

**UNITED STATES
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)

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

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

Stephen C. Jumper
President and 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)

Copy 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

Approximate date of commencement of proposed sale to the public: From time to time after the effective date of this Registration Statement.

If the only 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 to be 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.

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 registration statement pursuant to General Instruction I.D. or a post-effective amendment thereto that shall become effective upon filing with the Commission pursuant to Rule 462(e) under the Securities Act, check the following box.

If this Form is a post-effective amendment to a registration statement filed pursuant to General Instruction I.D. filed to register additional securities or additional classes of securities pursuant to Rule 413(b) under the Securities Act, check the following box.

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, or a smaller reporting company. See the definitions of "large accelerated filer," "accelerated filer" and "smaller reporting company" in Rule 12b-2 of the Exchange Act.

Large accelerated filer Accelerated filer
Non-accelerated filer (Do not check if a smaller reporting company) Smaller reporting company

CALCULATION OF REGISTRATION FEE

Title of Each Class of Securities to be Registered	Proposed Maximum Aggregate Offering Price (1)(2)(3)	Amount of Registration Fee (3)
Senior Debt Securities		

Subordinated Debt Securities		
Preferred Stock, par value \$1.00 per share		
Common Stock, par value \$0.33 1/3 per share (4)		
Warrants		
Total	\$150,000,000	\$5,730

- (1) Estimated solely for the purpose of computing the registration fee pursuant to Rule 457(o) under the Securities Act and exclusive of accrued interest, distributions and dividends, if any. In no event will the aggregate initial offering price of all securities issued from time to time pursuant to this Registration Statement exceed \$150,000,000. If any debt securities are issued at an original issue discount, then the offering price shall be in such greater principal amount as shall result in an aggregate initial offering price of up to \$150,000,000, less the dollar amount of any securities previously issued hereunder. Any securities registered hereunder may be sold separately or as units with other securities registered hereunder or other securities.
- (2) There is being registered hereunder such indeterminate number or amount of senior and subordinated debt securities, preferred stock, common stock and warrants as may from time to time be issued at indeterminate prices and as may be issuable upon conversion, redemption, exchange, exercise or settlement of any securities registered hereunder, including under any applicable antidilution provisions.
- (3) Pursuant to Rule 415(a)(6) under the Securities Act, \$100,000,000 of the securities registered hereunder are unsold securities previously registered under the registrant's Registration Statement on Form S-3 (Registration No. 333-158330), initially filed with the Commission on March 31, 2009 (the "Prior Registration Statement"), for which a filing fee was paid. The registrant hereby registers additional securities with an aggregate initial offering price of up to \$50,000,000 for a filing fee of \$5,730. Pursuant to Rule 415(a)(6) of the Securities Act, the offering of the unsold securities registered under the Prior Registration Statement will be deemed terminated as of the date of the effectiveness of this Registration Statement.
- (4) Each share of common stock includes one right to purchase 1/100th of a share of Series A Junior Participating Preferred Stock under the Registrant's Rights Agreement. No separate consideration is payable for the preferred share purchase rights. The registration fee for these securities is included in the fee for the common stock.

The Registrant hereby amends this Registration Statement on such date or dates as may be necessary to delay its effective date until the Registrant shall file a further amendment which specifically states that this Registration Statement shall thereafter become effective in accordance with Section 8(a) of the Securities Act of 1933, or until the Registration Statement shall become effective on such date as the Commission, acting pursuant to said Section 8(a), may determine.

The information in this prospectus is not complete and may be changed. We may not sell these securities until the registration statement filed with the Securities and Exchange Commission is effective. This prospectus is not an offer to sell these securities and is not soliciting an offer to buy these securities in any state where the offer or sale is not permitted.

Subject to Completion, dated April 4, 2012

PROSPECTUS

\$150,000,000

Dawson Geophysical Company



Senior Debt Securities
Subordinated Debt Securities
Common Stock
Preferred Stock
Warrants

We may offer and sell these securities to or through one or more underwriters, dealers or agents, or directly to purchasers, on a continuous or delayed basis. This prospectus describes only the general terms of these securities and the general manner in which we will offer the securities. We will provide the specific terms of the securities in supplements to this prospectus. The prospectus supplement will describe the specific manner in which we will offer the securities and also may add, update or change information contained in this prospectus. You should read this prospectus and any supplement carefully before you invest. Our common stock is quoted on The Nasdaq Global Select Market under the symbol "DWSN."

Investing in our securities involves risk. You should carefully consider the risk factors described under "[Risk Factors](#)" beginning on page 3 of this prospectus before you make any investment in our securities. In addition, risks associated with any investment in our securities may be described in the applicable prospectus supplement and certain of our filings with the Securities and Exchange Commission, as described in "[Risk Factors](#)" on page 3.

Neither the Securities and Exchange Commission nor any state securities commission has approved or disapproved of these securities or determined if this prospectus is truthful or complete. Any representation to the contrary is a criminal offense.

The date of this prospectus is April 4, 2012.

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ABOUT THIS PROSPECTUS

In this prospectus, unless we state otherwise or the context clearly indicates otherwise, all references to “we,” “us,” “our,” or “Dawson” refer to Dawson Geophysical Company.

This prospectus is part of a registration statement that we have filed with the Securities and Exchange Commission using a “shelf” registration process. Using this process, we may offer any combination of the securities described in this prospectus in one or more offerings with a total initial offering price of up to \$150,000,000. This prospectus provides you with a general description of the securities we may offer. Each time we use this prospectus to offer securities, we will provide a prospectus supplement and, if applicable, a pricing supplement that will describe the specific terms of that offering. The prospectus supplement and any pricing supplement may also add, update or change information contained or incorporated by reference in this prospectus. Please carefully read this prospectus, the prospectus supplement and any pricing supplement together with the information contained in the documents we refer to under the heading “Where You Can Find More Information.”

You should rely only on the information we have provided or incorporated by reference in this prospectus, the prospectus supplement and any pricing supplement. We have not authorized any person, including any salesman or broker, to provide you with additional or different information. We are not making an offer of these securities in any jurisdiction where the offer is not permitted.

You should not assume that the information in this prospectus is accurate as of any date other than the date on the cover page of this prospectus or that any information we have incorporated by reference is accurate as of any date other than the date of the documents incorporated by reference. Our business, financial condition, results of operations and prospects may have changed since those dates.

DAWSON GEOPHYSICAL COMPANY

We are a leading provider of onshore seismic data acquisition services in the lower 48 states of the United States as measured by the number of active data acquisition crews. Founded in 1952, we acquire and process 2-D, 3-D and multi-component seismic data for our clients, ranging from major oil and gas companies to independent oil and gas operators, as well as providers of multi-client data libraries. The majority of our crews are currently working in oil producing basins. Our clients rely on seismic data to identify areas where subsurface conditions are favorable for the accumulation of hydrocarbons and to optimize the development and production of hydrocarbon reservoirs. During fiscal 2011, substantially all of our revenues were derived from 3-D seismic data acquisition operations.

We market and supplement our services from our headquarters in Midland, Texas and from additional offices in Houston, Denver, Oklahoma City and Pittsburgh. Our geophysicists perform data processing in our Midland, Houston and Oklahoma City offices, and our field operations are supported from our field office facility in Midland. The results of a seismic survey conducted for a client belong to that client. We do not acquire seismic data for our own account nor do we participate in oil and gas ventures.

Additional information concerning our business and operations is incorporated by reference herein from our other filings made with the Securities and Exchange Commission (the "SEC") and may be included in applicable prospectus supplements and any pricing supplements.

We are a Texas corporation with our principal executive offices located at 508 West Wall, Suite 800, Midland, Texas 79701. Our telephone number at such address is (432) 684-3000.

RISK FACTORS

Our business is subject to uncertainties and risks. You should carefully consider and evaluate all of the information included or incorporated by reference in this prospectus, including the risk factors incorporated by reference from our most recent annual report on Form 10-K, as updated by our quarterly reports on Form 10-Q and other SEC filings filed after such annual report. It is possible that our business, financial condition, liquidity or results of operations could be materially adversely affected by any of these risks. When we offer and sell any securities pursuant to a prospectus supplement, we may include additional risk factors relevant to that offering in the prospectus supplement.

FORWARD-LOOKING INFORMATION

This prospectus, including the information we incorporate by reference, contains "forward-looking statements" within the meaning of Section 27A of the Securities Act of 1933, as amended (the "Securities Act") and Section 21E of the Securities Exchange Act of 1934, as amended (the "Exchange Act"). Statements other than statements of historical fact included in this prospectus that relate to forecasts, estimates or other expectations regarding future events may be deemed to be forward-looking statements within the meaning of Section 27A of the Securities Act and Section 21E of the Exchange Act. When used in this prospectus, words such as "anticipate," "believe," "estimate," "expect," "intend" and similar expressions, as they relate to us or our management, identify forward-looking statements. These statements discuss future expectations, contain projections of results of operations or of financial condition or state other "forward-looking" information. We and our representatives may from time to time make other oral or written statements that are also forward-looking statements.

These forward-looking statements are based on our management's current plans, expectations, estimates, assumptions and beliefs as well as information currently available to management concerning future events impacting us and therefore involve a number of risks and uncertainties. Most of these factors are beyond our control. Because these forward-looking statements involve risks and uncertainties, actual results could differ materially from those expressed or implied by these forward looking statements for a number of important reasons, including those described under "Risk Factors" in our most recent annual report on Form 10-K. These forward-looking statements reflect our current views with respect to future events and are subject to these and other risks, uncertainties and assumptions relating to our operations, results of operations, growth strategies and liquidity. All subsequent written and oral forward-looking statements attributable to us or persons acting on our behalf are expressly qualified in their entirety by this paragraph. We assume no obligation to update any such forward-looking statements.

USE OF PROCEEDS

Unless we inform you otherwise in the prospectus supplement or any pricing supplement, we expect to use the net proceeds from the sale of securities offered by this prospectus for general corporate purposes, including repayment or refinancing of debt, further expansion of our seismic data operations, acquisitions and other maintenance capital requirements. Pending any specific application, we may initially invest funds in short-term marketable securities.

RATIO OF EARNINGS TO FIXED CHARGES

We have presented in the table below our historical ratio of earnings to fixed charges for the periods shown.

