IMMUCELL CORP /DE/ Form 10-K March 28, 2013

UNITED STATES

SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

FORM 10-K

x ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE

SECURITIES EXCHANGE ACT OF 1934

For the fiscal year ended December 31, 2012

TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE

SECURITIES EXCHANGE ACT OF 1934

001-12934

(Commission file number)

ImmuCell Corporation

(Exact name of Registrant as specified in its charter)

Delaware01-0382980(State or other jurisdiction of
incorporation or organization)(I.R.S. Employer
Identification No.)

56 Evergreen Drive, Portland, Maine 04103 (Address of principal executive offices) (Zip Code)

Registrant's telephone number: (207) 878-2770

Securities registered pursuant to Section 12(b) of the Act:
None
Securities registered pursuant to Section 12(g) of the Act:
Common Stock, par value \$0.10 per share
(Title of class)
Indicate by check mark if the Registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act Yes." No x
Indicate by check mark if the Registrant is not required to file reports pursuant to Section 13 or 15(d) of the Act. Yes No x
Indicate by check mark whether the Registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the Registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. Yes x No.:
Indicate by check mark whether the Registrant has submitted electronically and posted on its corporate Web site, if any, every Interactive Data File required to be submitted and posted pursuant to Rule 405 of Regulation S-T (§232.405 of this chapter) during the preceding 12 months (or for such shorter period that the Registrant was required to submit and post such files). Yes x No "
Indicate by check mark if disclosure of delinquent filers pursuant to Item 405 of Regulation S-K is not contained herein, and will not be contained, to the best of Registrant's knowledge, in definitive proxy or information statements incorporated by reference in Part III of this Form 10-K or any amendment to this Form 10-K. x

Indicate by check mark whether the Registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, or a smaller reporting company. Large accelerated filer "Accelerated filer "Non-accelerated filer "Smaller reporting company x

Indicate by check mark whether the Registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act). Yes "No x

The aggregate market value of the voting and non-voting common equity held by non-affiliates at June 29, 2012 was approximately \$12,926,000 based on the closing sales price on June 29, 2012 of \$5.85 per share.

The number of shares of the Registrant's common stock outstanding at March 20, 2013 was 3,019,034.

Documents incorporated by reference: Portions of the Registrant's definitive Proxy Statement to be filed in connection with the 2013 Annual Meeting of Stockholders are incorporated by reference into Part III hereof.

ImmuCell Corporation

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December 31, 2012

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PART I

ITEM 1 – DESCRIPTION OF BUSINESS

Summary

ImmuCell Corporation was founded in 1982 and completed an initial public offering of common stock in 1987. After achieving approval from the U.S. Department of Agriculture (USDA) to sell **First Defense**® in 1991, we focused most of our efforts during the 1990's developing human product applications of the underlying milk protein purification technology. Beginning in 1999, we re-focused on **First Defense**® and other products for the dairy industry. Our purpose is to create scientifically-proven and practical products that result in a measurable economic impact on animal health and productivity in the dairy and beef industries.

During 2000, we began the development of **Mast Out**^o, our Nisin-based treatment for subclinical mastitis in lactating dairy cows. Nisin is an antibacterial peptide that has been demonstrated in clinical studies to be an effective aid in the reduction of mastitis-causing organisms in dairy cows. Mastitis is a very common infection in dairy cows that results in inflammation of the mammary gland. Because dairy producers are required to discard milk for a period during and after treatment with all currently marketed mastitis treatment products due to concerns about antibiotic residue in milk, it is generally current practice to only treat mastitis when the disease has progressed to the clinical stage where the milk from an infected cow cannot be sold. By avoiding the milk discard penalty and making earlier treatment of subclinically infected cows economically feasible, we believe that **Mast Out** oculd revolutionize the way that mastitis is treated. No other FDA-approved mastitis treatment product on the market can offer this value proposition. Mast Out o could also be used as a tool to improve milk quality, allowing producers to increase milk revenue by earning higher milk quality premiums. No sales of this product can be made without prior approval from the Center for Veterinary Medicine, U.S. Food and Drug Administration (FDA). Regulatory achievements to-date have significantly reduced the product development risks for **Mast Out**^O in the areas of safety and effectiveness. Our primary focus has now turned to the commercial-scale manufacturing objectives required for FDA approval. We are actively engaged in pursuing the necessary financial support and resources to complete the Mast Out^O product development initiative through any combination of available cash, debt, equity and/or investment from a partner.

During the thirteen-year period that began on January 1, 2000 and ended on December 31, 2012, we invested the aggregate of \$16,603,000 in total product development expenses, while working on **Mast Out**^ô and other projects. Approximately 53% of this amount pertained directly to the development of **Mast Out**^ô. This estimated allocation to **Mast Out**^ô reflects only direct expenditures and includes no allocation of product development or administrative overhead expenses. Approximately \$2,641,000 (which was all earned prior to 2008) of this investment was offset by product licensing revenues and grant income related to **Mast Out**^ô. We are engaged in negotiations with potential

partners that may fund the remaining investment, principally related to the manufacture of pharmaceutical-grade Nisin, that is required to bring **Mast Out**^o to market. This strategic decision not to self-fund these large, late-stage development expenses, together with increased sales of **First Defense**[®], allowed us to return to profitability during 2012.

Maintaining our compliance with current Good Manufacturing Practice (cGMP) regulations requires a sustained investment that we believe further increases our products' quality and may open access to international markets where such standards are imposed. At the same time, we are investigating ways to develop new products utilizing the technology underlying **First Defense**® (milk antibodies) and **Mast Out**O (Nisin).

With our 1999 shift to re-focus on animal health products, we were able to record net income for each year during the nine-year period that began on January 1, 1999 and ended on December 31, 2007. We believe that this conservative approach to financial management put us in a position to weather a general economic downturn like the one we have been experiencing, while funding a large amount of **Mast Out**® product development expenses. A significant and controlled investment in the development of **Mast Out**® resulted in net losses for each year during the four-year period that began on January 1, 2008 and ended on December 31, 2011. We had enough cash and short-term investments to fund these losses. We returned to profitability during 2012 based principally on a reduction in product development expenses and an increase in sales of **First Defense**®. During the fourteen-year period that began January 1, 1999 and ended on December 31, 2012, we invested an aggregate of \$17,416,000 in product development expenses. During these fourteen years, this financial strategy (which resulted in nine years of profits followed by four years of losses before returning to profitability in 2012) has allowed us to fund our operations and improve our net financial position, as demonstrated in the following table (in thousands, except for percentages):

	As of December 31, 1998	Net \$ increase over fourteen-year period	As of December 31, 2012	Net % increase over fourteen-year period
Cash, cash equivalents and short-term investments	\$ 1,539	+ \$ 3,375	= \$ 4,914	219 %
Net working capital	\$ 1,866	+ \$ 4,831 =	= \$ 6,697	259 %
Total assets	\$ 3,145	+ \$ 7,885 =	= \$ 11,030	251 %
Stockholders' equity	\$ 2,248	+ \$ 6,947 =	= \$ 9,195	309 %

We had approximately 2,429,000 shares of common stock outstanding as of December 31, 1998 in comparison to 3,019,000 shares as of December 31, 2012. There were approximately 480,000 and 213,000 shares of common stock reserved for issuance under stock options that were outstanding as of December 31, 1998 and 2012, respectively.

Animal Health Products

Our lead product, **First Defense**^o, is manufactured from cows' colostrum using our proprietary vaccine and milk protein purification technologies. The target disease, bovine enteritis (calf scours), causes diarrhea and dehydration in newborn calves and often leads to serious sickness and even death. **First Defense**^o is the only USDA-licensed, orally delivered scours preventive product on the market for calves with claims against *E. coli* K99 and coronavirus (two leading causes of scours). We are a leader in the scours prevention market with this product. During the third quarter of 2012, we sold the 12,000,000th dose of **First Defense**^o. The third quarter of 2012 marked the 21st anniversary of the original USDA approval of this product in 1991. We believe that these milestones demonstrate the value of our technology and the long-term market acceptance of our product.

Due to natural variability in colostrum, newborn calves do not always get the antibodies they need from maternal colostrum. **First Defense**® provides bovine antibodies that newborn calves need but are unable to produce on their own immediately after birth. **First Defense**® competes with scours vaccines that are given to the mother cow and to the calf. Despite the best-managed dam (mother cow) vaccine program, colostrum quality is variable. Further, we know that newborn calves respond poorly, if at all, to vaccines, and the immune system must be given time to develop a response to vaccines. Colostrum feeding must be delayed when a calf vaccine is used, and it is not a good calf health practice to delay the feeding of colostrum while waiting for a vaccine response to be mounted. **First Defense**® provides immediate and preformed immunity (**Immediate Immunity**) when calves need it most - during the first few critical days of life. The direct, two-part mode-of-action of **First Defense**® delivers specific immunoglobulins at the gut level to immediately protect against disease, while also providing additional antibodies that are absorbed into the bloodstream. These circulating antibodies function like a natural timed-release mechanism, as they are re-secreted into the gut later to provide extended protection. A single dose of **First Defense**® provides a guaranteed level of protection proven to reduce mortality and morbidity from two major causes of calf scours. Studies have shown that calves that

scour are more susceptible to other diseases and under-perform calves that do not contract scours. **First Defense**[®] is convenient to use. A calf needs to receive only one bolus of **First Defense**[®] within the first twelve hours after birth. The product is stored at room temperature and no mixing is required before it is given to the calf. There is no required slaughter withdrawal period for calves that are given **First Defense**[®].

During 1999, we acquired **Wipe Out Dairy Wipes**, which is our second leading source of product sales revenue. That transaction included the purchase of certain equipment, trademarks and a license of intellectual property, including several issued patents, covering the product and rights to develop skin and environmental sanitizing applications of the Nisin technology. **Wipe Out Dairy Wipes** consist of biodegradable towelettes that are pre-moistened with a Nisin-based formulation to prepare the teat area of a cow in advance of milking. Milking regulations require that the teat area of cows be cleaned, sanitized and dried for each milking. Producers use a variety of methods including dips and paper or cloth towels. Our wipes are made from a non-woven fabric that is strong enough to allow for a vigorous cleaning but still biodegradable for disposal. The wiping process can also help promote milk letdown. **Wipe Out Dairy Wipes** are manufactured in compliance with cGMP regulations, as required by federal law.

As a product line extension, we have been developing a pet application of our Nisin and **Wipe Out**[®] **Dairy Wipes** technologies, since many skin infections in pets are caused by Nisin-susceptible bacteria. During 2006, we completed a collaborative study of Nisin susceptibility in methicillin-resistant canine staphylococcal isolates with investigators at the University of Pennsylvania School of Veterinary Medicine. One hundred isolates of methicillin-resistant canine *Staphylococcus aureus* (MRSA), *intermedius* and *schleiferi* were tested and found to be highly susceptible to Nisin's antibacterial activity. During 2008, we completed a clinical feasibility study in collaboration with the University of Tennessee to evaluate the effectiveness of Nisin impregnated wipes used to treat skin infections in dogs. During the first quarter of 2013, we made our first significant sale of Nisin-based wipes for pets in a 120-count canister to Bayer Animal Health of St. Joseph, Missouri.

During 2001, we began to offer our own, internally developed **California Mastitis Test (CMT)**. **CMT** can be used for bulk tank as well as individual cow sample monitoring and can be used to determine which quarter of the udder is mastitic. This test can be performed at cow-side for early detection of mastitis. **CMT** products are also made by other manufacturers and are readily available to the dairy producer. The wholesale price of our product is generally lower than the competitive products that were present in the market when we initiated commercial sales.

Sales and Markets

Our sales and marketing team currently consists of one director and two regional managers. Our office manager and facility manager support our sales efforts by performing the order entry, inside sales and shipping duties. Effective for 2011 and 2012, we entered into a sales and marketing collaboration with Agri Laboratories Ltd. of St. Joseph, Missouri, (AgriLabsò), under which the AgriLabs sales and marketing teams worked with us to expand market demand for **First Defense**o. This agreement was not extended beyond December 31, 2012. The manner in which we sell and distribute our products depends, in large measure, upon the nature of the particular product, its intended users and the country in which it is sold. The distribution channel selected is intended to address the particular characteristics of the marketplace for a given product. **First Defense**o is sold primarily through major veterinarian distributors. Sales are normally seasonal, with higher sales expected during the first quarter. Harsh winter weather and severe temperature fluctuations cause stress to calves, and calves under stress are more susceptible to scours. Sales of this product into the beef industry are highly seasonal because most beef calves are born between January and April each year and our product is designed to be administered to calves immediately after birth. We sell **Wipe Out**o **Dairy Wipes**, and **CMT** to distributors, bovine veterinarians and directly to producers. Sales and marketing expenses amounted to 18%, 17% and 15% of product sales in the years ended December 31, 2012, 2011 and 2010, respectively. Our budget guideline for 2013 is to invest up to 20% of product sales in sales and marketing expenses.

