As filed with the Securities and Exchange Commission on September 23, 2009 Registration No. 333-____

UNITED STATES SECURITIES AND EXCHANGE COMMISSION Washington, D.C. 20549

FORM S-3

REGISTRATION STATEMENT

UNDER

THE SECURITIES ACT OF 1933

BSD MEDICAL CORPORATION (Exact name of registrant as specified in its charter)

Delaware (State or other jurisdiction of incorporation or organization) 75-1590407 (I.R.S. Employer Identification Number)

2188 West 2200 South

Salt Lake City, Utah 84119

(801) 972-5555

(Address, including zip code, and telephone number, including area code of registrant's principal executive offices)

Harold R. Wolcott President BSD Medical Corporation 2188 West 2200 South Salt Lake City, Utah 84119 (801) 972-5555

(Name, address, including zip code, and telephone number, including area code, of agent for service)

Copy to: Nolan S. Taylor, Esq. Dorsey & Whitney LLP 136 South Main Street, Suite 1000 Salt Lake City, Utah 84101 Telephone: (801) 933-7360

From time to time after the effective date of this Registration Statement

(Approximate date of commencement of proposed sale to the public)

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

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. x

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. o

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. o

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. o

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. o

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. (Check one):

Large accelerated filer o	Accelerated filer x	Non-accelerated filer o	Smaller Reporting Company x
		(Do not check if a smaller	1 2
		reporting company)	

CALCULATION OF REGISTRATION FEE

		Proposed	Proposed		
	Amount to be	Maximum	Maximum		
Title of Each Class of	Registered(1)	Aggregate Price	Aggregate Offering	Amount of	of
Securities To Be Registered(1)	(2)	Per Unit(2)	Price (2) (3)	Registration F	Fee (6)
Common Stock, par value					
\$0.001 per share					
Preferred Stock, par value					
\$0.001 per share					
Debt Securities(4)					
Warrants(5)					
Units					
Total			\$ 50,000,000	\$	2,790

- 1. There are being registered hereunder such indeterminate number of shares of common stock, such indeterminate number of shares of preferred stock, such indeterminate principal amount of debt securities, and such indeterminate number of warrants to purchase common stock, preferred stock or debt securities as will have an aggregate initial offering price not to exceed \$50,000,000. Any securities registered hereunder may be sold separately or as units with other securities registered hereunder. The securities registered also include such indeterminate amounts and numbers of shares of common stock and preferred stock and such indeterminate principal amounts of debt securities, as may be issued upon exercise of warrants, upon conversion of or exchange for debt securities that provide for conversion or exchange, or pursuant to anti-dilution provisions of any such securities. No separate consideration will be received for any shares of common stock, preferred stock, or principal amounts of debt securities so issued upon conversion or exchange.
 - 2. Not applicable pursuant to Form S-3 General Instruction II.D.
- 3. The Registrant is hereby registering an indeterminate amount and number of each identified class of the identified securities up to a proposed maximum aggregate offering price of \$50,000,000, which may be offered from time to time at indeterminate prices, including securities that may be purchased by underwriters. The Registrant has estimated the proposed maximum aggregate offering price solely for the purpose of calculating the registration fee pursuant to Rule 457(o) under the Securities Act of 1933, as amended.
- 4. If any debt securities are issued at an original issue discount, then the offering price of such debt securities shall be in such greater principal amount as shall result in an aggregate initial offering price not to exceed \$50,000,000, less the aggregate dollar amount of all securities previously issued hereunder.
- 5. Includes warrants to purchase common stock, warrants to purchase preferred stock and warrants to purchase debt securities.
 - 6. The registration fee has been calculated in accordance with Rule 457(o) under the Securities Act.

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 that 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 Securities and Exchange 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 or accept an offer to buy 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 it is not soliciting offers to buy these securities in any state where such offer or sale is not permitted.

SUBJECT TO COMPLETION, DATED SEPTEMBER 23, 2009 PROSPECTUS \$50,000,000 COMMON STOCK, PREFERRED STOCK, DEBT SECURITIES, WARRANTS AND UNITS BSD MEDICAL CORPORATION

From time to time, we may offer up to \$50,000,000 of any combination of the securities described in this prospectus, either individually or in units.

This prospectus provides a general description of the securities we may offer. Each time we sell securities, we will provide specific terms of the securities offered in a supplement to this prospectus. We may also authorize one or more free writing prospectuses to be provided to you in connection with these offerings. The prospectus supplement and any related free writing prospectus may also add, update or change information contained in this prospectus. You should carefully read this prospectus, the applicable prospectus supplement and any related free writing prospectus, the applicable prospectus supplement and any related free writing prospectus, as well as any documents incorporated by reference before you invest in any securities. This prospectus may not be used to consummate a sale of securities unless accompanied by the applicable prospectus supplement.

Our common stock is listed on The Nasdaq Global Market under the symbol "BSDM." On September 22, 2009, the last reported sale price for our common stock was \$3.83 per share. The applicable prospectus supplement will contain information, where applicable, as to any other listing on The Nasdaq Global Market or any securities market or other exchange of the securities, if any, covered by the prospectus supplement.

INVESTING IN OUR SECURITIES INVOLVES RISKS. YOU SHOULD REVIEW CAREFULLY THE RISKS AND UNCERTAINTIES DESCRIBED UNDER THE HEADING "RISK FACTORS" ON PAGE 5 AND CONTAINED IN THE APPLICABLE PROSPECTUS SUPPLEMENT AND ANY RELATED FREE WRITING PROSPECTUS AND UNDER SIMILAR HEADINGS IN THE OTHER DOCUMENTS THAT ARE INCORPORATED BY REFERENCE INTO THIS PROSPECTUS.

We will sell these securities directly to investors, through agents designated from time to time or to or through underwriters or dealers. For additional information on the methods of sale, you should refer to the section entitled "Plan of Distribution" in this prospectus. If any underwriters are involved in the sale of any securities with respect to which this prospectus is being delivered, the names of such underwriters and any applicable commissions or discounts will be set forth in a prospectus supplement. The price to the public of such securities and the net proceeds we expect to receive from such sale will also be set forth in a prospectus supplement.

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

TABLE OF CONTENTS

ABOUT THIS PROSPECTUS	1
SUMMARY	2
RISK FACTORS	5
<u>SPECIAL NOTE REGARDING FORWARD-LOOKING</u> <u>STATEMENTS</u>	6
USE OF PROCEEDS	7
DESCRIPTION OF CAPITAL STOCK	8
DESCRIPTION OF DEBT SECURITIES	12
DESCRIPTION OF WARRANTS	13
DESCRIPTION OF UNITS	15
PLAN OF DISTRIBUTION	16
LEGAL MATTERS	18
EXPERTS	18
WHERE YOU CAN FIND MORE INFORMATION	18
INCORPORATION BY REFERENCE	19

ABOUT THIS PROSPECTUS

This prospectus is a part of a registration statement that we filed with the Securities and Exchange Commission, or SEC, utilizing a "shelf" registration process. Under this shelf registration process, we may sell any combination of the securities described in this prospectus in one or more offerings up to a total dollar amount of \$50,000,000. This prospectus provides you with a general description of the securities we may offer. Each time we sell securities under this shelf registration, we will provide a prospectus supplement that will contain specific information about the terms of that offering. We may also authorize one or more free writing prospectuses to be provided to you that may contain material information relating to these offerings. The prospectus supplement and any related free writing prospectus or in any documents that we have incorporated by reference into this prospectus. You should read this prospectus, any applicable prospectus supplement and any related free writing prospectus, together with the information incorporated herein by reference as described under the heading "Incorporation by Reference."