	Three Months Ended	Years Ended September 30,				
	December 31, 2011	2011	2010	2009	2008	2007
Ratio of earnings to fixed charges	21.63x	(A)	N/A	N/A	118.03x	307.61x

(A) For the year ended September 30, 2011, earnings were less than fixed charges. The amount of the coverage deficiency, or the amount of fixed charges in excess of earnings, was approximately \$2,807,000.

We have computed the ratio of earnings to fixed charges by dividing earnings by fixed charges. For this purpose, "earnings" consist of pretax income from continuing operations and fixed charges, less interest capitalized. "Fixed charges" consist of interest expensed and capitalized.

We had no preferred stock outstanding for any period presented, and accordingly, the ratio of earnings to combined fixed charges and preferred stock dividends is the same as the ratio of earnings to fixed charges.

DESCRIPTION OF DEBT SECURITIES

The debt securities covered by this prospectus will be our general unsecured obligations. The debt securities will be either senior debt securities or subordinated debt securities. We will issue the debt securities under one or more separate indentures between us and a trustee we will name in the prospectus supplement. Senior debt securities will be issued under a senior indenture, and subordinated debt securities will be issued under a subordinated indenture. We refer to the senior indenture and the subordinated indenture collectively as the indentures. The indentures will be substantially identical, except for provisions relating to subordination.

We have summarized material provisions of the indentures and the debt securities below. You should read the indentures for more details regarding the provisions we describe below and for other provisions that may be important to you. We have filed the forms of the indentures with the SEC and have incorporated them by reference as exhibits to the registration statement of which this prospectus forms a part. You should read the indentures for provisions that may be important to you. Please read "Where You Can Find More Information."

General

Neither indenture limits the amount of debt securities that may be issued under that indenture, nor limits the amount of other unsecured debt or securities that we may issue. We may issue debt securities under the indentures from time to time in one or more series, each in an amount authorized prior to issuance. No securities are outstanding under the indentures.

The senior debt securities will constitute our senior unsecured indebtedness and will rank equally in right of payment with all of our other unsecured and unsubordinated debt and senior in right of payment to all of our subordinated indebtedness. The senior debt securities will be effectively subordinated to, and thus have a junior position to, our secured indebtedness with respect to the assets securing that indebtedness. The subordinated debt securities will rank junior to all of our senior indebtedness and may rank equally with or senior to other subordinated indebtedness we may issue from time to time.

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Unless we inform you otherwise in the prospectus supplement, the indentures and the debt securities will not contain:

- any covenants or other provisions designed to protect holders of the debt securities in the event we participate in a highly leveraged transaction or upon a change of control; or
- provisions that give holders of the debt securities the right to require us to repurchase their securities in the event of a decline in our credit rating for any reason, including as a result of a takeover, recapitalization or similar restructuring or otherwise.

Terms

The prospectus supplement relating to any series of debt securities being offered will include specific terms relating to the offering. These terms will include some or all of the following:

- whether the debt securities will be senior or subordinated debt securities;
- the title of the debt securities;
- the total principal amount of the debt securities;
- whether a series of subordinated debt is junior in any respect to another series of subordinated debt;
- whether we will issue the debt securities in individual certificates to each holder or in the form of temporary or permanent global securities held by a depositary on behalf of holders;
- the date or dates on which the principal of and any premium on the debt securities will be payable;
- any interest rate, the date from which interest will accrue, interest payment dates and record dates for interest payments;
- whether and under what circumstances we will pay any additional amounts with respect to the debt securities;
- the place or places where payments on the debt securities will be payable;
- any provisions for redemption or early repayment;
- any sinking fund or other provisions that would obligate us to redeem, purchase or repay the debt securities;
- the denominations in which we will issue the debt securities if other than \$1,000 and integral multiples of \$1,000;
- whether payments on the debt securities will be payable in foreign currency or currency unit or another form and whether payments will be payable by reference to any index or formula;
- the portion of the principal amount of debt securities that will be payable if the maturity is accelerated, if other than the entire principal amount;
- any additional means of defeasance of the debt securities, any additional conditions or limitations to defeasance of the debt securities or any changes to those conditions or limitations;
- any changes or additions to the events of default or covenants described in this prospectus;
- any restrictions or other provisions relating to the transfer or exchange of debt securities;

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- any terms for the conversion or exchange of the debt securities for other securities;
- with respect to the subordinated indenture, any changes to the subordination provisions for the subordinated debt securities; and
- any other terms of the debt securities not inconsistent with the applicable indenture.

We may sell the debt securities at a discount, which may be substantial, below their stated principal amount. These debt securities may bear no interest or interest at a rate that at the time of issuance is below market rates. If we sell these debt securities, we will describe in the prospectus supplement any material United States federal income tax consequences and other special considerations.

If we sell any of the debt securities for any foreign currency or currency unit or if payments on the debt securities are payable in any foreign currency or currency unit, we will describe in the prospectus supplement the restrictions, elections, tax consequences, specific terms and other information relating to those debt securities and the foreign currency or currency unit.

Consolidation, Merger and Sales of Assets

The indentures generally permit a consolidation or merger involving us. They also permit us to sell, lease, convey, assign, transfer or otherwise dispose of all or substantially all of our assets. We have agreed, however, that we will not consolidate with or merge into any entity or sell, lease, convey, assign, transfer or dispose of all or substantially all of our assets to any entity unless:

- (1) either
 - we are the continuing entity, or
 - the resulting or surviving entity expressly assumes the due and punctual payments on the debt securities and the performance of our covenants and obligations under the applicable indenture and the debt securities;
- (2) immediately after giving effect to the transaction, no default or event of default under the indentures has occurred and is continuing or would result from the transaction; and
- (3) we deliver an officers' certificate and an opinion of counsel stating that the transaction and the supplemental indenture comply with the terms of the indentures.

Upon any transaction of the type described in and effected in accordance with this section, the resulting entity will succeed to and be substituted for and may exercise all of our rights and powers under the indenture and the debt securities with the same effect as if the resulting entity had been named as us in the indenture. In the case of any asset transfer or disposition other than a lease, when the resulting entity assumes all of our obligations and covenants under the applicable indenture and the debt securities, we will be relieved of all such obligations.

Events of Default

Unless we inform you otherwise in the applicable prospectus supplement, the following are events of default with respect to a series of debt securities:

- our failure to pay interest on any debt security of that series for 30 days when due;
- our failure to pay principal of or any premium on any debt security of that series when due;
- our failure to deposit any sinking fund payment for 30 days when due;
- our failure to comply with any covenant or agreement in that series of debt securities or the applicable indenture (other than an agreement or covenant that has been included in the indenture solely for the benefit of other series of debt securities) for 90 days after written notice by the trustee or by the holders of at least 25% in principal amount of the outstanding debt securities issued under that indenture that are affected by that failure;

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- specified events involving bankruptcy, insolvency or reorganization of us; and
- any other event of default provided for that series of debt securities.

A default under one series of debt securities will not necessarily be a default under any other series. If a default or event of default for any series of debt securities occurs, is continuing and is known to the trustee, the trustee will notify the holders of applicable debt securities within 90 days after it occurs. The trustee may withhold notice to the holders of the debt securities of any default or event of default, except in any payment on the debt securities, if the trustee in good faith determines that withholding notice is in the interests of the holders of those debt securities.

If an event of default for any series of debt securities occurs and is continuing, the trustee or the holders of at least 25% in principal amount of the outstanding debt securities of the series affected by the default (or, in some cases, 25% in principal amount of all debt securities issued under the applicable indenture that are affected, voting as one class) may declare the principal of and all accrued and unpaid interest on those debt securities to be due and payable immediately. If an event of default relating to certain events of bankruptcy, insolvency or reorganization of our company occurs, the principal of and accrued and unpaid interest on all the debt securities issued under the applicable indenture will become immediately due and payable without any action on the part of the trustee or any holder. At any time after a declaration of acceleration has been made, the holders of a majority in principal amount of the outstanding debt securities of the series affected by the default (or, in some cases, of all debt securities issued under the applicable indenture that are affected, voting as one class) may in some cases rescind this accelerated payment requirement and its consequences.

A holder of a debt security of any series issued under an indenture may pursue a remedy under that indenture only if:

- the holder gives the trustee written notice of a continuing event of default with respect to that series;
- the holders of at least 25% in principal amount of the outstanding debt securities of that series make a written request to the trustee to pursue the remedy;
- the holders offer to the trustee indemnity satisfactory to the trustee against any loss, liability or expense;
- the trustee does not comply with the request within 60 days after receipt of the request and offer of indemnity; and
- during that 60-day period, the holders of a majority in principal amount of the debt securities of that series do not give the trustee a direction inconsistent with the request.

This provision does not, however, affect the right of a holder of a debt security to sue for enforcement of any overdue payment.

In most cases, holders of a majority in principal amount of the outstanding debt securities of a series (or of all debt securities issued under the applicable indenture that are affected, voting as one class) may direct the time, method and place of:

- with respect to debt securities of a series, conducting any proceeding for any remedy available to the trustee and exercising any trust or power conferred on the trustee relating to or arising as a result of specified events of default; or
- with respect to all debt securities issued under the applicable indenture that are affected, conducting any proceeding for any remedy available to the trustee and exercising any trust or power conferred on the trustee relating to or arising other than as a result of such specified events of default.

The trustee, however, may refuse to follow any such direction that conflicts with law or the indentures, is unduly prejudicial to the rights of other holders of the debt securities, or would involve the trustee in personal liability. In addition, prior to acting at the direction of holders, the trustee will be entitled to be indemnified by those holders against any loss and expenses caused thereby.

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The indentures require us to furnish to the trustee annually a statement as to our performance of certain of our obligations under the indentures and as to any default in performance.