First Defense) is generally sold through large, financially strong distributors, which we believe has resulted in minimal bad debt with respect to this product. We provide for a 50% account credit for domestic distributors on

expired **First Defense**^o product, which has a two-year shelf life, resulting in an immaterial amount of returns. Promotional merchandise is given to certain customers at times because we believe it enhances brand recognition. Additionally, advertising, training meetings, incentive programs, direct mail initiatives and face-to-face solution selling are tactics we use to create brand loyalty.

International product sales represented approximately 20%, 19% and 18% of our total product sales for the years ended December 31, 2012, 2011 and 2010, respectively. The majority of these international sales were to Canada. We currently price our products in U.S. dollars. An increase in the value of the dollar in any country in which we sell products may have the effect of increasing the local price of such products, thereby leading to a potential reduction in demand. Conversely, to the extent that the value of the dollar declines with respect to any other currency, our competitive position may be enhanced. Generally, our international sales are generated through relationships with in-country distributors that have knowledge of the local regulatory and marketing requirements.

We continue our efforts to grow sales of **First Defense**^o in North America, where there are approximately 9,000,000 dairy cows in the United States and 1,000,000 dairy cows in Canada. We believe that even greater market opportunities exist in other international territories. There are estimated to be approximately 23,000,000 dairy cows in the European Union, another 8,000,000 in Russia, another 7,000,000 in Australia and New Zealand and another 800,000 in Japan. These figures do not consider potential sales in the beef markets. Industry practices, economic conditions and cause of disease may differ in these foreign markets from what we experience in the United States. We introduced **First Defense**^o into South Korea in 2005 and its equivalent into Japan in 2007 through collaborations with in-country distributors.

Estimated to cost the U.S. dairy industry approximately \$2 billion per year, mastitis (inflammation of the mammary gland) is the most costly and common disease affecting the dairy industry. The disease diminishes the saleable quantity and overall value of milk, in addition to causing other herd health and productivity losses. These losses include the cost of treatment products, reduced milk production, discarded milk and increased cull cows. We estimate that the U.S. market for antibiotics used to treat clinical mastitis (those cases where cows are producing abnormal milk that cannot be sold) in lactating cows is approximately \$40,000,000 per year and that similar market opportunities also exist outside of the United States and for the treatment of dry (non-lactating) cows. Some observers believe the market could be larger.

While the benefit of treating clinical mastitis is widely known, subclinical mastitis (those cases where cows have infected udders, but still produce saleable milk) is associated with its own significant economic losses and is recognized as a significant contributor to clinical mastitis cases. There is a growing awareness of the cascade of adverse events and conditions associated with subclinical mastitis, including reduced or foregone milk quality premiums, lower milk production, shorter shelf life for fluid milk, lower yields and less flavor for cheese, higher rates of clinical mastitis, lower conception rates, increased abortions and increased cull rates. It is difficult to evaluate the potential size of the as-yet undeveloped subclinical mastitis treatment market. Some industry experts have estimated that subclinical mastitis costs the U.S. dairy industry approximately \$1 billion per year. Current intervention strategies for subclinical disease are considered inadequate and generally not cost-effective. Due to milk discard requirements, most dairy producers simply do not treat subclinically infected cows or they cull the affected animals from the herd. Common milk discard periods cover the duration of treatment and extend from 36 to 96 hours after last treatment, depending on the antibiotic. On average, a cow produces approximately 80 pounds of milk per day. While milk prices vary significantly, at an average value of \$15 per 100 pounds, a cow produces approximately \$12 worth of milk per day. Milk discard costs, ranging from approximately \$40 to \$100 per treated animal, are a significant barrier to the routine treatment of subclinical mastitis. We believe Mast Out'o could expand the subclinical mastitis treatment market niche largely because it would not be subject to this milk discard requirement. The ability to treat such cases without a milk discard could revolutionize the way mastitis is managed in a herd. Mast Out^o could be uniquely positioned in the market as both a treatment for subclinical mastitis and as a tool to prevent some cases of clinical mastitis.

Mast Out^ò likely will be priced at a premium to the traditional antibiotic products currently on the market, which are all sold subject to a milk discard requirement. However, we believe that the product's value proposition demonstrates a return on investment to the producer that will justify this premium, even in this economically challenging dairy economy.

The FDA is expected to grant a period of five years of market exclusivity for **Mast Out**^o (meaning the FDA would not grant approval to a second and similar NADA for a period of five years after the first NADA approval is granted) under Section 512(c)(2)F of the Federal Food, Drug, and Cosmetic Act. Regulations in the European Union will likely require that **Mast Out**^o be sold subject to a milk discard requirement in that territory, although the duration of the

milk discard requirement may be shorter than the discard requirement applicable to competitive products on the market.

Many fear that the possible overuse of antibiotics in livestock may undermine the effectiveness of drugs to combat human illnesses and may be a contributing factor to the rising problem of bacterial drug resistance. The FDA is committed to addressing this public health concern. Citing concerns about untreatable, life-threatening infections in humans, new FDA and European regulations are aimed at restricting the use of cephalosporins in food animals and at improving milk quality. New USDA regulations have been implemented to reduce the allowable level of somatic cell counts in milk to 400,000 (previously 750,000) at the farm level in order to qualify for an EU export certification. In late 2011, The Dutch Veterinary Society proposed strict guidelines for veterinary use of antibiotics in the EU. Additionally, regulators have recently increased their monitoring of antibiotic residues in milk and meat. This current environment could be favorable to the introduction of a new product such as **Mast Out**^ô as an alternative to traditional antibiotics. We continue to believe that this product opportunity justifies ongoing product development efforts.

Product Development

Our lead product development initiative is **Mast Out**®, a Nisin-based intramammary treatment of subclinical mastitis in lactating dairy cows. As anticipated, we reduced product development expenses during 2012 primarily because we spent less money on the development of **Mast Out**O with the significant clinical studies now largely complete. Product development expenses decreased by approximately 47%, or \$802,000, to \$918,000 during the year ended December 31, 2012 in comparison to \$1,720,000 during the same period in 2011.

During 2000, we acquired an exclusive license from Nutrition 21, Inc. (formerly Applied Microbiology Inc. or AMBI) to develop and market Nisin-based products for animal health applications, which allowed us to initiate the development of **Mast Out**. In 2004, we paid Nutrition 21 approximately \$965,000 to buy out this royalty and milestone-based license to Nisin, thereby acquiring control of the animal health applications of Nisin. Nisin, the same active ingredient contained in **Wipe Out**. **Dairy Wipes**, is an antibacterial peptide. Nisin is known to have activity against most gram positive and some gram negative bacteria. Nisin is a well characterized substance, having been used in food preservation applications for over 50 years. Food-grade Nisin, however, cannot be used in pharmaceutical applications because of its low purity. Our Nisin technology includes methods to achieve pharmaceutical-grade purity. In the pivotal effectiveness study, statistically significant **Mast Out**. cure rates were associated with a statistically significant reduction in milk somatic cell count (SCC), which is an important measure of milk quality.

In 2004, we entered into a product development and marketing agreement with Zoetis Inc. (formerly Pfizer Animal Health, a division of Pfizer, Inc.) covering **Mast Out**^O. Under that agreement (as amended and supplemented and later terminated), we received \$2,375,000 in payments. Zoetis elected to terminate the agreement in 2007. Soon thereafter, Zoetis returned to us all rights, data, information, files, regulatory filings, materials and stocks of Nisin and Nisin producing cultures relating to the development of **Mast Out**^O. We believe that the decision of Zoetis to terminate the agreement was not based on any unanticipated efficacy or regulatory issues. Rather, we believe the decision was primarily market driven, largely relating to their fear that the use of **Mast Out**^O might cause a potential problem, where the milk from treated cows could interfere with the manufacture of certain cultured dairy products.

Due to the zero milk discard feature, there is a risk that Nisin from milk of cows treated with **Mast Out** oculd interfere with the manufacture of certain (but not all) commercial cultured dairy products, such as some kinds of cheese and yogurt, if a process tank contains milk from a high enough percentage of treated cows. We have conducted a formal risk assessment to quantify the impact that milk from treated cows may have on cultured dairy products. This study concluded that the dilution of milk from treated cows through commingling with milk from untreated cows during normal milk hauling and storage practices reduces the risk of interference with commercial dairy cultures to a negligible level when **Mast Out** is used in accordance with the product label. Milk from treated cows that is sold exclusively for fluid milk products presents no such risk.

Commercial introduction of **Mast Out**^o in the United States is subject to approval of our New Animal Drug Application (NADA) by the Center for Veterinary Medicine, U.S. Food and Drug Administration (FDA), which approval cannot be assured. Foreign regulatory approvals would be required for sales in key markets outside of the United States and would involve some similar and some different requirements. In 2007, we began the production of pivotal batches of drug product to fulfill the regulatory requirements of effectiveness, stability, target animal safety and human food safety. The NADA is comprised of five principal Technical Sections subject to the FDA's phased review of a NADA. By statute, each Technical Section submission is generally subject to a six-month review cycle by the FDA. The current status of our work on these Technical Sections is as follows:

- 1) Environmental Impact: During the third quarter of 2008, we received the Environmental Impact Technical Section Complete Letter from the FDA.
- 2) Target Animal Safety: During the second quarter of 2012, we received the Target Animal Safety Technical Section Complete Letter from the FDA.
- 3) Effectiveness: During the third quarter of 2012, we received the Effectiveness Technical Section Complete Letter from the FDA.
- 4) Human Food Safety (HFS): The HFS Technical Section submission was made during the fourth quarter of 2010. This Technical Section determines if a milk discard period or meat withhold period will be required. This Technical Section includes several subsections such as: a) toxicology, b) total metabolism, c) effects of drug residues in food on human intestinal microbiology, d) effects on bacteria of human health concern (antimicrobial resistance) and e) pivotal residue chemistry. During the second quarter of 2011, we announced that the FDA had accepted the subsections described above and granted **Mast Out**^o a zero milk discard time and a zero meat withhold period. Before we can obtain the Technical Section Complete Letter, we must adapt our analytical method that measures Nisin residues in milk around the newly assigned tolerance limit and transfer that method to a FDA laboratory. We submitted the validated analytical method to the FDA during the fourth quarter of 2012. We now expect to receive the HFS Technical Section Complete Letter from the FDA during the second half of 2013.

5) Chemistry, Manufacturing and Controls (CMC): We are party to agreements with three manufacturers to produce inventory for us utilizing our proprietary technologies and processes. First, a long-term, exclusive supply agreement with Plas-Pak Inc. of Norwich, Connecticut covers the proprietary syringe that was developed specifically for Mast Out^o. These syringes were used for all pivotal studies of Mast Out^o. Second, a Development and Manufacturing Agreement with Lonza Sales, Ltd. of Basel, Switzerland provides for the exclusive manufacture of the Active Pharmaceutical Ingredient (API). The Lonza site in Europe is FDA-approved, compliant with cGMP regulations and subject to future FDA approval and inspection. Third, an exclusive Contract Manufacture Agreement with Norbrook Laboratories Limited of Newry, Northern Ireland, an FDA-approved drug product manufacturer, covers the formulation of the API into drug product, the sterile-fill of syringes and the final packaging. Norbrook provided these services for clinical material used in all pivotal studies of Mast Out^O. The selection of and financing for the API production facility is a critical decision. We have been considering four options: 1) having this work done by a qualified contract manufacturer, 2) building a new facility, 3) leasing and modifying an existing facility and 4) transferring our technology to a partner's facility. Leasing an existing facility or transferring the technology to a partner's facility would provide us with more control and flexibility with regards to production volumes and costs than would be possible if we relied on a contract manufacturer to produce the API for us and could be less expensive and quicker to market than building a new facility. We estimate that it would take approximately eighteen months to two years to complete the necessary facility modifications and equipment installations. During the fourth quarter of 2012, we withdrew our first submission to the FDA of the CMC Technical Section because of changes we have made to our regulatory filing and manufacturing strategies. As soon as we have prepared all of the relevant information, we expect to make a revised first submission for a six-month review cycle by the FDA. We anticipate that our second submission would include the three, required validation batches produced at the FDA-inspected commercial production facility. After completing this work, we would be eligible to receive the CMC Technical Section Complete Letter from the FDA following a six-month review cycle.