You should rely only on the information that we have provided or incorporated by reference in this prospectus, any applicable prospectus supplement and any related free writing prospectus that we may authorize to be provided to you. We have not authorized any dealer, salesman or other person to give any information or to make any representation other than those contained or incorporated by reference in this prospectus, any applicable prospectus supplement or any related free writing prospectus that we may authorize to be provided to you. You must not rely upon any information or representation not contained or incorporated by reference in this prospectus or the accompanying prospectus supplement. This prospectus and the accompanying supplement to this prospectus do not constitute an offer to sell or the solicitation of an offer to buy any securities other than the registered securities to which they relate, nor do this prospectus and the accompanying supplement to this prospectus constitute an offer to sell or the solicitation of an offer to buy securities in any jurisdiction to any person to whom it is unlawful to make such offer or solicitation in such jurisdiction. You should not assume that the information contained in this prospectus, any applicable prospectus supplement or any related free writing prospectus is accurate on any date subsequent to the date set forth on the front of the document or that any information we have incorporated by reference is correct on any date subsequent to the date of the document incorporated by reference, even though this prospectus, any applicable prospectus supplement or any related free writing prospectus is delivered or securities sold on a later date.

Table of Contents

1

SUMMARY

Prospectus Summary

This summary highlights selected information from this prospectus and does not contain all of the information that you need to consider in making your investment decision. You should carefully read the entire prospectus, including the risks of investing discussed under "Risk Factors" beginning on page 5, the information incorporated by reference, including our financial statements, and the exhibits to the registration statement of which this prospectus is a part.

Throughout this prospectus, references to "BSD," the "Company," "we," "us," and "our" refer to BSD Medical Corporation.

Our Company

We develop, manufacture, market and service medical systems that deliver precision-focused radio frequency (RF) or microwave energy into diseased sites of the body, heating them to specified temperatures as required by a variety of medical therapies. Our business objectives are to commercialize our products developed for the treatment of cancer and to further expand our systems to treat other diseases and medical conditions. Our product line for cancer therapy has been created to offer hospitals and clinics a complete solution for thermal treatment for cancer provided through microwave/RF systems.

While our primary developments to date have been cancer treatment systems, we also pioneered the use of microwave thermal therapy for the treatment of symptoms associated with enlarged prostate, and we are responsible for technology that has contributed to a new medical industry addressing the needs of men's health. In accordance with our strategic plan, we subsequently sold our interest in TherMatrx, Inc., the company established to commercialize our technology to treat enlarged prostate symptoms, to provide substantial funding that we can utilize for commercializing our systems used in the treatment of cancer and in achieving other business objectives.

Our product line includes systems that have been strategically designed to offer a range of thermal treatment systems for the treatment of cancer, including both hyperthermia and ablation treatment systems. Studies have shown that both hyperthermia and ablation treatments kill cancer but they have different clinical applications.

Our hyperthermia cancer treatment systems are used to treat cancer with heat (hyperthermia) while boosting the effectiveness of radiation through a number of biological mechanisms. Hyperthermia is usually used to increase the effectiveness of other therapies; e.g., radiation therapy and chemotherapy for the treatment of locally advanced cancers. Hyperthermia usually refers to treatments delivered at temperatures of 40-49°C for one hour.

Our microwave ablation system is to be used to ablate (remove or vaporize) soft tissue with heat alone. Thermal ablation usually refers to heat treatments delivered at temperatures above 55°C for short periods of time. Thermal ablation is used to destroy local tumors using a short intense focus of heat on a specific area, which is usually small, similar to surgical removal of the tumor.

Our primary mission is to develop the full spectrum of medical uses for our special competence in precision-focused RF/microwave systems, and to broadly apply the utilization of our technology to treat cancer and benign diseases and conditions.

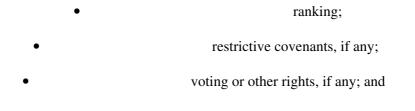
Our principal executive offices are located at 2188 West 2200 South, Salt Lake City, Utah 84101, and our telephone number is (801) 972-5555.

The Securities We May Offer

We may offer shares of our common stock and preferred stock, various series of debt securities and warrants to purchase any of such securities, either individually or in units, with a total value of up to \$50 million from time to time under this prospectus, together with any applicable prospectus supplement and related free writing prospectus, at prices and on terms to be determined by market conditions at the time of offering. This prospectus provides you with a general description of the securities we may offer. Each time we offer a type or series of securities, we will provide a prospectus supplement that will describe the specific amounts, prices and other important terms of the securities, including, to the extent applicable:

designation or classification;
aggregate principal amount or aggregate offering price;
maturity, if applicable;
original issue discount, if any;
rates and times of payment of interest or dividends, if any;
redemption, conversion, exchange or sinking fund terms, if any;

• conversion or exchange prices or rates, if any, and, if applicable, any provisions for changes to or adjustments in the conversion or exchange prices or rates and in the securities or other property receivable upon conversion or exchange;



important United States federal income tax considerations.

A prospectus supplement and any related free writing prospectus that we may authorize to be provided to you may also add, update or change information contained in this prospectus or in documents we have incorporated by reference. However, no prospectus supplement or free writing prospectus will offer a security that is not registered and described in this prospectus at the time of the effectiveness of the registration statement of which this prospectus is a part.

We may sell the securities directly to or through underwriters, dealers or agents. We, and our underwriters or agents, reserve the right to accept or reject all or part of any proposed purchase of securities. If we do offer securities through underwriters or agents, we will include in the applicable prospectus supplement:

•	the names of those underwriters or agents;
•	applicable fees, discounts and commissions to be paid to them;
•	details regarding over-allotment options, if any; and
•	the net proceeds to us.

Common Stock. We may offer shares of our common stock from time to time. Holders of our common stock are entitled to one vote per share on all matters that require stockholder approval. Subject to any preferential rights of any outstanding preferred stock, holders of our common stock are entitled to dividends when and if declared by the board of directors. Our common stock is described in greater detail in this prospectus under "Description of Capital Stock — Common Stock."

Preferred Stock. We currently have authorized 10,000,000 shares of preferred stock, \$0.001 par value per share. We may offer shares of our preferred stock from time to time, in one or more series. Under our certificate of incorporation, our board of directors currently has the authority to designate the shares of preferred stock in one or more series and to fix the privileges, preferences and rights of each series of preferred stock, any or all of which may be greater than the rights of the common stock. Our Preferred Stock is described in greater detail in this prospectus under "Description of Capital Stock — Preferred Stock."

We will fix the rights, preferences, privileges, qualifications and restrictions of the preferred stock of each series that we sell under this prospectus and applicable prospectus supplements in the certificate of designation relating to that series. We will incorporate by reference into the registration statement of which this prospectus is a part the form of any certificate of designation that describes the terms of the series of preferred stock we are offering before the issuance of the related series of preferred stock. We urge you to read the prospectus supplements and any free writing prospectus that we may authorize to be provided to you related to the series of preferred stock being offered, as well as the complete certificate of designation that contains the terms of the applicable series of preferred stock.