Modification and Waiver

We and the trustee may supplement or amend each indenture with the consent of the holders of at least a majority in principal amount of the outstanding debt securities of all series issued under that indenture that are affected by the amendment or supplement (voting as one class). Without the consent of the holder of each debt security affected, however, no supplement or amendment may:

- reduce the amount of debt securities whose holders must consent to an amendment, supplement or waiver;
- reduce the rate of or change the time for payment of interest on the debt security;
- reduce the principal of the debt security or change its stated maturity;
- reduce any premium payable on the redemption of the debt security or change the time at which the debt security may or must be redeemed;
- change any obligation to pay additional amounts on the debt security;
- make payments on the debt security payable in currency other than as originally stated in the debt security;
- impair the holder's right to institute suit for the enforcement of any payment on or with respect to the debt security;
- make any change in the percentage of principal amount of debt securities necessary to waive compliance with certain provisions of the indenture or to make any change in the provision related to modification;
- with respect to the subordinated indenture, modify the provisions relating to the subordination of any subordinated debt security in a manner adverse to the holder of that security;
- waive a continuing default or event of default regarding any payment on the debt securities; or
- if applicable, make any change that materially and adversely affects the right to convert any debt security.

We and the applicable trustee may supplement or amend either indenture or waive any provision of either indenture without the consent of any holders of debt securities issued under that indenture in certain circumstances, including:

- to cure any ambiguity, omission, defect or inconsistency;
- to provide for the assumption of our obligations under the indenture by a successor upon any merger, consolidation or asset transfer permitted under the indenture;
- to provide for uncertificated debt securities in addition to or in place of certificated debt securities or to provide for bearer debt securities;
- to provide any security for, or to add any guarantees of or obligors on, any series of debt securities;

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- to comply with any requirement to effect or maintain the qualification of that indenture under the Trust Indenture Act of 1939;
- to add covenants that would benefit the holders of any debt securities or to surrender any rights we have under the indenture;
- to add events of default with respect to any series of debt securities;
- to make any change that does not adversely affect any outstanding debt securities of any series issued under that indenture in any material respect; and
- to establish the form of any debt securities and to accept the appointment of a successor trustee, each as permitted under the indenture.

The holders of a majority in principal amount of the outstanding debt securities of any series (or, in some cases, of all debt securities issued under the applicable indenture that are affected, voting as one class) may waive any existing or past default or event of default with respect to those debt securities. Those holders may not, however, waive any default or event of default in any payment on any debt security or compliance with a provision that cannot be amended or supplemented without the consent of each holder affected.

Defeasance and Discharge

Defeasance. When we use the term defeasance, we mean discharge from some or all of our obligations under an indenture. If we deposit with the trustee under an indenture any combination of money or government securities sufficient to make payments on the debt securities of a series issued under that indenture on the dates those payments are due, then, at our option, either of the following will occur:

- we will be discharged from our obligations with respect to debt securities of that series (“legal defeasance”); or
- we will no longer have any obligation to comply with the consolidation, merger and sale of assets covenant and other specified restrictive covenants relating to the debt securities of that series, and the related events of default will no longer apply (“covenant defeasance”).

If a series of debt securities is defeased, the holders of the debt securities of that series will not be entitled to the benefits of the applicable indenture, except for obligations to register the transfer or exchange of debt securities, replace stolen, lost or mutilated debt securities or maintain paying agencies and hold money for payment in trust. In the case of covenant defeasance, our obligation to pay principal, premium and interest on the debt securities will also survive.

Unless we inform you otherwise in the prospectus supplement, we will be required to deliver to the trustee an opinion of counsel that the deposit and related defeasance would not cause the holders of the debt securities to recognize income, gain or loss for U.S. federal income tax purposes. If we elect legal defeasance, that opinion of counsel must be based upon a ruling from the United States Internal Revenue Service or a change in law to that effect.

Satisfaction and Discharge. In addition, an indenture will cease to be of further effect with respect to the debt securities of a series issued under that indenture, subject to exceptions relating to compensation and indemnity of the trustee under that indenture and repayment to us of excess money or government securities, when:

- either
 - (a) all outstanding debt securities of that series have been delivered to the trustee for cancellation; or
 - (b) all outstanding debt securities of that series not delivered to the trustee for cancellation either:

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- have become due and payable,
 - will become due and payable at their stated maturity within one year, or
 - are to be called for redemption within one year; and
- we have deposited with the trustee any combination of money or government securities in trust sufficient to pay the entire indebtedness on the debt securities of that series when due; and
 - we have paid all other sums payable by us with respect to the debt securities of that series.

Subordination

Under the subordinated indenture, payment of the principal of and any premium and interest on the subordinated debt securities will generally be subordinated and junior in right of payment to the prior payment in full of all senior debt, including debt under our credit facility. As of March 31, 2012, we had \$12,951,381.17 of debt related to our equipment term loan and no debt outstanding under our revolver. Unless we inform you otherwise in the prospectus supplement, we may not make any payment of principal of or any premium or interest on the subordinated debt securities if:

- we fail to pay the principal, interest, premium or any other amounts on any senior debt when due; or
- we default in performing any other covenant (a “covenant default”) on any senior debt that we have designated if the covenant default allows the holders of that senior debt to accelerate the maturity of the senior debt they hold.

The subordination does not affect our obligation, which is absolute and unconditional, to pay, when due, the principal of and any premium and interest on the subordinated debt securities. In addition, the subordination does not prevent the occurrence of any default under the subordinated indenture.

The subordinated indenture does not limit the amount of senior debt that we may incur. As a result of the subordination of the subordinated debt securities, if we become insolvent, holders of subordinated debt securities may receive less on a proportionate basis than other creditors.

Unless we inform you otherwise in the prospectus supplement, “senior debt” will mean all debt, including guarantees of the Company, unless the debt states that it is not senior to our subordinated debt securities or other junior debt. Senior debt with respect to a series of subordinated debt securities could include a series of debt securities issued under a subordinated indenture.

Governing Law

New York law will govern the indentures and the debt securities.

The Trustees

Pursuant to applicable provisions of the indentures and the Trust Indenture Act of 1939 governing trustee conflicts of interest, any uncured event of default with respect to any series of debt securities will force the trustee to resign as trustee under either the subordinated indenture or the senior indenture. Any resignation requires the appointment of a successor trustee under the applicable indenture in accordance with its terms and conditions.

The trustee may resign or be removed by us under certain circumstances specified in the indenture with respect to one or more series of debt securities and a successor trustee may be appointed to act with respect to any series. The holders of a majority in aggregate principal amount of the debt securities of any series may remove the trustee with respect to the debt securities of that series.

Each indenture contains limitations on the right of the trustee, if it or any of its affiliates is then our creditor, to obtain payment of claims or to realize on certain property received for any such claim, as security or otherwise. The trustee and its affiliates are permitted to engage in other transactions with us. If, however, the trustee acquires any conflicting interest, it must eliminate that conflict or resign within 90 days after ascertaining that it has a conflicting interest. If an event of default occurs and is continuing, the trustee will be required to use the degree of care and skill of a prudent person in the conduct of his own affairs.

Payment and Paying Agents

Unless we inform you otherwise in a prospectus supplement, we will make payments on the debt securities in U.S. dollars at the office of the trustee and any paying agent. At our option, however, payments may be made by wire transfer for global debt securities or by check mailed to the address of the person entitled to the payment as it appears in the security register. Unless we inform you otherwise in a prospectus supplement, we will make interest payments to the person in whose name the debt security is registered at the close of business on the record date for the interest payment.

Unless we inform you otherwise in a prospectus supplement, the trustee under the applicable indenture will be designated as the paying agent for payments on debt securities issued under that indenture. We may at any time designate additional paying agents or rescind the designation of any paying agent or approve a change in the office through which any paying agent acts.

If the principal of or any premium or interest on debt securities of a series is payable on a day that is not a business day, the payment will be made on the following business day. For these purposes, unless we inform you otherwise in a prospectus supplement, a “business day” is any day that is not a Saturday, a Sunday or a day on which banking institutions in any of New York, New York, Midland, Texas or a place of payment on the debt securities of that series is authorized or obligated by law, regulation or executive order to remain closed.

Subject to the requirements of any applicable abandoned property laws, the trustee and paying agent will pay to us upon written request any money held by them for payments on the debt securities that remains unclaimed for two years after the date upon which that payment has become due. After payment to us, holders entitled to the money must look to us for payment. In that case, all liability of the trustee or paying agent with respect to that money will cease.

Form, Exchange, Registration and Transfer

We will issue the debt securities in registered form, without interest coupons. Debt securities of any series will be exchangeable for other debt securities of the same series, the same total principal amount and the same terms but in different authorized denominations in accordance with the applicable indenture. Holders may present debt securities for registration of transfer at the office of the security registrar or any transfer agent designated by us. The security registrar or transfer agent will effect the transfer or exchange if its requirements and the requirements of the applicable indenture are met. We will not charge a service charge for any registration of transfer or exchange of the debt securities. We may, however, require payment of any transfer tax or similar governmental charge payable for that registration.

We will appoint the trustee as security registrar for the debt securities. If a prospectus supplement refers to any transfer agents we initially designate, we may at any time rescind that designation or approve a change in the location through which any transfer agent acts. We are required to maintain an office or agency for transfers and exchanges in each place of payment. We may at any time designate additional transfer agents for any series of debt securities.

In the case of any redemption or any repurchase of debt securities, we will not be required to register the transfer or exchange of:

- any debt security during a period beginning 15 business days prior to the mailing of the relevant notice of redemption or repurchase and ending on the close of business on the day of mailing of such notice; or
- any debt security that has been called for redemption in whole or in part, except the unredeemed portion of any debt security being redeemed in part.

Book-Entry Debt Securities

We may issue the debt securities in the form of one or more global debt securities that would be deposited with a depositary or its nominee identified in the prospectus supplement. We may issue global debt securities in either temporary or permanent form. We will describe in the prospectus supplement the terms of any depositary arrangement and the rights and limitations of owners of beneficial interests in any global debt security.

DESCRIPTION OF CAPITAL STOCK

The following is a description of our capital stock and a summary of the material provisions of our Second Restated Articles of Incorporation, as amended (“articles of incorporation”), our Second Amended and Restated Bylaws, as amended (“bylaws”) and our shareholder rights plan. You should also refer to our articles of incorporation and bylaws, which are incorporated herein by reference, and to Texas law.