Obtaining FDA approval of the CMC Technical Section defines the critical path to the submission of the administrative NADA to the FDA and ultimately to NADA approval and commercial sales. After obtaining the final Technical Section omplete Letter and after preparing materials responsive to other administrative requirements, the administrative NADA submission can be assembled for review by the FDA. This final administrative submission would be subject to a statutory sixty-day review period.

In addition to our work on **Mast Out**^O, we are actively exploring further improvements, extensions or additions to our current product line. For example, we currently are developing treatments that could prevent bovine enteritis (calf scours) caused by enteric pathogens other than *E. coli* K99 and bovine coronavirus (the current disease claims for **First Defense**[®]). In connection with that effort, during the second quarter of 2009 we entered into an exclusive license with Baylor College of Medicine covering certain rotavirus vaccine technology. This perpetual license (if not terminated for cause) is subject to milestone and royalty payments. Results from pilot studies completed during the first quarter of 2009 justified continued product development. We completed a pivotal effectiveness study of this experimental formulation during the third quarter of 2011 without seeing the anticipated level of effectiveness needed for regulatory approval and market acceptance. We are currently conducting additional pilot studies of different formulations of this antibody preparation. If positive results from these pilot studies are achieved, a second pivotal

effectiveness study could be initiated during the second half of 2013. During the third quarter of 2012, we entered into an exclusive option to a license with North Carolina State University covering certain recombinant *Cryptosporidium parvum* technology that may have utility in the development of a dry (non-lactating) cow vaccine. We are developing nutritional and feed supplement product applications (that are not delivered in the capsule format) of our **First Defense Technology**TM, which is a unique whey protein concentrate that is purified utilizing our proprietary milk protein processing methods that does not carry the claims of our USDA-licensed product. As additional opportunities arise to commercialize our own technology, or licensable technology, we may begin new development projects. While we continue to pursue internally funded product development programs, we also remain interested in acquiring new products and technologies that fit with our sales and marketing focus on the dairy and beef industries.

Competition

Our competition in the animal health market includes other biotechnology companies and major animal health companies. Many of these competitors have substantially greater financial, marketing, manufacturing and human resources and more extensive product development capabilities than we do. Many may be capable of developing technologies and/or products that are superior to ours, or may be more successful in developing production capability or in obtaining required regulatory approvals. We would consider any company that sells an antibiotic to treat mastitis, such as Zoetis, Merck Animal Health and Boehringer Ingelheim, to be among the potential competitors for **Mast Out**.

We may not be aware of competition that we face from other companies. Our competitive position will be highly influenced by our ability to attract and retain key scientific and managerial personnel, to develop proprietary technologies and products, to obtain USDA or FDA approval for new products, to effectively promote and market our products and to continue to profitably sell our current products. We currently compete on the basis of product performance, price and distribution capability. We continue to monitor our network of independent distributors to maintain our competitive position.

We believe that **First Defense**^ò offers two significant competitive advantages over other oral antibody products on the market. First, its capsule form does not require refrigeration and provides ease of administration. Second, **First Defense**^ò provides protection against the leading cause of calf scours (*E. coli*) and additional protection against coronavirus, another leading cause of the disease. In addition to direct competition from oral antibody products, **First Defense**^ò also competes for market share against vaccine products that are used to increase the production of antibodies by the dam that can then be transferred through the mother's milk to the calf, and against vaccine products that are administered to the newborn calf. We believe that the immediate and preformed immunity (**Immediate Immunity**) That **First Defense** provides to the calf is a competitive advantage over the vaccine products. **First Defense** against scours preventives that are not licensed by the USDA.

There are many products on the market that may be used in place of **Wipe Out**^O **Dairy Wipes**, and our product sells at a premium to most of them. These products include teat dips, teat sprays and other disposable and washable towel products offered by several different companies. Competitive advantages of **Wipe Out**^O **Dairy Wipes** include that they are convenient to use, they do not irritate the udder, they do not adulterate the milk and they are biodegradable.

Patents, Proprietary Information and Trademarks

In connection with the December 1999 acquisition of **Wipe Out** Dairy Wipes and the April 2000 license to all veterinary applications of Nisin from Nutrition 21, Inc., we acquired a license to six patents. In November 2004, we bought out certain future milestone and royalty obligations under the 1999 and 2000 licenses, which principally resulted in a fully paid, perpetual license related to the animal health applications of Nisin. Four of these six patents have expired or are expiring and one of the two longer-term patents may be subject to a patent term extension. In 2004, we were issued U.S. Patent No. 6,794,181 entitled "Method of Purifying Lantibiotics" covering a manufacturing process for pharmaceutical-grade Nisin.

During 2000, we were issued U.S. Patent No. 6,074,689 entitled "Colonic Delivery of Protein or Peptide Compositions" covering the method of formulation that can be used to deliver proteins to the colon. In 1999, we acquired an exclusive license for pharmaceutical applications to U.S. Patent No. 5,773,000 entitled "Therapeutic Treatment of *Clostridium difficile* Associated Diseases" from GalaGen, Inc. In 2002, we acquired ownership of this patent from the court administering the bankruptcy proceedings of GalaGen. These patents are included in a royalty-bearing license we granted to Immuron, Ltd. (formerly known as Anadis) of Australia in 2008 for their use in the development of milk antibody products for humans.

In the future, we may file additional patent applications for certain products under development. There can be no assurance that patents will be issued with respect to any pending or future applications. In some cases, we have chosen (and may choose in the future) not to seek patent protection for certain products or processes. Instead, we have sought (and may seek in the future) to maintain the confidentiality of any relevant proprietary technology through operational measures and contractual agreements. Reliance upon trade secret, rather than patent, protection may cause us to be vulnerable to competitors who successfully replicate our manufacturing techniques and processes. Additionally, there can be no assurance that others may not independently develop similar trade secrets or technology or obtain access to our unpatented trade secrets or proprietary technology. Other companies may have filed patent applications and may have been issued patents involving products or technologies potentially useful to us or necessary for us to commercialize our products or achieve our business goals. There can be no assurance that we will be able to obtain licenses to such patents on terms that are acceptable.

We have registered certain trademarks with the U.S. Patent and Trademark Office in connection with the sale of our products. We own federal trademark registrations of the following trademarks: ImmuCell, **First Defense**, our calf scours preventive product; **Wipe Out Dairy Wipes** and the related design and the trademark "**One Step Cow Pre**)", our pre-milking wipe product; and **Mast Out**, our mastitis treatment product under development.

Government Regulation

We believe that we are in compliance with current regulatory requirements relating to our business and products. The manufacture and sale of animal health biologicals within the United States is generally regulated by the USDA. We have received USDA and Canadian Food Inspection Agency approval for **First Defense**^o (our scours preventive product). **Mast Out**^o is regulated by the FDA, Center for Veterinary Medicine, which regulates veterinary drugs. The manufacture of **Wipe Out**^o **Dairy Wipes** also is regulated by the FDA, Center for Veterinary Medicine. Comparable agencies exist in foreign countries and foreign sales of our products will be subject to regulation by such agencies. Many states have laws regulating the production, sale, distribution or use of biological products, and we may have to obtain approvals from regulatory authorities in states in which we propose to sell our products. Depending upon the product and its applications, obtaining regulatory approvals may be a relatively brief and inexpensive procedure or it may involve extensive clinical tests, incurring significant expenses and an approval process of several years' duration.

Employees

We currently employ 25 full-time employees and 4 part-time employees. Approximately 14.55 full-time equivalent employees are engaged in manufacturing operations, 3.95 full-time equivalent employees in product development activities, 4.70 full-time equivalent employees in finance and administration and 3.80 full-time equivalent employees in sales. At times, manufacturing personnel are also utilized, as needed, in the production of clinical material for use in product development. All of our employees are required to execute non-disclosure, non-compete and invention assignment agreements intended to protect our rights in our proprietary products. We are not a party to any collective bargaining agreement and consider our employee relations to be excellent.

Executive Officers of the Company

Our executive officers as of March 20, 2013 were as follows:

MICHAEL F. BRIGHAM (Age: 52, Officer since 1991, Director since 1999) was appointed to serve as President and Chief Executive Officer in February 2000, while maintaining the titles of Treasurer and Secretary, and was appointed to serve as a Director of the Company in March 1999. He previously had been elected Vice President of the Company in December 1998 and served as Chief Financial Officer since October 1991. He has served as Secretary since December 1995 and as Treasurer since October 1991. Prior to that, he served as Director of Finance and Administration since originally joining the Company in September 1989. Mr. Brigham joined the Board of Directors of the United Way of York County in 2011, serving as Treasurer. Mr. Brigham served as the Treasurer of the Board of Trustees of the Kennebunk Free Library from 2005 to 2011. He re-joined the Finance Committee of the library in 2012. Prior to joining the Company, he was employed as an audit manager for the public accounting firm of Ernst & Young. Mr. Brigham earned his Masters in Business Administration from New York University in 1989.

JOSEPH H. CRABB, Ph.D. (Age: 58, Officer since 1996, Director since 2001) served as Chairman of the Board of Directors from June 2009 to February 2013. He was appointed a Director of the Company in March 2001, having previously served in that capacity during the period from March 1999 until February 2000. Before that, he was elected Vice President of the Company in December 1998, while maintaining the title of Chief Scientific Officer. He has served as Chief Scientific Officer since September 1998. Prior to that, he served as Vice President of Research and Development since March 1996. Prior to that, he served as Director of Research and Development and Senior Scientist since originally joining the Company in November 1988. Concurrent with his employment, he has served on national study sections and advisory panels, served as a peer reviewer, and held several adjunct faculty positions. Prior to joining the Company in 1988, Dr. Crabb earned his Ph.D. in Biochemistry from Dartmouth Medical School and completed postdoctoral studies in microbial pathogenesis at Harvard Medical School, where he also served on the faculty.

Public Information

As a reporting company, we file quarterly and annual reports with the Securities and Exchange Commission on Form 10-Q and Form 10-K. We also file current reports on Form 8-K, whenever events warrant or require such a filing. The public may read and copy any materials that we file with the SEC at the SEC's Public Reference Room at 450 Fifth Street, N.W., Washington, D.C. 20549. The public may obtain information on the operation of the Public Reference Room by calling the SEC at 1-800-SEC-0330. The SEC maintains an Internet site that contains reports, proxy and information statements and other information about us that we file electronically with the SEC at http://www.sec.gov. Our internet address is http://www.immucell.com.

ITEM 1A - RISK FACTORS

This Annual Report on Form 10-K contains "forward-looking statements" within the meaning of Section 27A of the Securities Act of 1933 and Section 21E of the Securities Exchange Act of 1934. Such statements include, but are not limited to, any statements relating to: projections of future financial performance; the scope and timing of future product development work and commercialization of our products; future costs of product development efforts; future sources of financial support for our product development, manufacturing and marketing efforts; the amount and timing of future investments in facility modifications and production equipment or the availability and cost of alternative manufacturing and/or distribution resources; the future adequacy of our working capital and the availability of third party financing; timing and future costs of a facility to produce API for Mast Out®; the timing and outcome of pending or anticipated applications for future regulatory approvals; future regulatory requirements relating to our products; future expense ratios; future compliance with bank debt covenants; future realization of deferred tax assets; costs associated with sustaining compliance with cGMP regulations in our current operations and attaining such compliance for the facility to produce API for Mast Out®; factors that may affect the dairy and beef industries and future demand for our products; the accuracy of our understanding of our distributors' ordering patterns; anticipated changes in our manufacturing capabilities and efficiencies; anticipated competitive and market conditions; and any other statements that are not historical facts. Forward-looking statements can be identified by the use of words such as "expects", "may", "anticipates", "intends", "would", "could", "should", "will", "plans", "believes", "estimates", "targets" and expressions. In addition, there can be no assurance that future developments affecting us will be those that we anticipate, especially considering the effects the distress in credit and capital markets will have on our current and prospective customers and the global economy and the uncertainties surrounding the potential for a prolonged global recession. Such statements involve risks and uncertainties, including, but not limited to, those risks and uncertainties relating to difficulties or delays in development, testing, regulatory approval, production and marketing of our products, competition within our anticipated product markets, the uncertainties associated with product development, manufacturing reliance upon third parties for products and services, changes in laws and regulations, decision making by regulatory authorities, currency fluctuations and other risks detailed from time to time in filings we make with the Securities and Exchange Commission, including our Quarterly Reports on Form 10-Q, our Annual Reports on Form 10-K and our Current Reports on Form 8-K. Such statements are based on our current expectations, but actual results

may differ materially due to various factors, including the risk factors summarized below and uncertainties otherwise referred to in this Annual Report.