Debt Securities. We may offer debt securities from time to time, in one or more series, as either senior or subordinated convertible debt. The debt securities will be issued under one or more documents called indentures, which are contracts between us and a trustee for the holders of the debt securities. In this prospectus, we have summarized certain general features of the debt securities under "Description of Debt Securities." We urge you, however, to read the prospectus supplements and any free writing prospectus that we may authorize to be provided to you related to the series of debt securities being offered, as well as the complete indentures that contain the terms of the debt securities. Forms of indentures have been filed as exhibits to the registration statement of which this prospectus is a part, and supplemental indentures and forms of debt securities containing the terms of debt securities being offered will be filed as exhibits to the registration statement of which this prospectus is a part, and supplemental indentures and forms of debt securities containing the terms of debt securities being offered will be filed as exhibits to the registration statement of which this prospectus is a part, and supplemental indentures and forms of debt securities containing the terms of debt securities being offered will be filed as exhibits to the registration statement of which this prospectus is a part, or incorporated by reference from a current report on Form 8-K that we file with the SEC.

Warrants. We may offer warrants for the purchase of our common stock, preferred stock and/or debt securities in one or more series, from time to time. We may issue warrants independently or together with common stock, preferred stock and/or debt securities, and the warrants may be attached to or separate from those securities.

The warrants will be evidenced by warrant certificates issued under one or more warrant agreements, which are contracts between us and an agent for the holders of the warrants. In this prospectus, we have summarized certain general features of the warrants under "Description of Warrants." We urge you, however, to read the prospectus supplements and any free writing prospectus that we may authorize to be provided to you related to the series of warrants being offered, as well as the complete warrant agreements and warrant certificates that contain the terms of the warrants. Specific warrant agreements will contain additional important terms and provisions and will be filed as exhibits to the registration statement of which this prospectus is a part, or incorporated by reference from a current report on Form 8-K that we file with the SEC.

Units. We may offer units consisting of common stock, preferred stock, debt securities and/or warrants to purchase any of such securities in one or more series. In this prospectus, we have summarized certain general features of the units under "Description of Units." We urge you, however, to read the prospectus supplements and any free writing prospectus that we may authorize to be provided to you related to the series of units being offered, as well as the unit agreements that contain the terms of the units. We will file as exhibits to the registration statement of which this prospectus is a part, or will incorporate by reference from a current report on Form 8-K that we file with the SEC, the form of unit agreement and any supplemental agreements that describe the terms of the series of units we are offering before the issuance of the related series of units.

We will evidence each series of units by unit certificates that we will issue under a separate agreement. We will enter into the unit agreements with a unit agent. Each unit agent will be a bank or trust company that we select. We will indicate the name and address of the unit agent in the applicable prospectus supplement relating to a particular series of units.

THIS PROSPECTUS MAY NOT BE USED TO OFFER OR SELL ANY SECURITIES UNLESS ACCOMPANIED BY A PROSPECTUS SUPPLEMENT.

RISK FACTORS

An investment in our securities involves a high degree of risk. The prospectus supplement applicable to each offering of our securities will contain a discussion of the risks applicable to an investment in our securities. Prior to making a decision about investing in our securities, you should carefully consider the specific factors discussed under the heading "Risk Factors" in the applicable prospectus supplement, together with all of the other information contained or incorporated by reference in the prospectus supplement or appearing or incorporated by reference in this prospectus. You should also consider the risks, uncertainties and assumptions discussed under Item 1A, "Risk Factors," in our Annual Report on Form 10-K for the fiscal year ended August 31, 2008, and our Quarterly Reports on Form 10-Q for the quarterly periods ended November 30, 2008, February 28, 2009 and May 31, 2009, all of which are incorporated herein by reference, and may be amended, supplemented or superseded from time to time by other reports we file with the Securities and Exchange Commission in the future. The risks and uncertainties we have described are not the only ones we face. Additional risks and uncertainties not presently known to us or that we currently deem immaterial may also affect our operations.

SPECIAL NOTE REGARDING FORWARD-LOOKING STATEMENTS

This prospectus and the documents incorporated by reference contain forward-looking statements. These are based on our management's current beliefs, expectations and assumptions about future events, conditions and results and on information currently available to us. Discussions containing these forward-looking statements may be found, among other places, in the Sections entitled "Business," "Risk Factors" and "Management's Discussion and Analysis of Financial Condition and Results of Operations" incorporated by reference from our most recent Annual Report on Form 10-K and in our Quarterly Reports on Form 10-Q, as well as any amendments thereto, filed with the SEC. Within the meaning of Section 27A of the Securities Act of 1933, as amended, or the Securities Act, and Section 21E of the Securities Exchange Act of 1934, as amended, or the Exchange Act, these forward-looking statements include, but are not limited to, statements about our business, technologies, prospects, partners, customers, suppliers and regulatory strategies.

All statements, other than statements of historical fact, included or incorporated herein regarding our strategy, future operations, financial position, future revenues, projected costs, plans, prospects and objectives are forward-looking statements. In some cases, you can identify forward-looking statements by terms such as "anticipate," "believe," "could," "estimate," "expect," "intend," "may," "plan," "potential," "predict," "project," "should," "will," "would" and similar expression statements involve risks, uncertainties and other factors that may cause our actual results, performance, time frames or achievements to be materially different from any future results, performance, time frames or achievements expressed or implied by the forward-looking statements. Risks, uncertainties and other factors that might cause or contribute to such differences include, but are not limited to, those discussed in the Section entitled "Risk Factors" in our most recent Annual Report on Form 10-K and in our Quarterly Reports on Form 10-Q, as well as any amendments thereto filed with the SEC. Given these risks, uncertainties and other factors, many of which are beyond our control, you should not place undue reliance on these forward-looking statements.

Except as required by law, we assume no obligation to update these forward-looking statements publicly, or to revise any forward-looking statements to reflect events or developments occurring after the date of this prospectus, even if new information becomes available in the future.

Table of Contents

6

USE OF PROCEEDS

Except as described in any applicable prospectus supplement and in any free writing prospectuses in connection with a specific offering, we currently intend to use the net proceeds from the sale of the securities offered hereby for operating costs, capital expenditures and for general corporate purposes, including working capital. We may also use a portion of the net proceeds to invest in or acquire businesses or technologies that we believe are complementary to our own, although we have no current plans, commitments or agreements with respect to any acquisitions as of the date of this prospectus. Pending these uses, we intend to invest the net proceeds in investment-grade, interest-bearing securities.

Table of Contents

7

DESCRIPTION OF CAPITAL STOCK

As of the date of this prospectus, our certificate of incorporation authorizes us to issue 40,000,000 shares of common stock, par value \$0.001 per share, and 10,000,000 shares of preferred stock, par value \$0.001 per share. As of August 31, 2009, 22,039,301 shares of common stock were outstanding and no shares of preferred stock were outstanding.

The following description of our capital stock is a summary. It is not complete and is subject to and qualified in its entirety by our Amended and Restated Certificate of Incorporation and Bylaws, as amended, a copy of each of which has been incorporated as an exhibit to the registration statement of which this prospectus forms a part.

Our Amended and Restated Certificate of Incorporation and Bylaws contain certain provisions that are intended to enhance the likelihood of continuity and stability in the composition of the board of directors, which may have the effect of delaying, deferring or preventing a future takeover or change in control of BSD unless such takeover or change in control is approved by our board of directors.