General

Our authorized capital stock consists of 5,000,000 shares of preferred stock, \$1.00 par value per share, and 50,000,000 shares of common stock, \$0.33 ¹/₃ par value per share. As of March 31, 2012, there were 7,926,869 shares of our common stock issued and outstanding, 456,997 shares of our common stock reserved for issuance under our incentive stock plans and no shares of preferred stock issued and outstanding. The outstanding shares of our common stock are legally issued, fully paid and nonassessable. Additional shares of authorized common stock may be issued, as authorized by our board of directors from time to time, without shareholder approval, except as may be required by applicable stock exchange requirements.

Common Stock

Each share of our common stock has one vote on all matters presented to our shareholders. Since our common stock does not have cumulative voting rights, the holders of more than 50% of our common stock may, if they choose to do so, elect all of the directors and, in that event, the holders of the remaining shares of our common stock will not be able to elect any directors. Subject to the rights and preferences of any preferred stock that may be designated and issued, the holders of our common stock are entitled to dividends when and as declared by our board of directors and are entitled to liquidation of all assets remaining after payment of liabilities, subject to the liquidation preferences of any shares of preferred stock. Our common stock has no preemptive or other subscription rights. There are no conversion rights or redemption or sinking fund provisions with respect to our common stock.

Our common stock is quoted on The Nasdaq Global Select Market under the symbol “DWSN.” The transfer agent and registrar for our common stock is Computershare Shareowner Services LLC.

Preferred Stock

Our preferred stock may be issued in series, and shares of each series shall have such rights and preferences as shall be fixed by our board of directors in the resolution or resolutions authorizing the issuance of that particular series. In designating any series of preferred stock, our board of directors has authority, without further action by the holders of our common stock, to fix the rights, dividend rate, conversion rights, rights and terms of redemption (including any sinking fund provisions), and the liquidation preferences of that series of preferred stock.

The prospectus supplement relating to any series of preferred stock we are offering will include specific terms relating to the offering. We will file the form of the preferred stock with the SEC before we issue any of it, and you should read it for provisions that may be important to you. The prospectus supplement will include some or all of the following terms:

- the title of the preferred stock;
- the maximum number of shares of the series;
- the dividend rate or the method of calculating the dividend, the date from which dividends will accrue and whether dividends will be cumulative;
- any liquidation preference;
- any optional redemption provisions;
- any sinking fund or other provisions that would obligate us to redeem or purchase the preferred stock;
- any terms for the conversion or exchange of the preferred stock for other securities of us or any other entity;

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- any voting rights; and
- any other preferences and relative, participating, optional or other special rights or any qualifications, limitations or restrictions on the rights of the shares.

The issuance of preferred stock by us could adversely affect the voting power of holders of our common stock and the likelihood that such holders will receive dividend payments and payments upon liquidation and could have the effect of delaying, deferring or preventing a change in control of us.

Anti-Takeover Effects of Our Articles of Incorporation and Bylaws and Texas Law

Our articles of incorporation and bylaws contain provisions that could delay or make more difficult the acquisition of control of us through a hostile tender offer, open market purchases, proxy contest, merger or other takeover attempt that a shareholder might consider in his or her best interest, including those attempts that might result in a premium over the market price of our common stock. These provisions, as well as certain provisions of Texas law and our shareholder rights plan, are designed to discourage coercive takeover practices and inadequate takeover bids. These provisions are also designed to encourage persons seeking to acquire control of us to first negotiate with our board of directors. We believe that the benefits of this increased protection gives us the potential ability to negotiate with the proponent of an unfriendly or unsolicited proposal to acquire or restructure us, and that the benefits of this increased protection outweigh the disadvantages of discouraging those proposals, because negotiation of those proposals could result in an improvement of their terms.

Authorized but Unissued Stock. We have 50,000,000 authorized shares of common stock and 5,000,000 authorized shares of preferred stock. One of the consequences of our authorized but unissued common stock and undesignated preferred stock may be to enable the board of directors to make more difficult or to discourage an attempt to obtain control of our company. If, in the exercise of its fiduciary obligations, our board of directors determined that a takeover proposal was not in our best interest, the board could authorize the issuance of some or all of those shares without shareholder approval. The issuance of such shares could make the completion of a proposed change of control transaction more difficult or costly by, among other things, diluting the voting or other rights of the proposed acquirer or insurgent shareholder group or creating a substantial voting block that might undertake to support the position of the incumbent board. In this regard, our articles of incorporation grant the board of directors broad power to establish the rights and preferences of the authorized and unissued preferred stock, and our board could establish one or more series of preferred stock that entitle holders to exercise rights designed to impede a takeover.

Board of Directors; Vacancies. Our articles of incorporation and bylaws expressly prohibit cumulative voting. The exact number of members of our board of directors will be fixed from time to time by resolution of the board of directors. Any vacancy occurring on the board of directors and any newly created directorship may be filled by a majority of the remaining directors in office.

Shareholder Meetings. Our bylaws provide that special meetings of the holders of common stock (i) may be called by the board of directors, chairman of the board, the chief executive officer or the president or (ii) shall be called by our president or secretary at the request in writing of shareholders owning at least the minimum percentage of shares entitled to vote at the proposed special meeting as specified by our articles of incorporation (or in the absence of such specification, the minimum percentage necessary to call a special meeting under Texas law). Such request must state, among other things, the purpose or purposes of the proposed meeting and the matters proposed to be acted on.

Modification of Bylaws. Our bylaws may be altered or repealed by the affirmative vote of a majority of our board of directors at any regular meeting of the board of directors or any special meeting of the board of directors if notice of the board proposed alteration or repeal is contained in the notice of such special meeting. Our bylaws may also be altered or repealed by the affirmative vote of the holders of capital stock entitled to vote at any regular meeting of shareholders or any special meeting of shareholders if notice of the proposed alteration or repeal is contained in the notice of such special meeting.

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Modification of Articles of Incorporation. Amendments to our articles of incorporation that are recommended by the board of directors require the affirmative vote of holders of at least two-thirds of the voting power of all outstanding shares of capital stock entitled to vote in the election of directors.

Other Limitations on Shareholder Actions. Our bylaws also impose procedural requirements on shareholders who wish to make nominations in the election of directors and propose any other business to be brought before a meeting of shareholders. Shareholders who wish to have a shareholder proposal brought before an annual meeting or their nominees for election to our board of directors considered by the nominating committee generally must submit such proposal or nomination to our corporate secretary not less than 90 days and not more than 120 days prior to the anniversary date of the immediately preceding annual meeting of shareholders. Such notice must include, among other things, certain information about the proposal or the nominee, as specified in our bylaws. These provisions of our bylaws may limit the ability of shareholders to bring business before a shareholders' meeting, including the consideration of any transaction that could result in a change of control.

Limitation of Director Liability. Our articles of incorporation provide that our directors will have no personal liability to us or our shareholders for monetary damages for breach or alleged breach of our directors' duty of care. This provision in our articles of incorporation does not eliminate our directors' fiduciary duty of care, and in appropriate circumstances, equitable remedies such as an injunction or other forms of non-monetary relief should remain available under Texas law. Furthermore, each of our directors will continue to be subject to liability for (i) a breach of the directors' duty of loyalty, (ii) acts or omissions not in good faith or involving intentional misconduct or knowing violations of law, (iii) any transaction from which a director derives an improper personal benefit or (iv) an act or omission for which the liability of a director is expressly provided by an applicable statute. This provision does not affect a director's responsibilities under any other laws, such as the federal securities laws or state or federal environmental laws.

Texas Anti-Takeover Law. We are subject to Section 21.606 of the Texas Business Organizations Code ("TBOC"). That section prohibits Texas corporations from engaging in a wide range of specified transactions with any affiliated shareholders during the three-year period immediately following the affiliated shareholder's acquisition of shares in the absence of certain board of director or shareholder approvals. An affiliated shareholder of a corporation is any person, other than the corporation and any of its wholly owned subsidiaries, that is or was within the preceding three-year period the beneficial owner of 20% or more of the outstanding voting shares of the corporation. Section 21.606 may deter any potential unfriendly offers or other efforts to obtain control of us that are not approved by our board. This may deprive our shareholders of opportunities to sell shares of our common stock at a premium to the prevailing market price.

Shareholder Rights Plan

We have adopted a Shareholder Rights Plan. The Rights described below are issued pursuant to the Rights Agreement effective as of July 23, 2009 between us and Mellon Investor Services LLC, as rights agent (the "Rights Agreement"). We have summarized selected portions of the Rights Agreement and the Rights below. This summary is qualified in its entirety by reference to the Rights Agreement, a copy of which we have incorporated by reference as an exhibit to the registration statement of which this prospectus forms a part.

On July 8, 2009, our board of directors authorized and declared a dividend to the holders of record on July 23, 2009 (the "Record Date") of one Right (a "Right") for each outstanding share of our common stock. In addition, we have authorized the issuance of one Right with respect to each share of common stock that shall become outstanding between the Record Date and the earliest of the Distribution Date, the Redemption Date and July 23, 2019 (the "Final Expiration Date"). When exercisable, each Right will entitle the holder to purchase one one-hundredth of a share of our Series A Junior Participating Preferred Stock, par value \$1.00 per share (the "Preferred Shares"), at an exercise price of \$130.00 per Right, subject to adjustment (the "Purchase Price"). The rights are not currently exercisable and will only become exercisable upon the earlier of (i) ten days following a public announcement that a person or group of affiliated or associated persons (an "Acquiring Person") has acquired, or obtained the right to acquire, beneficial ownership of 15% or more of the outstanding shares of Common Stock (the date of the announcement being the "Stock Acquisition Date"), or (ii) ten business days following the commencement of a tender offer or exchange offer that would result in a person's becoming an Acquiring Person. In certain circumstances, the Distribution Date may be deferred by the Board of Directors. Certain inadvertent

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acquisitions will not result in a person's becoming an Acquiring Person if the person promptly divests itself of sufficient Common Stock. We may redeem the Rights for \$0.01 per Right at any time prior to the tenth day after the first public announcement of a triggering acquisition.

In the event that any person or group of affiliated or associated persons becomes an Acquiring Person, proper provision shall be made so that each holder of a Right, other than Rights beneficially owned by the Acquiring Person (which will thereafter be null and void and nontransferable), will thereafter have the right to receive upon exercise that number of our common shares having a market value of two times the exercise price of the Right. In the event that we are acquired in a merger or other business combination transaction or 50% or more of its consolidated assets or earning power are sold after a person or group of affiliated or associated persons has become an Acquiring Person, proper provision will be made so that each holder of a Right will thereafter have the right to receive, upon the exercise thereof at the then current exercise price of the Right, that number of shares of common stock of the acquiring company which at the time of such transaction will have a market value of two times the exercise price of the Right.