Projection of net income: After nine consecutive years of reporting net income, we reported a net loss for the years ended December 31, 2011, 2010, 2009 and 2008, due in large part to our product development strategy. By reducing our investment in the development of **Mast Out**^o and increasing sales of **First Defense**[®], we were able to record net operating income of \$245,000 and net income of \$90,000 during the year ended December 31, 2012. Due principally to an anticipated increase in product development expenses during 2013 (over 2012 levels, but still less than 2011 levels), we expect 2013 results to be near breakeven. Generally speaking, our financial performance can differ significantly from management projections, due to numerous factors that are difficult to predict or that are beyond our control. Stronger than expected sales of **First Defense**[®], for example, could increase our net income. Conversely, weaker than expected sales of **First Defense**[®] could lead to less profits.

Reliance on sales of First Defense[®]: We are heavily reliant on the market acceptance of First Defense[®] to generate product sales and fund our operations. Our business would not have been profitable during either the nine consecutive years in the period ended December 31, 2007 or the year ended December 31, 2012, and our net losses would have been larger during the four years in the period ended December 31, 2011, without the gross margin that we earned from the sale of First Defense[®].

Economics of the dairy industry: The U.S. dairy industry has been facing very difficult economic pressures. Sales of our products may be influenced by the prices of milk, calves and milking cows. The size (annual average) of the U.S. dairy herd ranged from approximately 9,011,000 to 9,199,000 cows from 1998 to 2007. This annual average jumped to 9,315,000 cows in 2008. The annual average then declined to 9,203,000 in 2009 and further to 9,119,000 in 2010 before increasing to 9.194,000 in 2011. The average herd size increased to 9,231,000 in 2012. The total cattle inventory in the United States fell to the lowest level in 60 years, largely due to the drought which scorched pastures, causing many ranchers to shrink herds. As of January 1, 2013, dairy and beef farmers held approximately 90.8 million head of cattle, which was down 2.1% from a year earlier and represented the lowest level since 1952. While the number of cows in the U.S. herd and the production of milk per cow directly influence the supply of milk to the market, demand for milk has been influenced by very volatile international demand for milk products. The Class III milk price is an industry benchmark that reflects the value of product used to make cheese. The Class III milk price (which is largely out of the direct control of individual dairy producers) is an important indicator because it defines our customers' revenue level. For 2010, this price level averaged \$14.41, which represents a 27% increase from 2009. This price level averaged \$18.37 for 2011, which represents a 27% increase from 2010. This average price level for 2011 was higher than the annual average reached in any of the past 30 years, but then it began to decline in 2012. For 2012, this price level averaged \$17.44, which represents a 5% decrease from 2011. The actual level of milk prices may be less important than their level relative to costs. The recent improvement in milk prices has been offset, in part, by higher feed costs. One measure of this relationship is known as the milk-to-feed price ratio, which represents the amount of feed that one pound of milk can buy. Whenever this ratio meets or exceeds 3.0, it is considered profitable to buy feed and produce milk. For 2010, this ratio averaged approximately 2.26, representing a 27% increase compared to 2009. For 2011, this ratio averaged approximately 1.88, representing a 17% decrease compared to 2010. For 2012, this ratio averaged approximately 1.52, representing a 19% decrease compared to 2011. The ratio of 1.52 is the lowest recorded since this ratio was first reported in 1985. This means that a dairy producer can buy only 1.52 pounds of feed for every pound of milk sold. An increase in feed costs also has a negative impact on the beef industry. Widespread severe drought conditions in key U.S. agricultural regions during 2012 drove feed costs higher. Another indication of the economic condition of the dairy industry is the average price for animals sold for dairy herd replacement. This average price (reported as of January, April, July and October) averaged approximately \$1,330 in 2010, which represents a 4% decrease in comparison to the same period in 2009. This price averaged approximately \$1,420 in 2011, which represents a 7% increase in comparison to the same period in 2010. This price averaged approximately \$1,428 in 2012, which represents a 1% increase in comparison to the same period in 2011. The industry data referred to above is compiled from USDA databases. Another factor in the demand for our product is the decline in the value of bull calves. We are trying to maintain and grow our sales for use with heifer calves to offset what we assume is a significant decrease in the use of our product for bull calves. Given our focus on the dairy and beef industries, the financial insecurity of our primary customer base is a risk to our ability to maintain and grow sales at a profitable level. It also heightens the challenge of selling premium-priced animal health products (such as Mast Out^o) into such a market. Further, the loss of farms from which we buy raw material for First Defense® could make it difficult for us

to produce enough inventory until supply agreements are reached with replacement farms on suitable terms.

Regulatory requirements for Mast Out^ò: The commercial introduction of Mast Out^ò in the United States will require us to obtain appropriate FDA approval for this product. It presently is uncertain whether or when this approval will be achieved. We are exposed to additional regulatory compliance risks through the subcontractors that we choose to work with to produce Mast Out^ò, who also need to satisfy certain regulatory requirements in order to provide us with the products and services we need. International regulatory approvals would be required for sales outside of the United States. European regulatory authorities are not expected to approve a product with a zero milk discard claim, which would remove a significant competitive advantage of Mast Out^ò in that territory. However, the milk discard period may be shorter for Mast Out^ò than it is for other products on the market.

Product development risks: The development of new products is subject to financial, scientific, regulatory and market risks. Our current business growth strategy relies heavily on the development of **Mast Out**^ô which requires (and will continue to require) a substantial investment. Our efforts will be subject to inspection and approval by the FDA. There is no assurance whether or when we will obtain all of the data necessary to support regulatory approval for this product.

Risks associated with Mast Out^o funding strategy: Completing the development of Mast Out^o through to the submission of the administrative NADA to the FDA involves a great deal of risk. We may not be able to obtain financing to fund the completion of this product development effort on terms acceptable to us. We are evaluating alternative financial strategies in order to gain NADA approval and to support the product launch, which may result in our becoming dependent upon the skills and level of effort of a collaborative partner.

Uncertainty of market estimates: Even assuming that **Mast Out**^O achieves regulatory approval in the United States with a zero milk discard requirement, estimating the size of the market for this product is subject to numerous uncertainties. Some of the uncertainties surrounding our product include the development of the subclinical mastitis

treatment market, coverage of relevant pathogens, selling price and its effect on market penetration, cost of manufacture, integration of milk from treated cows into cheese starter cultures and market acceptance.

Access to raw materials: Our policy is to maintain more than one source of supply for the components used to manufacture and test our products. However, there is a risk that we could have difficulty in efficiently acquiring essential supplies. We are dependent on our manufacturing operations and facility at 56 Evergreen Drive in Portland, Maine for the production of First Defense^ò and Wipe Out^ò Dairy Wipes. The specific antibodies that we purify for First Defense^ò and the Nisin we produce by fermentation for Wipe Out^ò Dairy Wipes are not readily available from other sources. We expect to be dependent on Plas-Pak and Norbrook for the manufacture of Mast Out^ò if that product proceeds to commercialization, and we may become dependent on a collaborative partner for certain development, manufacturing and sales and marketing services. Any significant damage to or other disruption in the services at these facilities could adversely affect the production of inventory and result in significant added expenses and loss of sales.

Concentration of sales: A large portion of our product sales (49%, 52% and 50% for the years ended December 31, 2012, 2011, and 2010, respectively) was made to two large distributors. A large portion of our trade accounts receivable (42% as of December 31, 2012 and 45% as of December 31, 2011) was due from these two distributors. We have a good history with these distributors, but the concentration of sales and accounts receivable with a small number of customers does present a risk to us. During 2012, 80% of our product sales were made to customers in the U.S. dairy and beef industries. This compares to 81% during of 2011.

Risks associated with USDA and international regulatory oversight: First Defense[®], and modifications and extensions thereto, is subject to the jurisdiction of the Center for Veterinary Biologics, USDA. Similar regulatory oversight risks exist in territories outside of the United States where we sell our products.

Regulatory requirements for First Defense^o: First Defense^o is sold in the United States subject to a product license approval from the USDA, first obtained in 1991. The potency of serial lots is directly traceable to the original serial used to obtain the product performance claims (the "Reference Standard"). Due to the unique nature of the First Defense^o label claims, host animal re-testing is not required as long as periodic laboratory analyses continue to support the stability of stored Reference Standard. To date, these analyses have demonstrated strong stability. However, if the USDA were not to approve requalification of the Reference Standard, additional clinical studies could be required to meet regulatory requirements and allow for continued sales of the product.

Product risks generally: The sale of our products is subject to financial, efficacy, regulatory and competitive and other market risks. We cannot be sure that we will be able to maintain the regulatory compliance required to continue selling our products. There is no assurance that we will continue to achieve market acceptance at a profitable price level or that we can continue to manufacture our products at a sufficient gross margin.

Product Liability: The manufacture and sale of certain of our products entails a risk of product liability. Our exposure to product liability is mitigated to some extent by the fact that our products are principally directed towards the animal health market. We have maintained product liability insurance in an amount which we believe is reasonable in relation to our potential exposure in this area.

Regulatory requirements for Wipe Out^ò Dairy Wipes: While the FDA regulates the manufacture and sale of Wipe Out^ò Dairy Wipes, this type of product is permitted to be sold without a NADA approval, in accordance with the FDA's Compliance Policy Guide 7125.30 ("Teat Dips and Udder Washes for Dairy Cows and Goats"). This policy guide could be withdrawn at the FDA's discretion, in which case we would likely discontinue sales of the product. The manufacture of Wipe Out^ò Dairy Wipes is subject to Part 211 of the cGMP regulations. As such, our operations are subject to inspection by the FDA. We continue to invest in personnel, facility improvements and new equipment to sustain compliance with cGMP regulations across our entire product line. In June 2007, we received a Warning Letter from the FDA citing deficiencies in specific areas of the cGMP regulations. We filed a response to the FDA in June 2007, and we responded to a request for additional information in April 2008. We believe we have substantially corrected the deficiencies cited, but have received no further communications from the FDA on this subject. We remain subject to the risk of adverse action by the FDA in this respect.

Small size; dependence on key personnel: We are a small company with 25 full-time and 4 part-time employees. As such, we rely on certain key employees to support different operational functions, with limited redundancy in capacity. The loss of any of these key employees could adversely affect our operations until a qualified replacement is hired and trained. Our competitive position will be highly influenced by our ability to attract and retain key scientific, managerial and sales and marketing personnel, to develop proprietary technologies and products, to obtain USDA or FDA approval for new products and to continue to profitably sell our current products. We currently compete on the basis of product performance, price and distribution capability. We continue to monitor our network of independent distributors to maintain our competitive position.

Competition from others: Many of our competitors are significantly larger and more diversified in the relevant markets, and have substantially greater financial, marketing, manufacturing and human resources and more extensive product development capabilities than we do, including greater ability to withstand adverse economic or market conditions and declining revenues and/or profitability. The market for the treatment of mastitis in dairy cows is highly competitive, and presently is dominated by large companies such as Zoetis, Merck and Boehringer Ingelheim. There is no assurance that Mast Outò will compete successfully in this market. We may not be aware of other companies that compete with us or intend to compete with us in the future.

Exposure to risks associated with the financial downturn and global economic crisis: The U.S. economy appears to be coming out of a recession, caused principally by the housing, credit and financial crises. However, such recent positive indications could prove temporary and further downturn could occur, and the European economy remains sluggish and precarious. The credit markets continue to be very turbulent and uncertain. Sales and financial performance are still down at many businesses. This extraordinary period of instability facing the U.S. economy and the financial markets has been troubling for nearly all Americans. Some observers believe that the national unemployment rate is too high, the housing market remains problematic for the overall U.S. economy, the United States has taken on too much national debt and that the equity markets are overvalued. A continued and prolonged economic downturn could have a corresponding negative effect on our business and operations, including our ability

to penetrate key foreign markets.