Common Stock

Holders of common stock are entitled to one vote per share on all matters to be voted upon by the stockholders. Holders of common stock do not have cumulative voting rights, and, therefore, holders of a majority of the shares voting for the election of directors can elect all of the directors. In such event, the holders of the remaining shares will not be able to elect any directors. Subject to preferences that may be applicable to any then-outstanding preferred stock, holders of common stock are entitled to receive such dividends as may be declared from time to time by our board of directors out of funds legally available therefore. We have never declared or paid cash dividends on our capital stock. We expect to retain future earnings, if any, for use in the operation and expansion of our business, and do not anticipate paying any cash dividends in the foreseeable future.

In the event of our liquidation, dissolution or winding up, holders of common stock are entitled to share ratably in all assets legally available for distribution after payment of all debts and other liabilities and subject to the prior rights of the holders of any preferred stock then outstanding. Holders of common stock have no preemptive or other subscription or conversion rights, and there are no redemption or sinking fund provisions applicable to the common stock.

All outstanding shares of common stock are, and all shares of common stock to be outstanding upon the closing of this offering will be, 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 stockholder approval, except as may be required by applicable stock exchange requirements.

The transfer agent and registrar for our common stock is OTC Stock Transfer, Inc. Our common stock is listed on The Nasdaq Global Market under the symbol "BSDM".

Preferred Stock

As of the date of this prospectus, there were no shares of preferred stock outstanding. Our Amended and Restated Certificate of Incorporation authorizes 10,000,000 shares of undesignated preferred stock. Our board of directors will have the authority, without any further vote or action by our stockholders, to issue from time to time the preferred stock in one or more series and to fix the price, rights, preferences, privileges and restrictions thereof, including dividend rights, dividend rates, conversion rights, voting rights, terms of redemption, redemption prices, liquidation preferences and the number of shares constituting a series or the designation of such series. The issuance of preferred

stock, while providing desirable flexibility in connection with possible acquisitions and other corporate purposes, could decrease the amount of earnings and assets available for distribution to holders of common stock or adversely affect the rights and powers, including voting rights, of the holders of common stock, and may have the effect of delaying, deferring or preventing a change in control without further action by the stockholders. We have no current plans to issue any shares of preferred stock.

Future Preferred Stock. Our board of directors will fix the rights, preferences, privileges, qualifications and restrictions of the preferred stock of each series that we sell under this prospectus and applicable prospectus supplements in the certificate of designation relating to that series. We will file as an exhibit to the registration statement of which this prospectus is a part, or incorporate by reference into the registration statement of which this prospectus is a part the form of any certificate of designation that describes the terms of the series of preferred stock we are offering before the issuance of the related series of preferred stock. This description will include:

- the title and stated value;
- the number of shares we are offering;
- the liquidation preference per share;
 - the purchase price per share;
- the dividend rate per share, dividend period and payment dates and method of calculation for dividends;
- whether dividends will be cumulative or non-cumulative and, if cumulative, the date from which dividends will accumulate;
 - our right, if any, to defer payment of dividends and the maximum length of any such deferral period;
 - the procedures for any auction and remarketing, if any;
 - the provisions for a sinking fund, if any;
- the provisions for redemption or repurchase, if applicable, and any restrictions on our ability to exercise those redemption and repurchase rights;
 - •

.

- any listing of the preferred stock on any securities exchange or market;
- whether the preferred stock will be convertible into our common stock or other securities of ours, including warrants, and, if applicable, the conversion period, the conversion price, or how it will be calculated, and under what circumstances it may be adjusted;
- whether the preferred stock will be exchangeable into debt securities, and, if applicable, the exchange period, the exchange price, or how it will be calculated, and under what circumstances it may be adjusted;
 - voting rights, if any, of the preferred stock;
 - preemption rights, if any;
 - restrictions on transfer, sale or other assignment, if any;
- a discussion of any material or special United States federal income tax considerations applicable to the preferred stock;
- the relative ranking and preferences of the preferred stock as to dividend rights and rights if we liquidate, dissolve or wind up our affairs;

- any limitations on issuances of any class or series of preferred stock ranking senior to or on a parity with the series of preferred stock being issued as to dividend rights and rights if we liquidate, dissolve or wind up our affairs; and
 - any other specific terms, rights, preferences, privileges, qualifications or restrictions of the preferred stock.

When we issue shares of preferred stock under this prospectus, the shares will be fully paid and nonassessable and will not have, or be subject to, any preemptive or similar rights.

The General Corporation Law of the State of Delaware, the state of our incorporation, provides that the holders of preferred stock will have the right to vote separately as a class on any proposal involving fundamental changes in the rights of holders of that preferred stock. This right is in addition to any voting rights that may be provided for in the applicable certificate of designation.

Antitakeover Effects of Provisions of Charter Documents and Delaware Law

Certain provisions of our Amended and Restated Certificate of Incorporation and Bylaws could make the following more difficult:

acquisition of us by means of a tender offer;
acquisition of us by means of a proxy contest or otherwise; and
the removal of our incumbent officers and directors.

These provisions, summarized below, are expected 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 increased protection resulting from our potential ability to negotiate with the proponent of an unfriendly or unsolicited proposal to acquire or restructure us outweigh the disadvantages of discouraging such proposals because we believe that the negotiation of such proposals could result in an improvement of their terms.

Stockholder Meetings. Our Amended and Restated Certificate of Incorporation provides that only the board of directors, the Chairman of the Board, the Chief Executive Officer or our President may call special meetings of stockholders. The provision may not be amended without the affirmative vote of holders of at least 66 2/3% of our outstanding voting stock.

Elimination of Stockholder Action By Written Consent. Our charter documents eliminate the right of stockholders to act by written consent without a meeting.

Elimination of Cumulative Voting. Our charter documents do not provide for cumulative voting in the election of directors.

Undesignated Preferred Stock. The ability to authorize undesignated preferred stock makes it possible for the board of directors to issue preferred stock with voting or other rights or preferences that could impede the success of any attempt to change control of us. These and other provisions may have the effect of deferring hostile takeovers or delaying changes in control or management of us.

Delaware Takeover Statute. We are subject to Section 203 of the General Corporation Law of the State of Delaware, or DGCL, which regulates acquisitions of some Delaware corporations. In general, Section 203 prohibits, with some exceptions, a publicly held Delaware corporation from engaging in a "business combination" with an "interested stockholder" for a period of three years following the date of the transaction in which the person became an interested stockholder, unless:

•

the board of directors of the corporation approved the business combination or the other transaction in which the person became an interested stockholder prior to the date of the business combination or other transaction;

- upon consummation of the transaction that resulted in the person becoming an interested stockholder, the person owned at least 85% of the voting stock of the corporation outstanding at the time the transaction commenced, excluding shares owned by persons who are directors and also officers of the corporation and shares issued under employee stock plans under which employee participants do not have the right to determine confidentially whether shares held subject to the plan will be tendered in a tender or exchange offer; or
- on or subsequent to the date the person became an interested stockholder, the board of directors of the corporation approved the business combination and the stockholders of the corporation authorized the business combination at an annual or special meeting of stockholders by the affirmative vote of at least 66-2/3% of the outstanding stock of the corporation not owned by the interested stockholder.