At any time after any person or group of affiliated or associated persons becomes an Acquiring Person and prior to the acquisition by such person or group of 50% or more of our outstanding common stock or a merger or other business combination, our board of directors may exchange the Rights (other than Rights owned by such person or group which will have become null and void and nontransferable), in whole or in part, at an exchange ratio of one share of common stock, or of other equity securities deemed to have the same value as one share of common stock, per Right (subject to adjustment).

At any time prior to the close of business on the tenth day following a public announcement that an Acquiring Person has become such an Acquiring Person, our board of directors may redeem the Rights in whole, but not in part, at a price of \$.01 per Right. The redemption of the Rights may be made effective at such time, on such basis and with such conditions as our board of directors in its sole discretion may establish. The time at which the Rights are redeemed by us is herein referred to as the "Redemption Date." Immediately upon any redemption of the Rights, the right to exercise the Rights will terminate and the only right thereafter of the holders of Rights will be to receive the redemption price.

Other than the redemption price, any of the provisions of the Rights Agreement may be amended by the Board of Directors of the Company as long as the Rights are redeemable. Thereafter, the provisions of the Rights Agreement other than the redemption price may be amended by the Board of Directors in order to cure any ambiguity, defect or inconsistency, to make changes that do not materially adversely affect the interests of holders of Rights (excluding the interests of any Acquiring Person), or to shorten or lengthen any time period under the Rights Agreement; *provided, however*, that no amendment to lengthen the time period governing redemption shall be made at such time as the Rights are not redeemable.

The Rights have certain anti-takeover effects. The Rights will cause substantial dilution to a person or group that attempts to acquire us in a manner or on terms not approved by our board of directors. The Rights, however, should not deter any prospective offeror willing to negotiate in good faith with our board of directors, nor should the Rights interfere with any merger or business combination approved by our board of directors prior to an Acquiring Person's acquiring 15% or more of our common stock.

DESCRIPTION OF WARRANTS

We may issue warrants to purchase any combination of senior or subordinated debt securities, common stock, preferred stock or other securities. We may issue warrants independently or together with other securities. Warrants sold with other securities may be attached to or separate from the other securities. Warrants may also be issued through a dividend or other distribution to our shareholders. We will issue warrants under one or more warrant agreements between us and a warrant agent that we will name in the applicable prospectus supplement or any pricing supplement.

The prospectus supplement (or the pricing supplement) relating to any warrants we are offering will include specific terms relating to the offering. We will file the form of any warrant agreement with the SEC, and you should read the warrant agreement for provisions that may be important to you. The prospectus supplement (or pricing supplement) will include some or all of the following terms:

- the title of the warrants;
- the aggregate number of warrants offered;
- the designation, number and terms of the debt securities, common stock, preferred stock or other securities purchasable upon exercise of the warrants, and procedures by which those numbers may be adjusted;
- the exercise price of the warrants;
- the dates or periods during which the warrants are exercisable;
- the designation and terms of any securities with which the warrants are issued;
- if the warrants are issued as a unit with another security, the date, if any, on and after which the warrants and the other security will be separately transferable;
- a discussion of the material United States federal income tax considerations applicable to the warrants;
- any minimum or maximum amount of warrants that may be exercised at any one time; and
- any terms, procedures and limitations relating to the transferability, exchange or exercise of the warrants.

PLAN OF DISTRIBUTION

We may sell the securities in and outside the United States (1) through underwriters or underwriting syndicates led by one or more managing underwriters, (2) to or through brokers or dealers, (3) to or through agents, (4) directly to one or more purchasers, (5) pursuant to delayed delivery contracts or forward contracts or (6) through a combination of any of these methods. We may sell the securities being offered by this prospectus by any method permitted by law, including sales deemed to be an “at the market” offering as defined in Rule 415(a)(4) of the Securities Act, to or through a market maker or into an existing trading market, on an exchange or otherwise.

The prospectus supplement (or a pricing supplement) will set forth the terms of the offering and the method of distribution and will include the following information:

- the names of any underwriters or agents;
- the purchase price of the securities from us;
- the net proceeds to us from the sale of securities;
- any delayed delivery arrangements;
- any over-allotment options under which underwriters may purchase additional securities from us;
- any underwriting discounts, commissions and other items constituting compensation to underwriters, dealers or agents;
- any public offering price;
- any discounts or concessions allowed or reallocated or paid to dealers;
- any commissions paid to agents; and
- any securities exchange or market on which the securities offered in the prospectus supplement may be listed.

Sale Through Underwriters or Dealers

If we use underwriters in the sale of securities, we will execute an underwriting agreement with the underwriter at the time of sale and we will provide the name of any underwriter in the prospectus supplement that the underwriter will use to make resales of the securities to the public. The underwriters will acquire the securities for their own account, and the underwriters may resell the securities from time to time in one or more transactions, including negotiated transactions, at a fixed public offering price or at varying prices determined at or prior to the time of sale. Underwriters may offer securities to the public either through underwriting syndicates represented by one or more managing underwriters or directly by one or more firms acting as underwriters. The obligations of the underwriters to purchase the securities will be subject to conditions, and any underwritten offering may be on a best efforts or a firm commitment basis. The underwriters may change from time to time any initial public offering price and any discounts or concessions allowed or reallocated or paid to dealers.

If we use dealers in the sale of securities, we will sell the securities to them as principals. They may then resell those securities to the public at varying prices determined by the dealers at the time of resale. The dealers participating in any sale of the securities may be deemed to be underwriters within the meaning of the Securities Act with respect to any sale of those securities. We will include in the prospectus supplement the names of the dealers and the terms of the transaction.

Sales Through Agents

We may also sell the securities through agents we designate from time to time. In the prospectus supplement, we will name any agent involved in the offer or sale of the offered securities, and we will describe any commissions payable by us to the agent. Unless we inform you otherwise in the prospectus supplement, any agent will agree to use its reasonable best efforts to solicit purchases for the period of its appointment.

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Direct Sales

We may sell the securities directly. In that event, no underwriters or agents would be involved. We may use electronic media, including the Internet, to sell offered common units directly.

Delayed Delivery or Forward Contracts

If we so indicate in the prospectus supplement, we may authorize agents, underwriters or dealers to solicit offers to purchase securities from us at the public offering price set forth in the prospectus under delayed delivery or forward contracts. These contracts would provide for payment and delivery on a specified date in the future at prices determined as described in the prospectus supplement. The contracts would be subject only to those conditions described in the prospectus supplement. The prospectus supplement will describe the commission payable for solicitation of those contracts.

Remarketing

We may offer and sell any of the securities in connection with a remarketing upon their purchase, in accordance with a redemption or repayment by their terms or otherwise, by one or more remarketing firms acting as principals for their own accounts or as our agents. We will identify any remarketing firm, the terms of any remarketing agreement and the compensation to be paid to the remarketing firm in the prospectus supplement. Remarketing firms may be deemed underwriters under the Securities Act.

Derivative Transactions

We may enter into derivative transactions with third parties, or sell securities not covered by this prospectus to third parties in privately negotiated transactions. If the applicable prospectus supplement indicates, in connection with those derivatives, the third parties may sell securities covered by this prospectus and the applicable prospectus supplement, including in short sale transactions. If so, the third parties may use securities pledged by us or borrowed from us or others to settle those sales or to close out any related open borrowings of stock, and may use securities received from us in settlement of those derivatives to close out any related open borrowings of stock. The third parties in these sale transactions will be underwriters and will be identified in the applicable prospectus supplement or in a post-effective amendment to the registration statement of which this prospectus forms a part. In addition, we may otherwise loan or pledge securities to a financial institution or other third party that in turn may sell the securities short using this prospectus. Such financial institution or other third party may transfer its economic short position to investors in our securities or in connection with a concurrent offering of other securities.

General Information

In connection with the sale of the securities, underwriters, dealers or agents may be deemed to have received compensation from us in the form of underwriting discounts or commissions and may also receive commissions from securities purchasers for whom they may act as agent. Underwriters may sell the securities to or through dealers, and the dealers may receive compensation in the form of discounts, concessions or commissions from the underwriters or commissions from the purchasers for whom they may act as agent. We will provide in the applicable prospectus supplement information regarding any underwriting discounts or other compensation that we pay to underwriters or agents in connection with the securities offering, and any discounts, concessions or commissions which underwriters allow to dealers.

We may have agreements with the agents, dealers and underwriters to indemnify them against certain civil liabilities, including liabilities under the Securities Act, or to contribute with respect to payments that the agents, dealers or underwriters may be required to make because of those liabilities. Agents, dealers and underwriters, or their affiliates or associates, may be customers of, engage in transactions with or perform services for us in the ordinary course of their businesses.

Each series of offered securities will be a new issue, and other than the common stock, which is listed on The Nasdaq Global Select Market, will have no established trading market. We may elect to list any series of offered securities on an exchange, but we are not obligated to do so. It is possible that one or more underwriters may make a market in a series of offered securities. However, they will not be obligated to do so and may discontinue market making at any time without notice. No assurance can be given as to the liquidity of, or the trading market for, any offered securities.

In connection with an offering, certain persons participating in the offering may make a market in the securities or engage in transactions that stabilize, maintain or otherwise affect the market price of the securities.

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This may include, among other transactions, over-allotments or short sales of the securities, which involves the sale by persons participating in the offering of more securities than we sold to them. In these circumstances, these persons would cover such over-allotments or short positions by making purchases in the open market or by exercising their over-allotment option. As a result, the price of the securities may be higher than the price that otherwise might exist in the open market. If these activities are commenced, these transactions may be discontinued at any time.

LEGAL MATTERS

The validity of the securities offered in this prospectus will be passed upon for us by Baker Botts L.L.P., Dallas, Texas. If certain legal matters in connection with an offering of the securities made by this prospectus and a related prospectus supplement are passed on by counsel for the underwriters of such offering, that counsel will be named in the applicable prospectus supplement related to that offering.