Failure to protect intellectual property: In some cases, we have chosen (and may choose in the future) not to seek patent protection for certain products or processes. Instead, we have sought (and may seek in the future) to maintain the confidentiality of any relevant proprietary technology through operational safeguards and contractual agreements. Reliance upon trade secret, rather than patent, protection may cause us to be vulnerable to competitors who successfully replicate our manufacturing techniques and processes. Additionally, there can be no assurance that others may not independently develop similar trade secrets or technology or obtain access to our unpatented trade secrets or proprietary technology. Other companies may have filed patent applications and may have been issued patents involving products or technologies potentially useful to us or necessary for us to commercialize our products or achieve our business goals. There can be no assurance that we will be able to obtain licenses to such patents on terms that are acceptable. There is a risk that competitors could challenge the claims in patents that have been issued to us.

Bovine diseases: The potential for epidemics of bovine diseases such as Foot and Mouth Disease, Bovine Tuberculosis, Brucellosis and Bovine Spongiform Encephalopathy (BSE) presents a risk to us and our customers. Documented cases of BSE in the United States have led to an overall tightening of regulations pertaining to ingredients of animal origin, especially bovine. **First Defense**^O is considered a veterinary medicine rather than a feed ingredient, and it is manufactured from bovine milk (colostrum), which is not considered a BSE risk material. Future regulatory action to increase protection of the human food supply could affect **First Defense**^O, although presently we do not anticipate that this will be the case.

Biological terrorism: The threat of biological terrorism is a risk to both the economic health of our customers and our ability to economically acquire and collect good quality raw material from our contract farms. Any act of widespread bioterrorism against the dairy industry could adversely affect our operations.

No expectation to pay any dividends for the foreseeable future: We do not anticipate paying any dividends to our stockholders for the foreseeable future. Instead, we expect to use cash to fund product development costs. Any debt or equity financing we obtain to assist in funding our product development programs may include terms prohibiting or restricting our paying dividends or repurchasing stock for a lengthy period. Stockholders must be prepared to rely on sales of their common stock after price appreciation to earn an investment return, which may never occur. Any determination to pay dividends in the future will be made at the discretion of our Board of Directors and will depend on our results of operations, financial condition, contractual restrictions, restrictions imposed by applicable laws and other factors our Board of Directors deems relevant.

Market for common stock: Our common stock trades on the NASDAQ Stock Market (NASDAQ: ICCC). Our average daily trading volume is lower than the volume for most other companies and the bid/ask stock price spread can be larger, which could result in investors facing difficulty selling their stock for proceeds that they may expect or desire.

Our reporting obligations as a public company are costly: Operating a public company involves substantial costs to comply with reporting obligations under federal securities laws and the provisions of the Sarbanes-Oxley Act of 2002.

ITEM 2 – DESCRIPTION OF PROPERTY

We own a 27,750 square foot building at 56 Evergreen Drive in Portland, Maine. We currently use this space for substantially all of our office, laboratory and manufacturing needs. When we originally purchased this building in 1993, its size was 15,000 square feet, including 5,000 square feet of unfinished space on the second floor. In 2001, we completed a construction project that added approximately 5,200 square feet of new manufacturing space on the ground level. The 2001 facility addition also added approximately 4,100 square feet of storage space on the second floor. In 2007, we completed a renovation project converting the 5,000 square feet of unfinished space on the second floor into usable office space. After moving first floor offices into this space, we modified and expanded the laboratory space on the first floor. As part of the 2007 project, we also added approximately 2,500 square feet of storage space on the second floor. During 2009, we added 600 square feet to the second floor storage area and 350 square feet of cold storage space connected to our ground floor production area. We funded these investments with available cash. These investments are an integral part of our strategy to increase our production capacity and to be compliant with cGMP regulations in our manufacturing operations.

We rent approximately 550 square feet of office and warehouse space in New York on a short-term basis to support our farm operations.

We maintain property insurance in amounts that approximate replacement cost and a modest amount of business interruption insurance. We also maintain access to certain animals, primarily cows, through contractual relationships with commercial dairy farms.
ITEM 3 – LEGAL PROCEEDINGS
None
ITEM 4 – MINE SAFETY DISCLOSURES
None
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PART II

ITEM 5 – MARKET FOR COMMON EQUITY, RELATED STOCKHOLDER MATTERS AND PURCHASES OF EQUITY SECURITIES

Our common stock trades on the NASDAQ Capital Market tier of the NASDAQ Stock Market under the symbol ICCC. No dividends have been declared or paid on the common stock since its inception, and we do not anticipate or contemplate the payment of cash dividends in the foreseeable future. The following table sets forth the high and low sales price information for our common stock as reported by the NASDAQ Stock Market during the period January 1, 2011 through December 31, 2012:

	2012					2011						
	Three Months Ended					Three Months Ended						
	March 31	June 30	Se	ptember 30	De	ecember 31	March 31	June 30	Se	ptember 30	De	ecember 31
High	\$6.08	\$ 6.80	\$	7.00	\$	5.50	\$3.80	\$ 8.50	\$	8.33	\$	6.40
Low	\$4.50	\$ 4.60	\$	4.84	\$	3.76	\$2.91	\$ 3.12	\$	4.57	\$	4.49

As of March 20, 2013, we had 8,000,000 common shares authorized and 3,019,034 common shares outstanding, and there were approximately 1,000 shareholders of record. The last sales price of our common stock on March 20, 2013 was \$3.53 per share as quoted on the NASDAQ Stock Market.

Equity Compensation Plan Information

The table below summarizes the common stock reserved for issuance upon the exercise of stock options outstanding as of December 31, 2012 or that could be granted in the future:

Number of shares to be eighted-average for future issuance under stock-based outstanding options outstanding options outstanding options reflected in first column of this table)

Equity compensation plans approved by stockholders	213,000	\$ 3.13	250,500
Equity compensation plans not approved by stockholders	_	_	_
Total	213,000	\$ 3.13	250,500

ITEM 6 – SELECTED FINANCIAL DATA

The selected financial data set forth below has been derived from our audited financial statements. The information should be read in conjunction with the audited financial statements and related notes appearing elsewhere in this Form 10-K and in earlier reports filed on Form 10-K (in thousands, except for per share amounts).

	Year Ended December 31,							
	2012 2011 2010 2009 2008							
Statement of Operations Data:								
Product sales	\$5,390	\$5,111	\$4,386	\$4,506	\$4,628			
Gross margin	3,054	2,814	2,302	2,398	2,069			
Product development expenses	918	1,720	1,493	1,645	1,746			
Selling and administrative expenses	1,892	1,726	1,500	1,283	1,496			
Net operating income (loss)	245	(633)	(690)	(530)	(1,173)			
Other expenses (revenues), net	53	64	(7)	(101)	(212)			
Income (loss) before income taxes	192	(697)	(683)	(429)	(961)			
Net income (loss)	\$90	\$(410)	\$(385)	\$(216)	\$(469)			

	Year Ended December 31,						
	2012	2011	2010	2009	200	8	
Per Common Share:							
Basic net income (loss)	\$0.03	\$(0.14)	\$(0.13)	\$(0.07)	\$(0	.16)	
Diluted net income (loss)	\$0.03	\$(0.14)	\$(0.13)	\$(0.07)	\$(0	.16)	
Cash dividend		_	_			-	
Statement of Cash Flows Data:							
Net cash provided by (used for) operating activities	\$344	\$(37)	(008)	\$(110)	\$53	.	
Net easil provided by (used for) operating activities	ψЭтт	Ψ(31)	Ψ(00)	Φ(110)	ψυυ	,	
	As of De	ecember 3	1,				
	2012	2011	2010	200	9	2008	
Balance Sheet Data:							
Cash, cash equivalents and short-term investments	\$4,914	\$4,960	\$4,620	-		\$5,054	
Total assets	11,030	10,991	10,73	51 9,9	985	10,128	
Current liabilities	666	635	525	36	3	484	
Net working capital	6,697	6,516	6,44	1 5,9	944	6,245	
Long-term liabilities	1,170	1,336	944				
Stockholders' equity	\$9,195	\$9,020	\$9,282	2 \$9,6	522	\$9,644	
Per Outstanding Common Share:							
Cash, cash equivalents and short-term investments	\$1.63	\$1.65	\$1.56	\$1.5	54	\$1.75	
Stockholders' equity	\$3.05	\$3.00	\$3.12			\$3.33	
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ITEM 7 – MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

Financial Condition

We had approximately \$4,914,000 in available cash and short-term investments as of December 31, 2012. The table below summarizes the changes in selected, key balance sheet items (in thousands, except for percentages):

	As of Dec	cember 31,	(Decre Increas	
	2012	2011	\$	%
Cash, cash equivalents and short-term investments	\$4,914	\$4,960	\$(46)	(1)%

Net working capital	6,697	6,516	182	3
Total assets	11,030	10,991	39	0.4
Stockholders' equity	\$9,195	\$9,020	\$174	2 %

Cash, cash equivalents and short-term investments decreased by 1%, or \$46,000, to \$4,914,000 at December 31, 2012 from \$4,960,000 at December 31, 2011. Net cash provided by operating activities amounted to \$344,000 during the year ended December 31, 2012 in contrast to net cash used for operating activities of \$37,000 during the year ended December 31, 2011. Capital investments of \$275,000 during 2012 compared to capital investments of \$244,000 during 2011. Net working capital increased by 3%, or \$182,000, to \$6,697,000 at December 31, 2012 from \$6,516,000 at December 31, 2011. During 2012 we repaid \$173,000 in bank debt. Proceeds from bank debt received during 2011 aggregated \$455,000, net of debt repayments made during 2011. Total assets increased by less than 1%, or \$39,000, to \$11,030,000 at December 31, 2012 from \$10,991,000 at December 31, 2011. Stockholders' equity increased by 2%, or \$174,000, to \$9,195,000 at December 31, 2012 from \$9,020,000 at December 31, 2011. We believe that we have sufficient capital resources to meet our working capital requirements and to finance our ongoing business operations during at least the next twelve months.

During the third quarter of 2010, we agreed to terms of certain credit facilities with TD Bank, N.A. aggregating up to approximately \$2,100,000, which are secured by substantially all of our assets. These credit facilities are comprised of a \$1,000,000 ten-year mortgage loan, a \$600,000 fifty-four month note and a \$500,000 line of credit. Proceeds from the \$1,000,000 mortgage loan were received during the third quarter of 2010. Proceeds from the \$600,000 note were received during the first quarter of 2011. As of December 31, 2012, our outstanding bank debt balance was approximately \$1,268,000. The \$500,000 line of credit is available as needed. We believe that this debt financing (together with available cash and gross margin from ongoing product sales) provides us with sufficient funding to finance our working capital requirements while completing the first submissions to the FDA of all Technical Sections pertaining to **Mast Out**. We chose debt financing because we believe that in this market environment, the option to generate funds through the sale of equity securities at an acceptable level of stockholder dilution is very unlikely.

Since 1999, our strategy has been focused on selling and developing products that improve animal health and productivity in the dairy and beef industries. These product opportunities are generally less expensive to develop than the human health product opportunities that we had worked on during the 1990's. We funded most of our product development expenses principally from product sales and were profitable for each of the nine years in the period ended December 31, 2007. During this nine years of profitability, our cumulative investment in product development expenses of \$9,894,000 was supported, in part, by \$3,880,000 in licensing revenue, technology sales and grant income. Our strategic decision to continue developing Mast Out^o after the product rights were returned to us in 2007 caused us to increase our spending on product development expenses that were previously funded by a former partner from late 2004 to mid-2007. After these nine consecutive years of profitability, we incurred net losses of \$469,000, \$216,000, \$385,000 and \$410,000 during the years ended December 31, 2008, 2009, 2010 and 2011, respectively. As anticipated, a reduction in product development expenses during 2012 helped us return to profitability. Due principally to an anticipated increase in product development expenses (for ongoing Mast Out^o expenses and an increased investment in other new product development expenses) above the 2012 investment but still less than the 2011 expense level, we expect 2013 results to be near breakeven. We believe that the two key indicators of our financial performance going forward will be the gross margin on our product sales and our net operating income. The investment of an additional \$7,521,000 in product development expenses during 2008 thru 2012 brings our cumulative investment to \$17,416,000 during the fourteen-year period ended December 31, 2012. We may, on occasion, seek additional research grant support as a means of leveraging the funds that we are able to spend developing new products. We continue to look for new product acquisition opportunities that would have a strategic fit with the products that we currently sell.