Section 203 of the DGCL generally defines a "business combination" to include any of the following:

- any merger or consolidation involving the corporation and the interested stockholder;
- any sale, transfer, pledge or other disposition to the interested stockholder of assets with a value equal to 10% or more of the corporation's assets or outstanding stock;
- in general, any transaction that results in the issuance or transfer by the corporation of any of its stock to the interested stockholder;
- any transaction involving the corporation that has the effect of increasing the proportionate share of its stock owned by the interested stockholder; or
- the receipt by the interested stockholder of the benefit of any loans, advances, guarantees, pledges or other financial benefits provided by or through the corporation.

In general, Section 203 defines an "interested stockholder" as any person who, together with the person's affiliates and associates, owns, or within three years prior to the determination of interested stockholder status did own, 15% or more of a corporation's voting stock.

Section 203 of the DGCL could depress our stock price and delay, discourage or prohibit transactions not approved in advance by our board of directors, such as takeover attempts that might otherwise involve the payment to our stockholders of a premium over the market price of our common stock.

The provisions of Delaware law and our Amended and Restated Certificate of Incorporation and Bylaws could have the effect of discouraging others from attempting unsolicited takeovers and, as a consequence, they may also inhibit temporary fluctuations in the market price of our common stock that often result from actual or rumored unsolicited takeover attempts. Such provisions may also have the effect of preventing changes in our management. It is possible that these provisions could make it more difficult to accomplish transactions, which stockholders may otherwise deem to be in their best interests.

Table of Contents

11

DESCRIPTION OF DEBT SECURITIES

This section describes the general terms and provisions of the debt securities that we may offer using this prospectus and the related indentures. This section is only a summary and does not purport to be complete. You must look to the relevant form of debt security and the related indenture for a full understanding of all terms of any series of debt securities. The form of debt security and the related indenture have been or will be filed or incorporated by reference as exhibits to the registration statement of which this prospectus is a part. See "Where You Can Find More Information" for information on how to obtain copies.

We may issue senior or subordinated debt securities from time to time in one or more series under one of two separate indentures, which may be supplemented or amended from time to time. Senior debt securities will be issued under a senior indenture and subordinated debt securities will be issued under a subordinated indenture. The senior debt indenture and the subordinated debt indenture are referred to individually in this prospectus as the "indenture" and collectively as the "indentures." This prospectus outlines briefly the provisions of the indentures. The particular terms of a series of debt securities and the extent, if any, to which the particular terms of the issue modify the terms of the indenture will be described in the accompanying prospectus supplement relating to such series of debt securities. In some instances, certain of the precise terms of debt securities you are offered may be described in a further prospectus supplement, known as a pricing supplement. The indentures are subject to and governed by the Trust Indenture Act of 1939, as amended, and may be supplemented or amended from time to time following their execution.

The debt securities may be denominated and payable in U.S. dollars or foreign currencies. We may also issue debt securities with the principal amount, interest or other amounts payable to be determined by reference to one or more currency exchange rates, securities or baskets of securities, commodity prices, indices or any other financial, economic or other measure or instrument, including the occurrence or non-occurrence of any event or circumstance. Debt securities may bear interest at a fixed rate, which may be zero, or a floating rate.

Some of the debt securities may be issued as original issue discount debt securities. Original issue discount securities bear no interest or bear interest at below-market rates and will be sold at a discount from their stated principal amount. The prospectus supplement relating to an issue of original issue discount securities will contain information relating to United States federal income tax, accounting, and other special considerations applicable to original issue discount securities.

Holders may present debt securities for exchange or transfer, in the manner, at the places and subject to the restrictions stated in the debt securities and described in the applicable prospectus supplement and other offering material we will provide. We will provide these services without charge except for any tax or other governmental charge payable in connection with these services and subject to any limitations provided in the applicable indenture pursuant to which such debt securities are issued.

Holders may transfer debt securities in definitive bearer form and the related coupons, if any, by delivery to the transferee. If any of the securities are held in global form, the procedures for transfer of interests in those securities will depend upon the procedures of the depositary for those global securities.

We will generally have no obligation to repurchase, redeem, or change the terms of debt securities upon any event (including a change in control) that might have an adverse effect on our credit quality.

Table of Contents

12

DESCRIPTION OF WARRANTS

The following description, together with the additional information we may include in any applicable prospectus supplements and free writing prospectuses, summarizes the material terms and provisions of the warrants that we may offer under this prospectus, which may consist of warrants to purchase common stock, preferred stock or debt securities and may be issued in one or more series. Warrants may be offered independently or together with common stock, preferred stock or debt securities offered by any prospectus supplement, and may be attached to or separate from those securities. While the terms we have summarized below will apply generally to any warrants that we may offer under this prospectus, we will describe the particular terms of any series of warrants that we may offer in more detail in the applicable prospectus supplement and any applicable free writing prospectus. The terms of any warrants offered under a prospectus supplement may differ from the terms described below. However, no prospectus supplement will fundamentally change the terms that are set forth in this prospectus or offer a security that is not registered and described in this prospectus at the time of its effectiveness.

We will issue the warrants under a warrant agreement that we will enter into with a warrant agent to be selected by us. The warrant agent will act solely as an agent of ours in connection with the warrants and will not act as an agent for the holders or beneficial owners of the warrants. We will file as exhibits to the registration statement of which this prospectus is a part, or will incorporate by reference from a current report on Form 8-K that we file with the SEC, the form of warrant agreement, including a form of warrant certificate, that describes the terms of the particular series of warrants we are offering before the issuance of the related series of warrants. The following summaries of material provisions of the warrant agreement and warrant certificate applicable to a particular series of warrants. We urge you to read the applicable prospectus supplement and any applicable free writing prospectus related to the particular series of warrants that we sell under this prospectus, as well as the complete warrant agreements and warrant certificates that contain the terms of the warrants.

General

•

We will describe in the applicable prospectus supplement the terms relating to a series of warrants, including, if applicable:

- the offering price and aggregate number of warrants offered;
 - the currency for which the warrants may be purchased;
- if applicable, the designation and terms of the securities with which the warrants are issued and the number of warrants issued with each such security or each principal amount of such security;
- If applicable, the date on and after which the warrants and the related securities will be separately transferable;
- in the case of warrants to purchase debt securities, the principal amount of debt securities purchasable upon exercise of one warrant and the price at, and currency in which, this principal amount of debt securities may be purchased upon such exercise;
- in the case of warrants to purchase common stock or preferred stock, the number of shares of common stock or preferred stock, as the case may be, purchasable upon the exercise of one warrant and the price at which these shares may be purchased upon such exercise;

the effect of any merger, consolidation, sale or other disposition of our business on the warrant agreements and the warrants;

• the terms of any rights to redeem or call the warrants;

• any provisions for changes to or adjustments in the exercise price or number of securities issuable upon exercise of the warrants;

13

- the dates on which the right to exercise the warrants will commence and expire;
- the manner in which the warrant agreements and warrants may be modified;
- material United States federal income tax consequences of holding or exercising the warrants;
 - the terms of the securities issuable upon exercise of the warrants; and
- any other specific terms, preferences, rights or limitations of or restrictions on the warrants.

Before exercising their warrants, holders of warrants will not have any of the rights of holders of the securities purchasable upon such exercise, including:

- in the case of warrants to purchase debt securities, the right to receive payments of principal of, or premium, if any, or interest on, the debt securities purchasable upon exercise or to enforce covenants in the applicable indenture; or
- in the case of warrants to purchase common stock or preferred stock, the right to receive dividends, if any, or, payments upon our liquidation, dissolution or winding up or to exercise voting rights, if any.