EXPERTS

The financial statements and schedule of Dawson Geophysical Company as of September 30, 2011 and 2010 and for each of the years in the three-year period ended September 30, 2011 and management's assessment of the effectiveness of internal control over financial reporting as of September 30, 2011 have been incorporated by reference in reliance upon the reports of KPMG LLP, independent registered public accounting firm, also incorporated by reference herein, and upon the authority of such firm as experts in accounting and auditing.

WHERE YOU CAN FIND MORE INFORMATION

We have filed a registration statement with the SEC under the Securities Act that registers the securities we may offer pursuant to this prospectus. The registration statement, including the attached exhibits, contains additional relevant information about us. The rules and regulations of the SEC allow us to omit some information included in the registration statement from this prospectus.

In addition, we file annual, quarterly and current reports, proxy statements and other information with the SEC. You can read and copy any document we file at the SEC's public reference room at 100 F Street, N.E., Washington, D.C. 20549. You can obtain further information about the operation of the SEC's public reference room by calling the SEC at 1-800-SEC-0330. These SEC filings are also available to the public at the web site maintained by the SEC at <http://www.sec.gov> and on our web site at <http://www.dawson3d.com>. Information contained on our web site or any other web site is not incorporated by reference into this prospectus and does not constitute a part of this prospectus.

INC ORPORATION BY REFERENCE

The SEC allows us to "incorporate by reference" into this prospectus the information we have filed with the SEC. This means that we can disclose important information to you without actually including the specific information in this prospectus by referring you to other documents filed separately with the SEC. These other documents contain important information about us, our financial condition and results of operations. The information we incorporate by reference is an important part of this prospectus. Information that we file later with the SEC will automatically update and may replace information in this prospectus and information previously filed with the SEC.

We incorporate by reference in this prospectus the documents listed below:

- our annual report on Form 10-K for the fiscal year ended September 30, 2011 filed with the SEC on December 9, 2011;
- our quarterly report on Form 10-Q for the quarter ended December 31, 2011 filed with the SEC on February 8, 2012;
- our proxy statement on Schedule 14A filed with the SEC on December 16, 2011;
- our current reports on Form 8-K filed with the SEC on October 24, 2011, October 28, 2011, November 2, 2011, November 9, 2011, December 5, 2011, January 26, 2012, January 27, 2012, February 1, 2012, February 2, 2012, February 21, 2012 and March 2, 2012, in each case other than information furnished and not filed with the SEC;
- the description of our common stock contained in our Registration Statement on Form 8-A filed on February 1, 1982, as amended by Form 8-A/A filed on March 8, 1982 and as thereafter amended from time to time for the purpose of updating, changing or modifying such description, and the description of our rights to purchase Series A Junior Participating Preferred Stock on Form 8-A filed on July 9, 2009 and as thereafter amended from time to time for the purpose of updating, changing or modifying such description; and
- all documents filed by us under Sections 13(a), 13(c), 14 or 15(d) of the Exchange Act between the date of this prospectus and the termination of the registration statement (excluding any portions thereof that are deemed to be furnished and not filed).

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You may obtain any of the documents incorporated by reference in this prospectus from the SEC through the SEC's web site at the address provided above. You may also request a copy of any document incorporated by reference in this prospectus (including exhibits to those documents specifically incorporated by reference in this document), at no cost, by visiting our internet web site at www.dawson3d.com, or by writing or calling us at the following address and telephone number:

Dawson Geophysical Company
508 West Wall, Suite 800
Midland, Texas 79701
Attention: Christina W. Hagan
Telephone: (432) 684-3000

PART II

INFORMATION NOT REQUIRED IN PROSPECTUS

Item 14. Other Expenses of Issuance and Distribution.

The following table sets forth the estimated expenses (other than underwriting discounts and commissions) payable by Dawson Geophysical Company in connection with the offering described in this Registration Statement. With the exception of the Securities and Exchange Commission registration fee, the amounts set forth below are estimates:

Securities and Exchange Commission registration fee	\$17,190
Printing expenses	(1)
Accounting fees and expenses	(1)
Legal fees and expenses	(1)
Trustee fees and expenses	(1)
Rating agency fees	(1)
Miscellaneous	(1)
Total	<u>\$ (1)</u>

- (1) Estimated expenses are not presently known. The foregoing sets forth the general categories of expenses (other than underwriting discounts and commissions) that we anticipate to incur in connection with the offering of securities under this registration statement. An estimate of the aggregate expenses in connection with the issuance and distribution of the securities being offered will be included in the applicable prospectus supplement.

Item 15. Indemnification of Directors and Officers.

Article Seven of our articles of incorporation, as amended, provides as follows:

“A director of the corporation shall not be personally liable to the corporation or its shareholders for monetary damages for an act or omission in such director’s capacity as a director, except for liability for (i) a breach of a director’s duty of loyalty to the corporation or its shareholders; (ii) an act or omission not in good faith or that involves intentional misconduct or a knowing violation of the law; (iii) a transaction from which a director received an improper benefit, whether or not the benefit resulted from an action taken within the scope of the director’s office; (iv) an act or omission for which the liability of a director is expressly provided by statute; or (v) an act related to an unlawful stock repurchase or payment of a dividend. If the laws of the State of Texas are hereafter amended to authorize corporate action further eliminating or limiting the personal liability of a director of the corporation, then the liability of a director of the corporation shall thereupon be automatically eliminated or limited to the fullest extent permitted by such laws. Any repeal or modification of this Article Seven by the shareholders of the corporation shall not adversely affect any right or protection of a director existing at the time of such repeal or modification with respect to events or circumstances occurring or existing prior to such time.”

Article IX of our bylaws provides that:

“To the fullest extent permitted by Texas law as the same may exist or be hereinafter amended (but in the case of any such amendment, with respect to matters occurring before such amendment, only to the extent that such amendment permits the Corporation to provide broader indemnification rights than said law permitted the Corporation to provide prior to such amendment), the Corporation shall indemnify and hold harmless any present or former Director, officer, employee or agent of the Corporation against judgments, penalties (including excise and similar taxes), fines, settlements, and reasonable expenses actually incurred by the person in connection with a proceeding in which the person was, is, or is threatened to be made a named defendant or respondent because the person is or was a Director, officer, employee or agent of the Corporation.”

Sections 8.101 and 8.105 of the TBOC permit corporations to indemnify a person who was or is a governing person, officer, employee or agent of such corporation or who serves at the corporation’s request as a representative of another enterprise, organization or employee benefit plan (an “outside enterprise”), who was, is, or

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is threatened to be named a respondent in a legal proceeding by virtue of such person's position in the corporation or in an outside enterprise, but only if the person acted in good faith and reasonably believed, in the case of conduct in the person's official capacity, that the conduct was in or, in the case of all other conduct, that the conduct was not opposed to the corporation or outside enterprise's best interest, and, in the case of a criminal proceeding, the person had no reasonable cause to believe the conduct was unlawful. A person may be indemnified within the above limitations against judgment and expenses that are reasonable and actually incurred by the person in connection with the proceeding; however, indemnification is limited to reasonable expenses actually incurred in a proceeding in which the person is found liable to the corporation or is found to have improperly received a personal benefit and shall not be made in respect of any proceeding in which the person shall have been found liable for willful or intentional misconduct in the performance of his duty to the corporation, breach of the person's duty of loyalty owed to the corporation or an act or omission not committed in good faith that constitutes a breach of a duty owed by the person to the enterprise. Indemnification pursuant to Section 8.101 of the TBOC can be made by the corporation only upon a determination made in the manner prescribed by Section 8.103 of the TBOC that indemnification is proper in the circumstances because the party seeking indemnification has met the applicable standard of conduct for such indemnification.

Section 8.051 of the TBOC requires a corporation to indemnify a governing person, former governing person or person serving an outside enterprise at the corporation's request against reasonable expenses incurred in connection with a proceeding in which the person is a party because of the person's corporate position, if the person was wholly successful, on the merits or otherwise, in the defense of the proceeding.

Under certain circumstances, a corporation may also advance expenses to any of the above persons. Section 8.151 of the TBOC also permits a corporation to purchase and maintain insurance or to make other arrangements on behalf of any of such persons against any liability asserted against and incurred by the person in such capacity, or arising out of the person's status as such a person, whether or not the corporation would have the powers to indemnify the person against the liability under applicable law.

We have entered into indemnity agreements with our directors and certain of our executive officers that require us to indemnify such persons against judgments, penalties, settlements, fines, excise or similar taxes and all reasonable attorneys' fees, court costs and other expenses incurred in connection with any proceeding, whether actual or threatened, to which any such person may be made a party by reason of the fact that such person is or was one of our directors or officers or is or was serving at our request as a director, officer, employee or agent of another enterprise, to the fullest extent permitted by applicable law. The indemnification agreements also set forth certain procedures that will apply in the event of a claim for indemnification thereunder and provide for the advancement or payment of all expenses to the indemnitee and for reimbursement to us if it is found that such indemnitee is not entitled to such indemnification under applicable law. We currently have directors' and officers' liability insurance policies to insure our directors and officers against liability for actions or omissions occurring in their capacity as a director or officer, subject to certain exclusions and limitations.

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Item 16. Exhibits.

<u>Exhibit No.</u>	<u>Description of Exhibit</u>
1.1†	Form of Underwriting Agreement.
4.1*	Rights Agreement effective as of July 23, 2009 between the Company and Mellon Investor Services LLC as Rights Agent, which includes as Exhibit A the form of Statement of Resolution Establishing Series of Shares of Series A Junior Participating Preferred Stock setting forth the terms of the Preferred Stock, as Exhibit B the form of Rights Certificate and as Exhibit C the Summary of Rights to Purchase Preferred Stock (filed on July 9, 2009 as Exhibit 4.1 to the Company's Current Report on Form 8-K (File No. 000-10144) and incorporated herein by reference).
4.2*	Form of Senior Indenture (filed on August 5, 2005 as Exhibit 4.2 to the Registrant's Registration Statement on Form S-3 (File No. 333-127268) and incorporated herein by reference).
4.3*	Form of Subordinated Indenture (filed on August 5, 2005 as Exhibit 4.3 to the Registrant's Registration Statement on Form S-3 (File No. 333-127268) and incorporated herein by reference).
5.1	Opinion of Baker Botts L.L.P. as to the validity of the securities.
12.1	Computation of Ratio of Earnings to Fixed Charges of the Company.
23.1	Consent of KPMG LLP.
23.2	Consent of Baker Botts L.L.P. (included in Exhibit 5.1).
24.1	Powers of Attorney (included on the signature page).
25.1†	Form T-1 Statement of Eligibility and Qualification under the Trust Indenture Act of 1939.