A significant investment primarily related to the manufacture of the Active Pharmaceutical Ingredient (API) (principally related to manufacturing scale-up and preparations of full-scale batches) remains ahead to complete the **Mast Out** opportunity product development initiative. Our initial plan was to have the API produced for us under contract in order to avoid the investment in a manufacturing facility. By the end of 2011, we determined that the large minimum production volumes and high cost imposed by the selected contract manufacturer were not commercially sustainable. We believe that controlling the manufacture of the API ourselves, rather than hiring a contractor, would improve our competitiveness and increase our opportunity for success. As a result, we developed a plan to build a production facility for the API and, with assistance from prospective builders, we estimated that it would require approximately

\$13,000,000 to construct a new manufacturing facility. Because the actual cost could be higher, we have evaluated strategic alternatives to new construction. During the fourth quarter of 2012, we projected that we could reduce this upfront investment by leasing an existing facility rather than constructing a new one, and we engaged an engineering firm to estimate these costs. The resulting engineering report estimated these costs to be in the range of \$11,000,000 to \$13,000,000. In addition to the use of some of our cash, we are seeking debt issuance, equity financing and/or an investment from a partner as well as possible state and other financial incentives to support the investment required to manufacture the API. Absent such funding, we have not initiated the construction of our own API manufacturing facility or the leasing of an existing facility as of this date. Because we believe that the appropriate development and marketing partner would maximize the commercial sales potential for **Mast Out**, we continue to seek a partnership that would provide guaranteed cash and/or minimum levels of funding and ongoing revenue in return for marketing rights. The information that we have learned during negotiations with potential partners to date has increased our confidence in the likelihood of achieving FDA approval and in the potential value of the market opportunity for **Mast Out**. We believe that the evolution of our thinking relating to these strategic alternatives demonstrates the flexibility and creativity required to solve this financing challenge.

As part of our sustained investment in compliance with cGMP regulations across our product lines and as we make other process improvements, we are investing in personnel, equipment and facility modifications to increase the efficiency and quality of our operations. The size of this investment in capital expenditures for facility modifications and production equipment is subject to review and approval by our Board of Directors. As of January 1, 2013, we had remaining available authorization to spend up to approximately \$157,000 on capital expenditures, which authorized amount is net of increases aggregating \$200,000 during 2012 that were approved by our Board of Directors.

Off-Balance Sheet Arrangements
None
Results of Operations
2012 Compared to 2011
Product Sales

Product sales for the year ended December 31, 2012 increased by 5.5%, or \$279,000, to \$5,390,000 from \$5,111,000 in 2011. Domestic product sales increased by 4%, or \$155,000, during the year ended December 31, 2012, and international sales increased by 13%, or \$124,000, in comparison to 2011. For the three-month period ended December 31, 2012, product sales increased by 9%, or \$116,000, in comparison to the three-month period ended December 31, 2011. We believe our increased investment in sales and marketing personnel and efforts is helping us introduce **First Defense** to new customers. We believe that sales of our products were influenced by the relatively strong prices of milk, cows and calves which values were partially offset by the increased cost of feed.

Competition for resources that dairy producers allocate to their calf enterprises has been increased by the many new products that have been introduced to the calf market. While milk prices have improved recently, much of this gain has been offset by increases in the cost of feed. Even in this challenging market, our lead product, **First Defense**, continues to benefit from wide acceptance by dairy and beef producers as an effective tool to prevent bovine enteritis (scours) in newborn calves. It is our production and customer service objective to ship orders within one day of

receipt. We have been operating in accordance with this objective since the third quarter of 2009. Sales of **First Defense**^o aggregated 89% of our total product sales during both of the years ended December 31, 2012 and 2011.

Sales of **First Defense**^o increased by 5% during the year ended December 31, 2012 in comparison to 2011. Domestic sales of **First Defense**^o increased by 4%, and international sales increased by 10%. Sales of **First Defense**^o are normally seasonal, with higher sales expected during the first quarter. With the single exception of the second quarter of 2012, we have been experiencing consistently positive sales growth of **First Defense**^o since the fourth quarter of 2010, as demonstrated below:

5%: Fiscal Year 2012 over Fiscal Year 2011

16%: Fourth Quarter 2012 over Fourth Quarter 2011

9%: Third Quarter 2012 over Third Quarter 2011

(17%): Second Quarter 2012 under Second Quarter 2011

13%: First Quarter 2012 over First Quarter 2011

21%: Fiscal Year 2011 over Fiscal Year 2010

7%: Fourth Quarter 2011 over Fourth Quarter 2010

22%: Third Quarter 2011 over Third Quarter 2010

37%: Second Quarter 2011 over Second Quarter 2010

21%: First Quarter 2011 over First Quarter 2010

13%: Fourth Quarter 2010 over Fourth Quarter 2009

We believe that the growth in sales of **First Defense**^o may reflect, at least in part, the success of our strategic decision first implemented in 2010 to invest in additional sales and marketing efforts. We launched a communications campaign at the end of 2010 that is highlighting how the unique features of **First Defense**^o provide a dependable return on investment for producers. Effective for 2011 and for 2012, we entered into a sales and marketing collaboration with AgriLabs, under which the AgriLabs sales and marketing teams worked with us to expand market demand for **First Defense**^o.

Through our **First Defense Technology**TM, we are selling whey concentrate globulin proteins in different formats. During the first quarter of 2011, we initiated sales of our **First Defense Technology**TM in a bulk powder format, which is delivered by dissolving our powder in liquid for feeding to calves. During the first quarter of 2012, we initiated a limited launch of a new format of our **First Defense Technology**TM in a paste formulation that is delivered through an oral syringe. Through two collaborations, we are working to expand sales of our **First Defense Technology**TM. During the first quarter of 2011, AgriLabs launched commercial sales of their product, Colostrx®, a colostrum supplement with **First Defense Technology**TM **Inside**. During the fourth quarter of 2011, Milk Products, LLC of Chilton, Wisconsin launched commercial sales of their product, Ultra Start^ò 150 Plus, a colostrum replacer with **First Defense Technology**TM **Inside**.

Sales of **Wipe Out**^O **Dairy Wipes** decreased by 6% during the year ended December 31, 2012 in comparison to 2011. We believe that sales growth potential for **Wipe Out**^O **Dairy Wipes** is limited because most of our sales of this product tend to be to smaller dairies that are under continued financial pressures. Such pressures are forcing many small dairy producers out of business. While our product is a high quality tool, there are less expensive ways to sanitize a cow prior to milking, and many producers opt for a less expensive solution. We are competing aggressively on selling price to earn new business against less expensive products and alternative teat sanitizing methods. Sales of **CMT** decreased by 28% during the year ended December 31, 2012 in comparison to 2011.

We sell bulk reagents outside of the dairy and beef industries for use in a drinking water test that is sold by others known as IsolateTM (formerly known as **Crypto-Scan**. Sales of these bulk reagents aggregated 4% and 2% of product sales during the years ended December 31, 2012 and 2011, respectively. Sales of these bulk reagents increased by 92% during the year ended December 31, 2012 in comparison to 2011. Our animal health sales (total product sales less sales of these bulk reagents) increased by 4% during the year ended December 31, 2012 in comparison to 2011. This comparison demonstrates the growth of our core animal health business.

We generally held our product selling prices without increase during the seven year period ended December 31, 2007. During the first quarter of 2008, we implemented a modest increase to the selling price of **First Defense**[®]. We have implemented no significant price increases since then, believing that we could benefit more from higher unit sales than through a higher average selling price per unit.

Gross Margin

Changes in the gross margin on product sales are summarized in the following table for the respective periods (in thousands, except for percentages):

	Years En	nded	Inorosco	
	Decemb	er 31,	Increase	
	2012	2011	Amount	%
Gross margin	\$3,054	\$2,814	\$240	9%
Percent of product sales	57 %	6 55 %	2 %	3%

The gross margin as a percentage of product sales was 57% and 55% during the years ended December 31, 2012 and 2011, respectively. This compares to gross margin percentages of 52% and 53% for the years ended December 31, 2010 and 2009, respectively. Our current annual target is to maintain the gross margin percentage above 50%. A number of factors account for the variability in our costs. We expect some fluctuations in gross margin percentages from quarter to quarter. The gross margin on **First Defense**^o is affected by biological yields from our raw material, which do fluctuate over time. More generally, costs for production of **First Defense**^o and **Wipe Out**^o **Dairy Wipes** have increased due to increased labor costs and expenses associated with our efforts to sustain compliance with cGMP regulations in our production processes. Like most U.S. manufacturers, we have been experiencing increases in the cost of raw materials that we purchase. We have been able to minimize the impact of these cost increases by implementing yield improvements. Product mix also affects gross margin in that we earn a higher gross margin on **First Defense**^o and a lower gross margin on **Wipe Out**^o **Dairy Wipes**. Our inventory balance was reduced by 1%, or \$17,000, to \$1,649,000 at December 31, 2012 from \$1,666,000 at December 31, 2011. This level of investment was made in both periods to help prevent a potential backlog of orders. We have not experienced a backlog of orders since the third quarter of 2009.

Sales and Marketing Expenses

Sales and marketing expenses increased by approximately 12%, or \$103,000, to \$973,000 in 2012, increasing to 18% of product sales in 2012 from 17% in 2011. We continue to leverage the efforts of our small sales force through veterinary distributors. These expenses have increased due principally to a strategic decision to invest more to support **First Defense** sales. This investment may have created, at least in part, our recent increase in product sales. Our current budgetary objective in 2013 is to invest up to 20% of product sales in sales and marketing expenses on an annual basis.

Administrative Expenses

Administrative expenses increased by approximately 7%, or \$62,000, to \$918,000 during the year ended December 31, 2012 as compared to \$857,000 during 2011. We strive to be efficient with these expenses while funding costs associated with complying with the Sarbanes-Oxley Act of 2002 and other costs associated with being a publicly-held company. At this stage in our development, we have limited our investment in investor relations spending. We provide a full disclosure of the status of our business and financial condition in three quarterly reports and one annual report each year. Additional information about our business is available in our annual Proxy Statement. All of these reports are filed with the SEC and are available on-line or upon request to the Company. Presently, our financial and time resources are committed principally to managing our commercial business and developing **Mast Out**. Our Board of Directors is very involved with and supportive of this resource allocation. While this strategy of providing cost-effective investor relations through our SEC reporting is subject to change, we believe that this focus currently is in the best long-term interest of all stockholders.

Product Development Expenses

Product development expenses decreased by 47%, or \$802,000, to \$918,000 during the year ended December 31, 2012, as compared to \$1,720,000 during 2011. We expected lower product development expenses during the year ended December 31, 2012. Product development expenses aggregated 17% and 34% of product sales in 2012 and 2011, respectively. The majority of our product development budget from 2000 through 2012 has been focused on the development of **Mast Out**°. Going forward, we expect to maintain a reduced level of product development expenses, which expenses will continue to be focused on **Mast Out**° and other improvements, extensions or additions to our **First Defense**° product line. The other improvements, extensions, or additions to our current product line include the potential to prevent scours in calves caused by pathogens other than those within the current **First Defense**° disease

claims (*E. coli* K99 and coronavirus) such as rotavirus. We also remain interested in acquiring other new products and technologies that fit with our sales focus on the dairy and beef industries. We are currently seeking funding from a partner to complete the development of **Mast Out**^o and to support the manufacturing, sales and marketing efforts.

Other Expenses, Net

Interest income increased by approximately 11%, or \$2,000, to \$17,000 in 2012 in comparison to 2011. Interest expense aggregated \$75,000 and \$81,000 during 2012 and 2011, respectively.

Income (Loss) Before Income Taxes and Net Income (Loss)

Our income before income taxes of \$192,000 during the year ended December 31, 2012 is in contrast to a loss before income taxes of (\$697,000) during 2011. We recorded an income tax expense (benefit) of 53% and (41%) of the income (loss) before income taxes during the years ended December 31, 2012 and 2011, respectively. Our net income of \$90,000, or \$0.03 per share, during the year ended December 31, 2012 is in contrast to a net loss of (\$410,000), or (\$0.14) per share, during 2011.

2011 Compared to 2010

Product Sales

Product sales for the year ended December 31, 2011 increased by 17%, or \$725,000, to \$5,111,000 from \$4,386,000 in 2010. Domestic product sales increased by 16%, or \$560,000, during the year ended December 31, 2011, and international sales increased by 21%, or \$165,000, in comparison to 2010. For the three-month period ended December 31, 2011, product sales increased by 16%, or \$181,000, in comparison to the three-month period ended December 31, 2010. We believe that sales of our products were influenced by the increased price of milk, cows and calves and partially offset by the increased cost of feed.