Exercise of Warrants

Each warrant will entitle the holder to purchase the securities that we specify in the applicable prospectus supplement at the exercise price that we describe in the applicable prospectus supplement. Unless we otherwise specify in the applicable prospectus supplement, holders of the warrants may exercise the warrants at any time up to the specified time on the expiration date that we set forth in the applicable prospectus supplement. After the close of business on the expiration date, unexercised warrants will become void.

Holders of the warrants may exercise the warrants by delivering the warrant certificate representing the warrants to be exercised together with specified information, and paying the required amount to the warrant agent in immediately available funds, as provided in the applicable prospectus supplement. We will set forth on the reverse side of the warrant certificate and in the applicable prospectus supplement the information that the holder of the warrant will be required to deliver to the warrant agent.

Upon receipt of the required payment and the warrant certificate properly completed and duly executed at the corporate trust office of the warrant agent or any other office indicated in the applicable prospectus supplement, we will issue and deliver the securities purchasable upon such exercise. If fewer than all of the warrants represented by the warrant certificate are exercised, then we will issue a new warrant certificate for the remaining amount of warrants. If we so indicate in the applicable prospectus supplement, holders of the warrants may surrender securities as all or part of the exercise price for warrants.

DESCRIPTION OF UNITS

The following description, together with the additional information we may include in any applicable prospectus supplements, summarizes the material terms and provisions of the units that we may offer under this prospectus. While the terms we have summarized below will apply generally to any units that we may offer under this prospectus, we will describe the particular terms of any series of units in more detail in the applicable prospectus supplement. The terms of any units offered under a prospectus supplement may differ from the terms described below. However, no prospectus supplement will fundamentally change the terms that are set forth in this prospectus or offer a security that is not registered and described in this prospectus at the time of its effectiveness.

We will file as exhibits to the registration statement of which this prospectus is a part, or will incorporate by reference from a current report on Form 8-K that we file with the SEC, the form of unit agreement that describes the terms of the series of units we are offering, and any supplemental agreements, before the issuance of the related series of units. The following summaries of material terms and provisions of the units are subject to, and qualified in their entirety by reference to, all the provisions of the unit agreement and any supplemental agreements applicable to a particular series of units. We urge you to read the applicable prospectus supplements related to the particular series of units that we sell under this prospectus, as well as the complete unit agreement and any supplemental agreements that contain the terms of the units.

General

We may issue units comprised of one or more debt securities, shares of common stock, shares of preferred stock and warrants in any combination. Each unit will be issued so that the holder of the unit is also the holder of each security included in the unit. Thus, the holder of a unit will have the rights and obligations of a holder of each included security. The unit agreement under which a unit is issued may provide that the securities included in the unit may not be held or transferred separately, at any time or at any time before a specified date.

We will describe in the applicable prospectus supplement the terms of the series of units, including:

- the designation and terms of the units and of the securities comprising the units, including whether and under what circumstances those securities may be held or transferred separately;
 - any provisions of the governing unit agreement that differ from those described below; and
- any provisions for the issuance, payment, settlement, transfer or exchange of the units or of the securities comprising the units.

The provisions described in this section, as well as those described under "Description of Capital Stock," "Description of Debt Securities" and "Description of Warrants" will apply to each unit and to any common stock, preferred stock, debt security or warrant included in each unit, respectively.

Issuance in Series

We may issue units in such amounts and in numerous distinct series as we determine.

Enforceability of Rights by Holders of Units

Each unit agent will act solely as our agent under the applicable unit agreement and will not assume any obligation or relationship of agency or trust with any holder of any unit. A single bank or trust company may act as unit agent for

more than one series of units. A unit agent will have no duty or responsibility in case of any default by us under the applicable unit agreement or unit, including any duty or responsibility to initiate any proceedings at law or otherwise, or to make any demand upon us. Any holder of a unit may, without the consent of the related unit agent or the holder of any other unit, enforce by appropriate legal action its rights as holder under any security included in the unit.

We, the unit agents, and any of their agents may treat the registered holder of any unit certificate as an absolute owner of the units evidenced by that certificate for any purpose and as the person entitled to exercise the rights attaching to the units so requested, despite any notice to the contrary.

PLAN OF DISTRIBUTION

We may sell the securities to or through underwriters or dealers, through agents, directly to one or more purchasers, or through any combination of these methods. The distribution of the securities may be effected from time to time in one or more transactions at a fixed price or prices, which may be changed, at market prices prevailing at the time of sale, at prices related to the prevailing market prices or at negotiated prices. A prospectus supplement or supplements (and any related free writing prospectus that we may authorize to be provided to you) will describe the terms of the offering of the securities, including, to the extent applicable:

- the name or names of any underwriters, if any;
- the purchase price of the securities and the proceeds we will receive from the sale;
- any over-allotment options under which underwriters may purchase additional securities from us;
- any agency fees or underwriting discounts and other items constituting agents' or underwriters' compensation;
 - any public offering price;
 - any discounts or concessions allowed or reallowed or paid to dealers; and
 - any securities exchange or market on which the securities may be listed.

Only underwriters named in the prospectus supplement are underwriters of the securities offered by the prospectus supplement.

By Underwriters

If underwriters are used in the sale, they will acquire the securities for their own account and may resell the securities from time to time in one or more transactions at a fixed public offering price or at varying prices determined at the time of sale. The obligations of the underwriters to purchase the securities will be subject to the conditions set forth in the applicable underwriting agreement. We may offer the securities to the public through underwriting syndicates represented by managing underwriters or by underwriters without a syndicate. Subject to certain conditions, the underwriters will be obligated to purchase all of the securities offered by the prospectus supplement. Any public offering price and any discounts or concessions allowed or reallowed may change from time to time. We may use underwriters with whom we have a material relationship. We will describe in the prospectus supplement, naming the underwriter, the nature of any such relationship.

By Dealers

If a dealer is utilized in the sale of any securities offered by this prospectus, we will sell those securities to the dealer, as principal. The dealer may then resell the securities to the public at varying prices to be determined by the dealer at the time of resale. We will set forth the names of the dealers and the terms of the transaction in the applicable prospectus supplement.

By Agents

We may sell securities directly or through agents we designate from time to time. We will name any agent involved in the offering and sale of securities and we will describe any commissions we will pay the agent in the prospectus

supplement. Unless the prospectus supplement states otherwise, our agent will act on a best-efforts basis for the period of its appointment.

By Direct Sales

We may also directly sell securities offered by this prospectus. In this case, no underwriters or agents would be involved. We will describe the terms of those sales in the applicable prospectus supplement.

16

General Information

Underwriters, dealers and agents that participate in the distribution of the securities offered by this prospectus may be deemed underwriters under the Securities Act of 1933, as amended (the Securities Act), and any discounts or commissions they receive from us and any profit on their resale of the securities may be treated as underwriting discounts and commissions under the Securities Act.

We may authorize agents or underwriters to solicit offers by certain types of institutional investors to purchase securities from us at the public offering price set forth in the prospectus supplement pursuant to delayed delivery contracts providing for payment and delivery on a specified date in the future. We will describe the conditions to these contracts and the commissions we must pay for solicitation of these contracts in the prospectus supplement.

We may provide agents and underwriters with indemnification against civil liabilities related to this offering, including liabilities under the Securities Act, or contribution with respect to payments that the agents or underwriters may make with respect to these liabilities. Agents and underwriters may engage in transactions with, or perform services for, us in the ordinary course of business.