† To be filed by amendment or as an exhibit with a subsequent Current Report on Form 8-K in connection with a specific offering.

* Incorporated by reference as indicated.

Item 17. Undertakings.

(a) The undersigned registrant hereby undertakes:

(1) To file, during any period in which offers or sales are being made, a post-effective amendment to this registration statement:

(i) To include any prospectus required by section 10(a)(3) of the Securities Act;

(ii) To reflect in the prospectus any facts or events arising after the effective date of the registration statement (or the most recent post-effective amendment thereof) which, individually or in the aggregate, represent a fundamental change in the information set forth in the registration statement. Notwithstanding the foregoing, any increase or decrease in volume of securities offered (if the total dollar value of securities offered would not exceed that which was registered) and any deviation from the low or high end of the estimated maximum offering range may be reflected in the form of prospectus filed with the Commission pursuant to Rule 424(b) of the Securities Act if, in the aggregate, the changes in volume and price represent no more than a 20% change in the maximum aggregate offering price set forth in the "Calculation of Registration Fee" table in the effective registration statement;

(iii) To include any material information with respect to the plan of distribution not previously disclosed in the registration statement or any material change to such information in the registration statement;

provided, however, that paragraphs (a)(1)(i), (a)(1)(ii) and (a)(1)(iii) do not apply if the information required to be included in a post-effective amendment by those paragraphs is contained in reports filed with or furnished to the Commission by the registrant pursuant to section 13 or section 15(d) of the Exchange Act that are incorporated by reference in the registration statement, or is contained in a form of prospectus filed pursuant to Rule 424(b) that is part of the registration statement.

(2) That, for the purpose of determining any liability under the Securities Act, each such post-effective amendment shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial *bona fide* offering thereof.

(3) To remove from registration by means of a post-effective amendment any of the securities being registered which remain unsold at the termination of the offering.

(4) That, for the purpose of determining liability under the Securities Act to any purchaser:

(i) If the registrant is relying on Rule 430B:

(A) Each prospectus filed by the registrant pursuant to Rule 424(b)(3) shall be deemed to be part of the registration statement as of the date the filed prospectus was deemed part of and included in the registration statement; and

(B) Each prospectus required to be filed pursuant to Rule 424(b)(2), (b)(5), or (b)(7) as part of a registration statement in reliance on Rule 430B relating to an offering made pursuant to Rule 415(a)(1)(i), (vii), or (x) for the purpose of providing the information required by section 10(a) of the Securities Act shall be deemed to be part of and included in the registration statement as of the earlier of the date such form of prospectus is first used after effectiveness or the date of the first contract of sale of securities in the offering described in the prospectus. As provided in Rule 430B, for liability purposes of the issuer and any person that is at that date an underwriter, such date shall be deemed to be a new effective date of the registration statement relating to the securities in the registration statement to which that prospectus relates, and the offering of such securities at that time shall be deemed to be the initial *bona fide* offering thereof. Provided, however, that no statement made in a registration statement or prospectus that is part of the registration statement or made in a document incorporated or deemed incorporated by reference into the registration statement or prospectus that is part of the registration statement will, as to a purchaser with a time of contract of sale prior to such effective date, supersede or modify any statement that was made in the registration statement or prospectus that was part of the registration statement or made in any such document immediately prior to such effective date.

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(5) That, for the purpose of determining liability of the registrant under the Securities Act to any purchaser in the initial distribution of the securities, the undersigned registrant undertakes that in a primary offering of securities of the undersigned registrant pursuant to this registration statement, regardless of the underwriting method used to sell the securities to the purchaser, if the securities are offered or sold to such purchaser by means of any of the following communications, the undersigned registrant will be a seller to the purchaser and will be considered to offer or sell such securities to such purchaser:

(i) Any preliminary prospectus or prospectus of the undersigned registrant relating to the offering required to be filed pursuant to Rule 424;

(ii) Any free writing prospectus relating to the offering prepared by or on behalf of the undersigned registrant or used or referred to by the undersigned registrant;

(iii) The portion of any other free writing prospectus relating to the offering containing material information about the undersigned registrant or its securities provided by or on behalf of the undersigned registrant; and

(iv) Any other communication that is an offer in the offering made by the undersigned registrant to the purchaser.

(b) The undersigned registrant hereby undertakes that, for purposes of determining any liability under the Securities Act, each filing of the registrant's annual report pursuant to Section 13(a) or Section 15(d) of the Exchange Act (and, where applicable, each filing of an employee benefit plan's annual report pursuant to Section 15(d) of the Exchange Act) that is incorporated by reference in the registration statement shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial *bona fide* offering thereof.

(c) Insofar as indemnification for liabilities arising under the Securities Act may be permitted to directors, officers and controlling persons of the registrant pursuant to the foregoing provisions, or otherwise, the registrant has been advised that in the opinion of the Securities and Exchange Commission such indemnification is against public policy as expressed in the Securities Act and is, therefore, unenforceable. In the event that a claim for indemnification against such liabilities (other than the payment by the registrant of expenses incurred or paid by a director, officer or controlling person of the registrant in the successful defense of any action, suit or proceeding) is asserted by such director, officer or controlling person in connection with the securities being registered, the registrant will, unless in the opinion of its counsel the matter has been settled by controlling precedent, submit to a court of appropriate jurisdiction the question whether such indemnification by it is against public policy as expressed in the Securities Act and will be governed by the final adjudication of such issue.

(d) The undersigned registrant hereby undertakes to file an application for the purpose of determining the eligibility of the trustee to act under subsection (a) of section 310 of the Trust Indenture Act of 1939 (the "Act") in accordance with the rules and regulations prescribed by the Commission under section 305(b)(2) of the Act.

SIGNATURES

Pursuant to the requirements of the Securities Act of 1933, the Company 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 April 4, 2012.

DAWSON GEOPHYSICAL COMPANY

By: /s/ Stephen C. Jumper
Name: Stephen C. Jumper
Title: President, Chief Executive Officer and Director

POWER OF ATTORNEY

Each person whose signature appears below appoints Stephen C. Jumper and Christina W. Hagan, and each of them acting individually, as his or her true and lawful attorneys-in-fact and agents, with full power of substitution and resubstitution, for him or her and in his or her name, place and stead, in any and all capacities, to sign any and all amendments (including post-effective amendments) to this Registration Statement and any Registration Statement (including any amendment thereto) of the type contemplated by Rule 462(b) under the Securities Act of 1933, as amended, and to file the same, with all exhibits thereto and all other documents in connection therewith, with the Securities and Exchange Commission, granting unto said attorneys-in-fact and agents full power and authority to do and perform each and every act and thing requisite and necessary to be done, as fully and for all intents and purposes as he or she might or could do in person, hereby ratifying and confirming all that said attorneys-in-fact and agents or any of them or his or her substitute or substitutes, may lawfully do or cause to be done by virtue hereof.

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

<u>Signature</u>	<u>Title</u>	<u>Date</u>
<u>/s/ L. Decker Dawson</u> L. Decker Dawson	Chairman of the Board of Directors	April 4, 2012
<u>/s/ Stephen C. Jumper</u> Stephen C. Jumper	President, Chief Executive Officer and Director (Principal Executive Officer)	April 4, 2012
<u>/s/ Paul H. Brown</u> Paul H. Brown	Director	April 4, 2012
<u>/s/ Craig W. Cooper</u> Craig W. Cooper	Director	April 4, 2012
<u>/s/ Gary M. Hoover</u> Gary M. Hoover	Director	April 4, 2012
<u>/s/ Jack D. Ladd</u> Jack D. Ladd	Director	April 4, 2012
<u>/s/ Ted R. North</u> Ted R. North	Director	April 4, 2012
<u>/s/ Tim C. Thompson</u> Tim C. Thompson	Director	April 4, 2012
<u>/s/ Christina W. Hagan</u> Christina W. Hagan	Executive Vice President, Secretary and Chief Financial Officer (Principal Financial and Accounting Officer)	April 4, 2012

INDEX TO EXHIBITS

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* Incorporated by reference as indicated.

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NEW YORK
PALO ALTO
RIYADH
WASHINGTON

April 4, 2012

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

Ladies and Gentlemen:

We have acted as counsel for Dawson Geophysical Company, a Texas corporation (the "Company"), with respect to certain legal matters in connection with the Registration Statement on Form S-3 (the "Registration Statement") filed on this date by the Company with the Securities and Exchange Commission (the "Commission") under the Securities Act of 1933, as amended (the "Securities Act"). The Registration Statement relates to the proposed issuance and sale from time to time pursuant to Rule 415 under the Securities Act of up to \$150,000,000 aggregate initial offering price of (a) the Company's senior debt securities (the "Senior Debt Securities"), (b) the Company's subordinated debt securities (the "Subordinated Debt Securities"), (c) shares of common stock, par value \$0.33 1/3 per share (the "Common Stock"), of the Company, (d) shares of preferred stock, par value \$1.00 per share ("Preferred Stock"), of the Company and (e) warrants of the Company to purchase other securities (the "Warrants"). The Senior Debt Securities, Subordinated Debt Securities, Common Stock, Preferred Stock and Warrants may be hereinafter referred to as the "Securities."

Each series of the Senior Debt Securities will be issued pursuant to an indenture to be entered into in connection with the first series of Senior Debt Securities issued thereunder between the Company and the trustee thereunder (the "Senior Indenture"), and each series of the Subordinated Debt Securities will be issued pursuant to an indenture to be entered into in connection with the first series of Subordinated Debt Securities issued thereunder between the Company and the trustee thereunder (the "Subordinated Indenture"), as each such indenture will be supplemented, in connection with the issuance of each such series, by a supplemental indenture or other appropriate action of the Company creating such series (each, a "Supplemental Indenture").