Competition for resources that dairy producers allocate to their calf enterprises has been increased by the many new products that have been introduced to the calf market. While milk prices have improved recently, much of this gain has been offset by increases in the cost of feed. Even in this challenging market, our lead product, **First Defense**, continues to benefit from wide acceptance by dairy and beef producers as an effective tool to prevent bovine enteritis (scours) in newborn calves. During the fourth quarter of 2011, we sold our 11,000,000th dose of **First Defense**. The third quarter of 2011 marked the 20th anniversary of the original USDA approval of this product in 1991. We believe that these milestones demonstrate the value of our technology and the long-term market acceptance of our product. It is our production and customer service objective to ship orders within one day of receipt. We have been operating in accordance with this objective since the third quarter of 2009. Sales of **First Defense** increased by 21% during the year ended December 31, 2011 in comparison to 2010. Domestic sales of **First Defense** increased by 20%, and international sales increased by 25%. Sales of **First Defense** are normally seasonal, with higher sales expected during the first quarter. We have been experiencing consistently positive sales growth of **First Defense** since the fourth quarter of 2010, as demonstrated below:

21%: Fiscal Year 2011 over Fiscal Year 2010

7%: Fourth Quarter 2011 over Fourth Quarter 2010

22%: Third Quarter 2011 over Third Quarter 2010

37%: Second Quarter 2011 over Second Quarter 2010

21%: First Quarter 2011 over First Quarter 2010

13%: Fourth Quarter 2010 over Fourth Quarter 2009

We believe that the growth in sales of **First Defense**^ò may reflect, at least in part, the success of our strategic decision to invest in additional sales and marketing efforts. We launched a communications campaign at the end of 2010 that is highlighting how the unique features of **First Defense**^ò provide a dependable return on investment for producers. Effective for 2011 and for 2012, we entered into a sales and marketing collaboration with AgriLabs, under which the AgriLabs sales and marketing teams are working with us to expand market demand for **First Defense**^ò.

We are investigating additional opportunities to commercialize our whey protein purification technologies in the nutritional and feed supplement markets in different formats not regulated by the USDA. **First Defense Technology**TM is a unique whey protein concentrate that is purified utilizing our proprietary whey protein processing methods. It does not carry the claims of our USDA-licensed product. Through our **First Defense Technology**TM, we are selling whey concentrate globulin proteins in different formats. During the first quarter of 2011, we initiated sales of our **First Defense Technology**TM in a bulk powder format (no capsule), which is delivered with a scoop. During the first quarter of 2012, we initiated a limited launch of a tube delivery format of our **First Defense Technology**TM in a gel solution. Through two collaborations, we are working to expand sales of our **First Defense Technology**TM by accessing the U.S. feed market. During the first quarter of 2011, AgriLabs launched commercial sales of their product, Colostrx®, a colostrum supplement with **First Defense Technology**TM **Inside**. During the fourth quarter of 2011, Milk Products, LLC launched commercial sales of their product, Ultra Start^O 150 Plus, a colostrum replacer with **First Defense Technology**TM **Inside**.

Sales of **Wipe Out**^ò **Dairy Wipes** decreased by 18% during the year ended December 31, 2011 in comparison to 2010. We believe that sales growth potential for **Wipe Out**^ò **Dairy Wipes** is limited because most of our sales of this product tend to be to smaller dairies that are under continued financial pressures. Such pressures are forcing many small dairy producers out of business. While our product is a high quality tool, there are less expensive ways to sanitize a cow prior to milking, and many producers opt for a less expensive solution. We are competing aggressively on selling price to earn new business against less expensive products and alternative teat sanitizing methods.

The other products we sell primarily into the dairy industry aggregated approximately 3% of product sales during 2011 and 2010. Sales of these products were 28% higher in 2011 than the level of sales achieved in 2010. The other products we sell outside of the dairy and beef industries, principally IsolateTM (formerly known as **Crypto-Scan**, aggregated 2% and 3% of product sales during the years ended December 31, 2011 and 2010, respectively. Sales of our bulk reagents for use in a drinking water test sold by others decreased by 21% during the year ended December 31, 2011 in comparison to 2010. During 2011, these sales were recorded during the fourth quarter. During 2010, these sales were recorded during the second quarter. Our animal health sales (total product sales less sales of the water diagnostic reagents) increased by 18% during the year ended December 31, 2011 in comparison to 2010. This comparison more accurately reflects the growth of our core animal health business.

We generally held our product selling prices without increase during the seven year period ended December 31, 2007. During the first quarter of 2008, we implemented a modest increase to the selling price of **First Defense**[®]. We have implemented no significant price increases since then believing that we could benefit more from higher unit sales than through a higher average selling price per unit.

Gross Margin

Changes in the gross margin on product sales are summarized in the following table for the respective periods (in thousands, except for percentages):

	Years	End	led		Inon			
	Decen	nbei	: 31,		IIICI	ease		
	2011		2010		Am	ount	%	
Gross margin	\$2,81	4	\$2,30	2	\$51	1	22	2%
Percent of product sales	55	%	52	%	3	%	5	%

The gross margin as a percentage of product sales was 55% and 52% during the years ended December 31, 2011 and 2010, respectively. This compares to gross margin percentages of 53% and 45% for the years ended December 31, 2009 and 2008, respectively. Our current annual target is to maintain the gross margin percentage at approximately 50%. A number of factors account for the variability in our costs. We expect some fluctuations in gross margin percentages from quarter to quarter. The gross margin on **First Defense**° is affected by biological yields from our raw material, which do fluctuate over time. More generally, costs for production of **First Defense**° and **Wipe Out**° **Dairy Wipes** have increased due to increased labor costs and expenses associated with our efforts to sustain compliance with cGMP regulations in our production processes. Like most U.S. manufacturers, we have been experiencing increases in the cost of raw materials that we purchase. We have been able to minimize the impact of these cost increases by

implementing yield improvements. Product mix also affects gross margin in that we earn a higher gross margin on **First Defense**^o and a lower gross margin on **Wipe Out**^o **Dairy Wipes**. Our inventory balance increased by 4%, or \$65,000, to \$1,666,000 at December 31, 2011 from \$1,601,000 at December 31, 2010. This level of investment was made in both periods to help prevent a potential back log of orders. We have not experienced a back log of orders since the third quarter of 2009.

Sales and Marketing Expenses

Sales and marketing expenses increased by approximately 34%, or \$219,000, to \$870,000 in 2011, increasing to 17% of product sales in 2011 from 15% in 2010. We continue to leverage the efforts of our small sales force through veterinary distributors. These expenses have increased due principally to a strategic decision to invest more to support **First Defense** sales and to prepare for a market launch of **Mast Out**. This investment may have created, at least in part, our recent increase in product sales. Our budgetary objective in 2012 was to invest up to 20% of product sales in sales and marketing expenses on an annual basis.

Administrative Expenses

Administrative expenses increased by approximately 1%, or \$8,000, to \$857,000 during the year ended December 31, 2011 as compared to \$849,000 during 2010. We strive to be efficient with these expenses while funding costs associated with complying with the Sarbanes-Oxley Act of 2002 and other costs associated with being a publicly-held company. At this stage in our development, we have limited our investment in investor relations spending. We provide a full disclosure of the status of our business and financial condition in three quarterly reports and one annual report each year. Additional information about our business is available in our annual Proxy Statement. All of these reports are filed with the SEC and are available on-line or upon request to the Company. Presently, our financial and time resources are committed principally to managing our commercial business and developing **Mast Out**. Our Board of Directors is very involved with and supportive of this resource allocation. While this strategy of providing cost-effective investor relations through our SEC reporting is subject to change, we believe that this focus currently is in the best long-term interest of all stockholders.

Product Development Expenses

Product development expenses increased by 15%, or \$227,000, to \$1,720,000 during the year ended December 31, 2011, as compared to \$1,493,000 during 2010. We expected higher product development expenses during the year ended December 31, 2011. Product development expenses aggregated 34% of product sales in 2011 and 2010. The majority of our product development budget from 2000 through 2011 has been focused on the development of **Mast Out**^O. Going forward, we expect to reduce our product development expenses, which expenses will continue to be focused on **Mast Out**^O and other improvements, extensions or additions to our **First Defense**^O product line. The other improvements, extensions, or additions to our current product line include the potential to prevent scours in calves caused by pathogens other than those within the current **First Defense**^O disease claims (*E. coli* K99 and coronavirus) such as rotavirus. We also remain interested in acquiring other new products and technologies that fit with our sales focus on the dairy and beef industries. We are currently seeking funding from a partner to complete the development of **Mast Out**^O and to support the manufacturing, sales and marketing efforts.

Other Expenses, Net

Interest income decreased by approximately 38%, or \$10,000, to \$15,000 in 2011 in comparison to 2010 due principally to a decrease in interest rates. Interest expense aggregated \$81,000 and \$22,000 during 2011 and 2010, respectively.

Loss Before Income Taxes and Net Loss

Our loss before income taxes of \$697,000 during the year ended December 31, 2011 compares to a loss before income taxes of \$683,000 during 2010. We recorded income tax benefits of 41% and 44% of the losses before income taxes during the years ended December 31, 2011 and 2010, respectively. Our net loss of \$410,000, or \$0.14 per share, during the year ended December 31, 2011 compares to a net loss of \$385,000, or \$0.13 per share, during 2010.

Critical Accounting Policies

The financial statements are presented on the basis of accounting principles that are generally accepted in the United States. All professional accounting standards that were effective and applicable to us as of December 31, 2012 have been taken into consideration in preparing the financial statements. The preparation of financial statements requires that we make estimates and judgments that affect the reported amounts of assets, liabilities, revenues and expenses, and related disclosure of contingent assets and liabilities. On an on-going basis, we evaluate our estimates, including those related to revenue recognition, income taxes, contingencies and the useful lives and carrying values of intangible and long lived assets. We base our estimates on historical experience and on various other assumptions that we believe are reasonable under the circumstances, the results of which form the basis for making judgments about the carrying values of assets and liabilities that are not readily apparent from other sources. Actual results may differ from these estimates under different assumptions or conditions. We have chosen to highlight certain policies that we consider critical to the operations of our business and understanding our financial statements.

We recognize revenue in accordance with Staff Accounting Bulletin (SAB) No. 104, "Revenue Recognition", which supersedes SAB No. 101, "Revenue Recognition in Financial Statements". SAB No. 104 requires that four criteria are met before revenue is recognized. These include i) persuasive evidence that an arrangement exists, ii) delivery has occurred or services have been rendered, iii) the seller's price is fixed and determinable and iv) collectibility is reasonably assured. We recognize revenue at the time of shipment (including to distributors) for substantially all products, as title and risk of loss pass to the customer on delivery to the common carrier after concluding that collectibility is reasonably assured. We recognize service revenue at the time the service is performed. Royalty income is recorded on the accrual basis based on sales as reported to us by our licensee pursuant to the terms of the relevant agreement. All research and development costs and patent costs are expensed as incurred.

Inventory includes raw materials, work-in-process and finished goods and are recorded at the lower of standard cost which approximates cost on the first-in, first-out method or market (net realizable value). Work-in-process and finished goods inventories include materials, labor and manufacturing overhead.

ITEM 7A - QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

We believe that neither inflation nor interest rates nor currency exchange rates have had a significant effect on our revenues and expenses. However, future increases in inflation or interest rates or the value of the U.S. dollar could affect our customers and the demand for our products. We hedged our interest rate exposure to a \$1,000,000 mortgage with an interest rate swap agreement that effectively converted a floating interest rate to the fixed rate of 6.04%. The interest rate on our \$600,000 note is variable. If the London Interbank Offered Rate plus 3.25% exceeds 4.25%, our interest payments will increase over the current amount. We hope to increase the level of our future sales of products outside the United States. The cost of our products to international customers could be affected by currency fluctuations. The decline of the U.S. dollar against other currencies could make our products less expensive to international customers. We do not anticipate that currency fluctuations will significantly affect our sales or the cost of operations.