All securities we offer, other than common stock, will be new issues of securities with no established trading market. Any underwriters may make a market in these securities, but will not be obligated to do so and may discontinue any market making at any time without notice. We cannot guarantee the liquidity of the trading markets for any securities.

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 such sale transactions will be identified in the applicable prospectus supplement.

One or more firms, referred to as "remarketing firms," may also offer or sell the securities, if the prospectus supplement so indicates, in connection with a remarketing arrangement upon their purchase. Remarketing firms will act as principals for their own accounts or as agents for us. These remarketing firms will offer or sell the securities in accordance with the terms of the securities. The prospectus supplement will identify any remarketing firm and the terms of its agreement, if any, with us and will describe the remarketing firm's compensation. Remarketing firms may be deemed to be underwriters in connection with the securities they remarket.

In connection with an offering of our securities, underwriters, dealers or agents may purchase and sell them in the open market. These transactions may include stabilizing transactions and purchases to cover syndicate short positions created in connection with the offering. Stabilizing transactions consist of some bids or purchases for the purpose of preventing or slowing a decline in the market price of the securities, and syndicate short positions involve the sale by the underwriters or agents, as the case may be, of a greater number of securities than they are required to purchase from us in the offering. Underwriters may also impose a penalty bid, which means that the underwriting syndicate may reclaim selling concessions allowed to syndicate members or other broker dealers who sell securities in the offering for their account if the syndicate repurchases the securities in stabilizing or covering transactions. These activities may stabilize, maintain or otherwise affect the market price of the securities, which may be higher than the price that might otherwise prevail in the open market. These activities, if commenced, may be discontinued at any time without notice. These transactions may be affected on any securities exchange on which the securities may be listed, in the over-the-counter market or otherwise.

LEGAL MATTERS

Dorsey & Whitney LLP, Salt Lake City, Utah will pass for us upon the validity of the securities being offered by this prospectus and applicable prospectus supplement, and counsel named in the applicable prospectus supplement will pass upon legal matters for any underwriters, dealers or agents.

EXPERTS

Tanner LC, independent registered public accountants, have audited our financial statements and the effectiveness of the Company's internal control over financial reporting incorporated by reference in this prospectus for the year ended August 31, 2008, as set forth in their report which is incorporated by reference in this prospectus and elsewhere in the registration statement. Our financial statements are incorporated by reference in reliance on Tanner LC's report, given on their authority as experts in accounting and auditing.

WHERE YOU CAN FIND MORE INFORMATION

We are a reporting company and file annual, quarterly and current reports, proxy statements and other information with the SEC. We have filed with the SEC a registration statement on Form S-3 under the Securities Act with respect to the securities we are offering under this prospectus. This prospectus does not contain all of the information set forth in the registration statement and the exhibits to the registration statement. For further information with respect to us and the securities we are offering under this prospectus, we refer you to the registration statement and the exhibits and schedules filed as a part of the registration statement. You may read and copy the registration statement, as well as our reports, proxy statements and other information, at the SEC's Public Reference Room at 100 F Street, N.E., Washington, D.C. 20549. You can request copies of these documents by writing to the SEC and paying a fee for the copying cost. Please call the SEC at 1-800-SEC-0330 for more information about the operation of the Public Reference Room. The SEC maintains an internet site that contains reports, proxy and information statements, and other information regarding issuers that file electronically with the SEC, where our SEC filings are also available. The address of the SEC's web site is "http://www.sec.gov." We maintain a website at www.bsdmc.com. Information contained in or accessible through our website does not constitute a part of this prospectus.

Table of Contents

18

INCORPORATION BY REFERENCE

The SEC allows us to "incorporate by reference" information that we file with it into this prospectus, which means that we can disclose important information to you by referring you to those documents. The information incorporated by reference is an important part of this prospectus. The information incorporated by reference is considered to be a part of this prospectus, and information that we file later with the Commission will automatically update and supersede information contained in this prospectus and any accompanying prospectus supplement. We incorporate by reference the documents listed below that we have previously filed with the Commission:

- Our Annual Report on Form 10-K for the year ended August 31, 2008;
- •Our Quarterly Reports on Form 10-Q for the quarters ended November 30, 2008, February 28, 2009 and May 31, 2009;
- Our Current Reports on Form 8-K filed on September 11, 2008, April 8, 2009, April 14, 2009, May 18, 2009, July 29, 2009 and Form 8-K/A filed on September 9, 2008, April 14, 2009 and July 29, 2009; and
- the description of the Company's Common Stock, par value \$0.001 per share, as contained in Item 1 of the Registration Statement on Form 8-A filed on April 22, 2008, including any amendment or report filed for the purpose of updating such description.

We also incorporate by reference into this prospectus additional documents that we may file with the SEC under Sections 13(a), 13(c), 14 or 15(d) of the Exchange Act, excluding, in each case, information deemed furnished and not filed until we sell all of the securities we are offering or the termination of the offering. Any statements contained in a previously filed document incorporated by reference into this prospectus is deemed to be modified or superseded for purposes of this prospectus to the extent that a statement contained in this prospectus, or in a subsequently filed document also incorporated by reference herein, modifies or supersedes that statement.

We will provide to each person, including any beneficial owner, to whom a prospectus is delivered, without charge upon written or oral request, a copy of any or all of the information that has been incorporated by reference into this prospectus but not delivered with the prospectus, including exhibits that are specifically incorporated by reference into such documents. Requests should be directed to: BSD Medical Corporation, Attention: Investor Relations, 2188 West 2200 South, Salt Lake City, UT 84119, telephone: (801) 972-5555.

Table of Contents

19

•

BSD MEDICAL CORPORATION \$50,000,000 Common Stock, Preferred Stock, Debt Securities, Warrants and Units PROSPECTUS

,

PART II

INFORMATION NOT REQUIRED IN THE PROSPECTUS

Item 14. Other Expenses of Issuance and Distribution

The following table sets forth the estimated costs and expenses, other than underwriting discounts and commissions, payable by the registrant in connection with the offering of the securities being registered. All the amounts shown are estimates, except for the SEC registration fee.

SEC registration fee	\$2,790
Accounting fees and expenses	4,000
Legal fees and expenses	15,000
Miscellaneous expenses	25,000
Total	\$46,790

Item 15. Indemnification of Officers and Directors

Section 145 of the Delaware General Corporation Law grants the Company the power to indemnify its officers and directors, under certain circumstances and subject to certain conditions and limitations as stated therein, against all expenses and liabilities incurred by or imposed upon them as a result of suits brought against them as such officers and directors if they act in good faith and in a manner they reasonably believe to be in, or not opposed to, the best interests of the Company, and, with respect to any criminal action or proceeding, have no reasonable cause to believe their conduct was unlawful.

Section 145 of the Delaware General Corporation Law permits a corporation to include in its charter documents, and in agreements between the corporation and its directors and officers, provisions expanding the scope of indemnification beyond that specifically provided by the current law.

Article 8 of the Company's Amended and Restated Certificate of Incorporation provides for the indemnification of directors to the fullest extent permissible under Delaware law.

Section 8 of Article IX of the Company's Bylaws provides for the indemnification of officers, directors and third parties acting on behalf of the Company if such person acted in good faith and in a manner reasonably believed to be in, and not opposed to, the Company's best interest, and, with respect to any criminal action or proceeding, the indemnified party had no reason to believe his or her conduct was unlawful.