In our capacity as your counsel in the connection referred to above, we have examined the Second Restated Articles of Incorporation and the Second Amended and Restated Bylaws of the Company, in each case as amended to date (together, the "Charter Documents"), resolutions adopted by the Board of Directors of the Company (the Board of Directors, or, to the extent permitted by the Texas Business Organizations Code ("TBOC") and the Charter Documents, a duly constituted and acting committee thereof, being referred to herein as the "Board"), the Senior Indenture and the Subordinated Indenture filed as exhibits to the Registration Statement, the Registration Statement and the prospectus contained therein, corporate records of the Company, including minute books of the Company, certificates of public officials and of representatives of the Company, statutes and other instruments and documents as we have deemed necessary or appropriate to form a basis for the opinions hereinafter expressed.

In making our examination, we have assumed, without independent investigation, the authenticity, accuracy and completeness of all documents submitted to us as originals, the conformity to the originals of all documents submitted to us as copies, the genuineness of all signatures on all documents examined by us, and the accuracy and completeness of all information submitted to us.

In rendering this opinion, we have assumed: (a) the Registration Statement, and any amendments thereto (including post-effective amendments) will have become effective under the Securities Act and such effectiveness shall not have been terminated or rescinded; (b) a prospectus supplement will have been filed with the Commission describing the Securities offered thereby; (c) all Securities will be offered, issued and sold in compliance with applicable federal and state securities laws and in the manner stated in the Registration Statement and the applicable prospectus supplement; (d) each of the Senior Indenture and the Subordinated Indenture under which the Senior Debt Securities and the Subordinated Debt Securities, respectively, will be issued will have become qualified under the Trust Indenture Act of 1939, as amended; (e) a definitive purchase, underwriting or similar agreement with respect to any Securities offered will have been duly authorized and validly executed and delivered by the Company and the other parties thereto; (f) any securities issuable upon conversion, exchange, redemption or exercise of any Securities being offered will be duly authorized, created and, if appropriate, reserved for issuance upon such conversion, exchange, redemption or exercise; and (h) with respect to shares of Common Stock or Preferred Stock offered, there will be sufficient shares of Common Stock or Preferred Stock authorized under the Company's Charter Documents and not otherwise issued or reserved for issuance.

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

1. With respect to a series of Senior Debt Securities, when (a) an indenture substantially in the form of the Senior Indenture has been duly authorized and validly executed and delivered by the parties thereto, (b) any applicable Supplemental Indenture relating to such series has been duly authorized and validly executed and delivered by each of the parties thereto, (c) the Board has taken all necessary corporate action to approve and establish the terms of the offering thereof and related matters, and (d) the Senior Debt Securities of such series have been duly executed, authenticated, issued and delivered in accordance with the Senior Indenture, any applicable Supplemental Indenture relating to such series and the applicable definitive purchase, underwriting or similar agreement approved by the Board in exchange for payment of the consideration therefor provided therein, the Senior Debt Securities of such series will constitute legal, valid and binding obligations of the Company, enforceable against the Company in accordance with their terms, except as the enforceability thereof may be subject to the effect of (i) bankruptcy, insolvency, reorganization, moratorium, fraudulent conveyance or other laws relating to or affecting creditors' rights generally, (ii) general principles of equity (regardless of whether such enforceability is considered in a proceeding in equity or at law) and (iii) any implied covenants of good faith and fair dealing.

2. With respect to a series of Subordinated Debt Securities, when (a) an indenture substantially in the form of the Subordinated Indenture has been duly authorized and validly executed and delivered by the parties thereto, (b) any applicable Supplemental Indenture relating to such series has been duly authorized and validly executed and delivered by each of the parties thereto, (c) the Board has taken all necessary corporate action to approve and establish the terms of the offering thereof and related matters, and (d) the Subordinated Debt Securities of such series have been duly executed, authenticated, issued and delivered in accordance with the Subordinated Indenture, any applicable Supplemental Indenture relating to such series and the applicable definitive purchase, underwriting or similar agreement approved by the Board in exchange for payment of the consideration therefor provided therein, the Subordinated Debt Securities of such series will constitute legal, valid and binding obligations of the Company, enforceable against the Company in accordance with their terms, except as the enforceability thereof may be subject to the effect of (i) bankruptcy, insolvency, reorganization, moratorium, fraudulent conveyance or other laws relating to or affecting creditors' rights generally, (ii) general principles of equity (regardless of whether such enforceability is considered in a proceeding in equity or at law) and (iii) any implied covenants of good faith and fair dealing.

3. With respect to shares of Common Stock, when (a) the Board has taken all necessary corporate action to approve the issuance thereof and the terms of the offering of shares of Common Stock and related matters, and (b) certificates representing the shares of Common Stock have been duly executed, countersigned, registered and delivered, or, if uncertificated, valid book-entry notations have been made in the share register of the Company, in accordance with the provisions of the Charter Documents of the Company and either (i) in accordance with the applicable definitive purchase, underwriting or similar agreement approved by the Board in exchange for payment of the consideration therefor (not less than the par value of the Common Stock) provided for therein, or (ii) upon conversion, exchange, redemption or exercise of any other Security, in accordance with the terms of such Security or the instrument governing such Security providing for such conversion, exchange, redemption or exercise as approved by the Board, for the consideration approved by the Board (not less than the par value of the Common Stock), the shares of Common Stock will be duly authorized, validly issued, fully paid and non-assessable.

4. With respect to shares of Preferred Stock, when (a) the Board has taken all necessary corporate action to approve and establish the terms of the shares of Preferred Stock, to approve the issuance thereof and the terms of the offering thereof and related matters, including the adoption of resolutions designating and establishing the terms of such series of Preferred Stock and causing any required statements respecting such series of Preferred Stock to be prepared and filed with the Secretary of State of the State of Texas, and (b) certificates representing the shares of Preferred Stock have been duly executed, countersigned, registered and delivered, or, if uncertificated, valid book-entry notations have been made in the share register of the Company, either (i) in accordance with the applicable definitive purchase,

underwriting or similar agreement approved by the Board in exchange for payment of the consideration therefor (not less than the par value of the Preferred Stock) provided for therein, or (ii) upon conversion, exchange, redemption or exercise of any other Security, in accordance with the terms of such Security or the instrument governing such Security providing for such conversion, exchange, redemption or exercise as approved by the Board, for the consideration approved by the Board (not less than the par value of the Preferred Stock), the shares of Preferred Stock will be duly authorized, validly issued, fully paid and non-assessable.

5. With respect to Warrants, when (a) the Board has taken all necessary corporate action to approve the creation of and the issuance and terms of the Warrants, the terms of the offering thereof and related matters, (b) the warrant agreement or agreements relating to the Warrants have been duly authorized and validly executed and delivered by the Company and the warrant agent appointed by the Company, and (c) the Warrants or certificates representing the Warrants have been duly executed, countersigned, registered and delivered in accordance with the appropriate warrant agreement or agreements and the applicable definitive purchase, underwriting or similar agreement approved by the Board in exchange for payment of the consideration therefor provided for therein, the Warrants will be duly authorized and validly issued and will constitute legal, valid and binding obligations of the Company, enforceable against the Company in accordance with their terms, except as the enforceability thereof may be subject to the effect of (i) bankruptcy, insolvency, reorganization, moratorium, fraudulent conveyance or other laws relating to or affecting creditors' rights generally and (ii) general principles of equity (regardless of whether such enforceability is considered in a proceeding in equity or at law) and (iii) any implied covenants of good faith and fair dealing.

We limit the opinions we express above in all respects to matters of federal law, relevant contract law of the State of New York and the TBOC, including the applicable provisions of the Texas Constitution and the reported judicial decisions interpreting federal law and the TBOC, in each case, as in effect on the date hereof.

We hereby consent to the filing of this opinion as Exhibit 5.1 to the Registration Statement and to the use of our name under the heading "Legal Matters" in the prospectus forming a part of the Registration Statement. By giving this consent, we do not thereby admit that we are (1) experts within the meaning of Section 11 of the Securities Act, or (2) within the category of persons whose consent is required under Section 7 of the Securities Act or under the rules and regulations of the Commission thereunder.

We express no opinion as to any matter other than as expressly set forth above, and no opinion on any other matter may be inferred or implied herefrom. We undertake no, and hereby disclaim any, obligation to advise the Company or anyone else of any change in any matter set forth herein.

Very truly yours,

/s/ Baker Botts L.L.P.

DAWSON GEOPHYSICAL COMPANY
COMPUTATION OF RATIO OF EARNINGS TO FIXED CHARGES
(in thousands)

	Three Months Ended December 31, 2011	Fiscal Years Ended September 30,				
		2011	2010	2009	2008	2007
Pretax income from continuing operations	\$ 3,095	\$(2,807)	\$(13,990)	\$17,715	\$ 56,407	\$ 44,458
Fixed charges and amortization of capitalized interest	150	167	—	—	482	145
Capitalized interest	—	—	—	—	—	—
Earnings	\$ 3,245	\$(2,640)	\$(13,990)	\$17,715	\$ 56,889	\$ 44,603
Interest expensed and capitalized	\$ 150	167	—	—	482	145
Amortized premiums	—	—	—	—	—	—
Portion of rent representative of interest	—	—	—	—	—	—
Total fixed charges:	\$ 150	167	—	—	482	145
Ratio of earnings to fixed charges:	21.63x	(A)	N/A	N/A	118.03x	307.61x

(A) For the year ended September 30, 2011, earnings were less than fixed charges. The amount of the coverage deficiency, or the amount of fixed charges in excess of earnings, was approximately \$2,807,000.

CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

The Board of Directors and Stockholders
Dawson Geophysical Company:

We consent to the incorporation by reference in this registration statement on Form S-3 of Dawson Geophysical Company of our reports dated December 9, 2011, with respect to the balance sheets of Dawson Geophysical Company as of September 30, 2011 and 2010, and the related statements of operations, stockholders' equity and other comprehensive income (loss), and cash flows for each of the years in the three-year period ended September 30, 2011, and the related financial statement schedule, and the effectiveness of internal control over financial reporting as of September 30, 2011 which reports appear in the September 30, 2011 annual report on Form 10-K of Dawson Geophysical Company, and to the reference to our firm under the heading "Experts" in such registration statement.

/s/ KPMG LLP

Dallas, Texas
April 4, 2012