Section 145 of the Delaware General Corporation Law also permits a Delaware corporation to purchase and maintain insurance on behalf of its directors and officers. The Company's bylaws permit the registrant to purchase such insurance on behalf of its directors and officers. The Company maintains a policy of liability insurance for its officers and directors.

The underwriting agreement that we may enter into, Exhibit 1.1 to this Registration Statement, will provide for indemnification by any underwriters of the company, our directors, our officers who sign the registration statement and our controlling persons, if any, for some liabilities, including liabilities arising under the Securities Act.

Item 16. Exhibits and Financial Statement Schedules

Exhibit Number	Description of Document
1.1	Form of Underwriting Agreement*
3.1	Amended and Restated Certificate of Incorporation. Incorporated by reference to Exhibit 3.1 of the BSD Medical Corporation Form 10-KSB filed December 1, 2003 (File Number 000-10783)
3.2	Bylaws. Incorporated by reference to Exhibit 3.2 of the BSD Medical Corporation Registration Statement on Form S-1, filed October 16, 1986 (File Number 033-09534)
3.3	Amendment to Bylaws. Incorporated by reference to Exhibit 3.1 of the BSD Medical Corporation Current Report on Form 8-K, filed January 4, 2008 (File Number 001-32526)
4.1	Specimen Common Stock Certificate. Incorporated by reference to Exhibit 4 of the BSD Medical Corporation Registration Statement on Form S-1, filed October 16, 1986 (File Number 033-09534)
4.2	Form of Senior Indenture
4.3	Form of Subordinated Indenture
4.4	Form of Senior Debt Security*
4.5	Form of Subordinated Debt Security*
4.6	Form of Certificate of Designation*
4.7	Form of Preferred Stock Certificate*
4.8	Form of Warrant Agreement*
4.9	Form of Warrant Certificate*
4.10	Form of Unit Agreement*
4.11	Form of Unit Certificate*
5.1	Opinion of Dorsey & Whitney LLP
12.1	Statement Regarding Computation of Ratio of Earnings to Fixed Charges*
23.1	Consent of Independent Registered Public Accounting Firm — Tanner LC
23.2	Consent of Dorsey & Whitney LLP (included in Exhibit 5.1)
24.1	Power of Attorney (included on signature page)
25.1	

Form T-1 Statement of Eligibility under the Trust Indenture Act of 1939, as amended, of Trustee under the Indenture*

*To be filed by amendment or as an exhibit to a report pursuant to Section 13(a) or 15(d) of the Securities Exchange Act of 1934, as amended, and incorporated herein by reference.

Item 17. Undertakings

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 of 1933;

(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) if, in the aggregate, the changes in volume and price represent no more than 20 percent 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 the undertakings set forth in paragraphs (1)(i), (1)(ii) and (1)(iii) above do not apply if the registration statement is on Form S-3 or Form F-3 and 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 Securities Exchange Act of 1934 that are incorporated by reference in the registration statements 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 of 1933, 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 of 1933 to any purchaser:

(i) 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

(ii) 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 of 1933 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.

(5) That, for the purpose of determining liability of the registrant under the Securities Act of 1933 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 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.

(6) That, for purposes of determining any liability under the Securities Act of 1933, each filing of the registrant's annual report pursuant to Section 13(a) or 15(d) of the Securities Exchange Act of 1934 (and, where applicable, each filing of an employee benefit plan's annual report pursuant to Section 15(d) of the Securities Exchange Act of 1934) 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.

(7) That, 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 in accordance with the rules and regulations prescribed by the Commission under Section 305(b)(2) of the Trust Indenture Act.

(8) Insofar as indemnification for liabilities arising under the Securities Act of 1933 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 of 1933 and will be governed by the final adjudication of such issue.

SIGNATURES

Pursuant to the requirements of the Securities Act of 1933, as amended, the Registrant certifies that it has reasonable grounds to believe that it meets all of the requirements for filing on Form S-3 and has duly caused this Registration Statement to be signed on its behalf by the undersigned, thereunto duly authorized, in the city of Salt Lake City, State of Utah, on September 23, 2009.

BSD MEDICAL CORPORATION

BY:

/s/ Harold R. Wolcott Harold R. Wolcott President (Principal Executive Officer)

POWER OF ATTORNEY

Each person whose signature appears below constitutes and appoints Harold R. Wolcott and Paul F. Turner, his or her true and lawful attorney-in-fact and agent with full powers 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 to file the same, with all exhibits thereto, and other documents in connection therewith, with the Securities and Exchange Commission, granting unto said attorney-in-fact and agent full power and authority to do and perform each and every act and thing requisite and necessary to be done in about the premises, as fully to all intents and purposes as he or she might or could do in person, hereby ratifying and confirming all that said attorney-in-fact and agent 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 on September 23, 2009.

/s/ Harold R. Wolcott Harold R. Wolcott	President (principal executive officer) and Director
/s/ Dennis P. Gauger	Chief Financial Officer (principal financial and
Dennis P. Gauger	accounting officer)
/s/ Paul F. Turner	Director, Senior Vice President and Chief Technology
Paul F. Turner	Officer
/s/ Gerhard W. Sennewald Gerhard W. Sennewald	Director
/s/ Michael Nobel Michael Nobel	Director
/s/ Douglas P. Boyd Douglas P. Boyd	Director

/s/ Steven G. Stewart Director Steven G. Stewart

/s/ Timothy C. Director McQuay Timothy C. McQuay

EXHIBIT INDEX

Exhibit Number	Description of Document
1.1	Form of Underwriting Agreement*
3.1	Amended and Restated Certificate of Incorporation. Incorporated by reference to Exhibit 3.1 of the BSD Medical Corporation Form 10-KSB filed December 1, 2003 (File Number 000-10783)
3.2	Bylaws. Incorporated by reference to Exhibit 3.2 of the BSD Medical Corporation Registration Statement on Form S-1, filed October 16, 1986 (File Number 033-09534)
3.3	Amendment to Bylaws. Incorporated by reference to Exhibit 3.1 of the BSD Medical Corporation Current Report on Form 8-K, filed January 4, 2008 (File Number 001-32526)
4.1	Specimen Common Stock Certificate. Incorporated by reference to Exhibit 4 of the BSD Medical Corporation Registration Statement on Form S-1, filed October 16, 1986 (File Number 033-09534)
4.2	Form of Senior Indenture
4.3	Form of Subordinated Indenture
4.4	Form of Senior Debt Security*
4.5	Form of Subordinated Debt Security*
4.6	Form of Certificate of Designation*
4.7	Form of Preferred Stock Certificate*
4.8	Form of Warrant Agreement*
4.9	Form of Warrant Certificate*
4.10	Form of Unit Agreement*
4.11	Form of Unit Certificate*
5.1	Opinion of Dorsey & Whitney LLP
12.1	Statement Regarding Computation of Ratio of Earnings to Fixed Charges*
23.1	Consent of Independent Registered Public Accounting Firm — Tanner LC
23.2	Consent of Dorsey & Whitney LLP (included in Exhibit 5.1)
24.1	Power of Attorney (included on signature page)
25.1	

Form T-1 Statement of Eligibility under the Trust Indenture Act of 1939, as amended, of Trustee under the Indenture*

*To be filed by amendment or as an exhibit to a report pursuant to Section 13(a) or 15(d) of the Securities Exchange Act of 1934, as amended, and incorporated herein by reference.