ITEM 8 – FINANCIAL STATEMENTS

Our financial statements, together with the notes thereto and the report of the independent registered public accounting firm thereon, are set forth on Pages F-1 through F-19 at the end of this report. The index to these financial statements is as follows:

Report of Baker Newman & Noyes, LLC, Independent Registered Public Accounting Firm	F-1
Balance Sheets as of December 31, 2012 and 2011	F-2
Statements of Operations for the years ended December 31, 2012, 2011 and 2010	F-3
Statements of Comprehensive Income (Loss) for the years ended December 31, 2012, 2011 and 2010	F-4
Statements of Stockholders' Equity for the years ended December 31, 2010, 2011 and 2012	F-5
Statements of Cash Flows for the years ended December 31, 2012, 2011 and 2010	F-6
Notes to Financial Statements	F-7 to F-19

ITEM 9 – CHANGES IN AND DISAGREEMENTS WITH ACCOUNTANTS ON ACCOUNTING AND FINANCIAL DISCLOSURE

None

ITEM 9A - CONTROLS AND PROCEDURES

Disclosure Controls and Procedures. Our management, with the participation of the individual who serves as our principal executive and principal financial officer, evaluated the effectiveness of our disclosure controls and procedures as of December 31, 2012. Based on this evaluation, that officer concluded that our disclosure controls and procedures were effective as of that date. Disclosure controls and procedures are designed to ensure that information required to be disclosed by us in the reports that we file or submit under the Exchange Act (i) is recorded, processed, summarized and reported, within the time periods specified in the SEC's rules and forms and (ii) is accumulated and communicated to our management, including our principal executive and principal financial officer, as appropriate to allow timely decisions regarding required disclosure.

Management's Annual Report on Internal Control Over Financial Reporting. The management of the Company is responsible for establishing and maintaining adequate internal control over financial reporting. The Company's internal control over financial reporting is designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles.

Management conducted an evaluation of the effectiveness of the internal controls over financial reporting based on the framework in Internal Control - Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission. This evaluation included a review of the documentation of controls, evaluation of the design effectiveness of controls, testing the operating effectiveness of the controls and a conclusion on this evaluation. Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Therefore, even those systems determined to be effective can provide only reasonable assurance with respect to financial statement preparation and presentation. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

Management assessed the effectiveness of the Company's internal control over financial reporting as of December 31, 2012. Based on management's assessment and those criteria, management believes that the internal control over financial reporting as of December 31, 2012 was effective.

This Annual Report does not include an attestation report of the Company's independent registered public accounting firm regarding internal control over financial reporting. Management's internal control report was not subject to attestation by the Company's independent registered public accounting firm pursuant to rules of the Securities and Exchange Commission that permit the Company to provide only management's report.

Changes in Internal Controls over Financial Reporting. There was no change in our internal control over financial reporting that occurred during our last fiscal quarter that has materially affected, or is reasonably likely to materially affect, our internal control over financial reporting.

ITEM 9B - OTHER INFORMATION

None

IIIIIIIUCEII COLDOLAUOII	ImmuCell	Corporation
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PART III

ITEM 10 - DIRECTORS, EXECUTIVE OFFICERS AND CORPORATE GOVERNANCE

Information with respect to our directors is incorporated herein by reference to the section of our 2013 Proxy Statement titled "Election of the Board of Directors", which we intend to file with the Securities and Exchange Commission within 120 days after December 31, 2012. The information required by this item with respect to our executive officers is contained in Item 1 of Part I of this Annual Report on Form 10-K under the heading "Executive Officers of the Company". There is no family relationship between any director, executive officer, or person nominated or chosen by the Company to become a director or executive officer.

ITEM 11 - EXECUTIVE COMPENSATION

Information regarding cash compensation paid to our executive officers is incorporated herein by reference to the section of our 2013 Proxy Statement titled "Executive Officer Compensation", which we intend to file with the Securities and Exchange Commission within 120 days after December 31, 2012.

ITEM 12 – SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS AND MANAGEMENT AND RELATED STOCKHOLDER MATTERS

Information regarding ownership of our common stock by certain owners and management is incorporated herein by reference to the section of our 2013 Proxy Statement titled "Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters", which we intend to file with the Securities and Exchange Commission within 120 days after December 31, 2012.

ITEM 13 – CERTAIN RELATIONSHIPS AND RELATED TRANSACTIONS AND DIRECTOR INDEPENDENCE

Information regarding certain relationships and related transactions is incorporated herein by reference to the section of our 2013 Proxy Statement titled "Certain Relationships and Related Transactions and Director Independence", which we intend to file with the Securities and Exchange Commission within 120 days after December 31, 2012.

ITEM 14 - PRINCIPAL ACCOUNTING FEES AND SERVICES

Information regarding our principal accountant fees and services is incorporated by reference to the section of our 2013 Proxy Statement titled "Principal Accounting Fees and Services", which we intend to file with the Securities and Exchange Commission within 120 days after December 31, 2012.

ITEM 15 - EXHIBITS AND FINANCIAL STATEMENT SCHEDULES

- 3.1 Certificate of Incorporation of the Company (incorporated by reference to Exhibit 3.1 of the Company's 1987 Registration Statement No. 33-12722 on Form S-1 as filed with the Commission).
- 3.2 Certificate of Amendment to the Company's Certificate of Incorporation effective July 23, 1990 (incorporated by reference to Exhibit 3.2 of the Company's Annual Report on Form 10-K for the year ended December 31, 2008).
- 3.3 Certificate of Amendment to the Company's Certificate of Incorporation effective August 24, 1992 (incorporated by reference to Exhibit 3.3 of the Company's Annual Report on Form 10-K for the year ended December 31, 2008).
- 3.4 Bylaws of the Company as amended (incorporated by reference to Exhibit 3.4 of the Company's Annual Report on Form 10-K for the year ended December 31, 2008).
- Rights Agreement dated as of September 5, 1995, between the Company and American Stock Transfer and Trust Co., as Rights Agent, which includes as Exhibit A thereto the form of Right Certificate and as Exhibit B thereto the Summary of Rights to Purchase Common Stock (incorporated by reference to Exhibit 4.1 to the Company's Quarterly Report on Form 10-Q for the quarterly period ended March 31, 2009).
- 4.1A Second Amendment to Rights Agreement dated as of June 30, 2008 (incorporated by reference to Exhibit 4.1A of the Company's Annual Report on Form 10-K for the year ended December 31, 2008).

- 4.1B Third Amendment to Rights Agreement dated as of August 9, 2011 (incorporated by reference to Exhibit 4.1 of the Company's Quarterly Report on Form 10-Q for the three-month period ended June 30, 2011).
 - Form of Indemnification Agreement (updated) entered into with each of the Company's Directors and Officers
- 10.1+(incorporated by reference to Exhibit 10.3A to the Company's Annual Report on Form 10-KSB for the year ended December 31, 2006).
- 10.2+2000 Stock Option and Incentive Plan of the Company (incorporated by reference to Exhibit 10.6 of the Company's Annual Report on Form 10-K for the year ended December 31, 2008).
- 10.3+ Form of Incentive Stock Agreement (incorporated by reference to Exhibit 10.7 of the Company's Annual Report on Form 10-K for the year ended December 31, 2008).
 - Amendment to Employment Agreement between the Company and Michael F. Brigham dated March 26, 2010
- 10.4+(incorporated by reference to Exhibit 10.6 of the Company's Annual Report on Form 10-K for the year ended December 31, 2009).
- Amendment to Employment Agreement between the Company and Joseph H. Crabb dated March 26, 2010
- 10.5+(incorporated by reference to Exhibit 10.7 of the Company's Annual Report on Form 10-K for the year ended December 31, 2009).
- 10.6+2010 Stock Option and Incentive Plan of the Company (incorporated by reference to Exhibit 10.6 of the Company's Annual Report on Form 10-K for the year ended December 31, 2010).
- 10.7+ Form of Incentive Stock Option Agreement (incorporated by reference to Exhibit 10.7 of the Company's Annual Report on Form 10-K for the year ended December 31, 2010).
 - Development and Manufacturing Agreement between the Company and Lonza Sales, Ltd. dated July 15, 2010
- 10.8⁽¹⁾ (incorporated by reference to Exhibit 10.1 of the Company's Quarterly Report on Form 10-Q for the three-month period ended June 30, 2010).
- Commercial Promissory Note for \$1,000,000 between the Company and TD Bank, N.A. dated August 13, 2010 10.9 (incorporated by reference to Exhibit 10.2 of the Company's Quarterly Report on Form 10-Q for the three-month period ended June 30, 2010).
- Commercial Promissory Note for \$600,000 between the Company and TD Bank, N.A. dated August 13, 2010 10.10(incorporated by reference to Exhibit 10.3 of the Company's Quarterly Report on Form 10-Q for the three-month period ended June 30, 2010).
- Line of Credit Agreement and Promissory Note for up to \$500,000 between the Company and TD Bank, N.A.
- 10.11 dated August 13, 2010 (incorporated by reference to Exhibit 10.4 of the Company's Quarterly Report on Form 10-Q for the three-month period ended June 30, 2010).
- Loan Agreement between the Company and TD Bank, N.A. dated August 13, 2010 (incorporated by reference 10.12⁽¹⁾ to Exhibit 10.5 of the Company's Quarterly Report on Form 10-Q for the three-month period ended June 30, 2010).
- Contract Manufacture Agreement between the Company and Norbrook Laboratories Limited dated as of 10.13⁽¹⁾ September 27, 2010 (incorporated by reference to Exhibit 10.1 of the Company's Quarterly Report on Form 10-Q for the three-month period ended September 30, 2010).
- ¹⁴Code of Business Conduct and Ethics (incorporated by reference to Exhibit 14 of the Company's Annual Report on Form 10-K for the year ended December 31, 2008).
- 23 Consent of Baker Newman & Noves, LLC.
- 31 Certifications required by Rule 13a-14(a).
- 32 Certification pursuant to Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.

101.INS XBRL Instance Document.

101.SCH XBRL Taxonomy Extension Schema Document.

101.CALXBRL Taxonomy Extension Calculation Linkbase Document.

101.DEF XBRL Taxonomy Extension Definition Linkbase Document.

101.LABXBRL Taxonomy Extension Label Linkbase Document.

101.PRE XBRL Taxonomy Extension Presentation Linkbase Document.

- + Management contract or compensatory plan or arrangement.
- (1) Confidential treatment as to certain portions has been requested, which portions have been omitted and filed separately with the Securities and Exchange Commission.

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the Board of Directors and Stockholders

ImmuCell Corporation

Portland, Maine

We have audited the accompanying balance sheets of ImmuCell Corporation (the Company) as of December 31, 2012 and 2011, and the related statements of operations, comprehensive income (loss), stockholders' equity and cash flows for each of the three years in the period ended December 31, 2012. These financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on these financial statements based on our audits.

We conducted our audits in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. The Company is not required to have, nor were we engaged to perform, an audit of its internal control over financial reporting. Our audits included consideration of internal control over financial reporting as a basis for designing audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Company's internal control over financial reporting. Accordingly, we express no such opinion. An audit also includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements, assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation. We believe that our audits provide a reasonable basis for our opinion.

In our opinion, the financial statements referred to above present fairly, in all material respects, the financial position of ImmuCell Corporation as of December 31, 2012 and 2011, and the results of its operations and its cash flows for each of the three years in the period ended December 31, 2012, in conformity with U.S. generally accepted accounting principles.

Portland, Maine /s/ Baker Newman & Noyes March 28, 2013 Limited Liability Company

F-1

BALANCE SHEETS

ASSETS	As of December 2012	ber 31, 2011
RRENT ASSETS: sh and cash equivalents ort-term investments de accounts receivable, net of allowance for doubtful accounts of \$15,111 and	\$2,673,719 2,240,000	\$781,516 4,178,000
\$16,359 at December 31, 2012 and 2011, respectively	574,146	346,447
Income taxes receivable Other receivables Inventory Current portion of deferred tax asset Prepaid expenses Total current assets	348 36,860 1,649,002 31,177 157,930 7,363,182	648 36,701 1,666,465 59,016 81,807 7,150,600
NET PROPERTY, PLANT AND EQUIPMENT, at cost	2,357,609	2,515,331
LONG-TERM PORTION OF DEFERRED TAX ASSET	1,245,982	1,306,335
OTHER ASSETS, net	63,634	19,006
TOTAL ASSETS	\$11,030,407	\$10,991,272
LIABILITIES AND STOCKHOLDERS' EQUITY CURRENT LIABILITIES:		
Accrued expenses	\$255,568	\$303,900
Accounts payable	228,711	149,877
Current portion of bank debt Deferred revenue	181,491	172,973 8,250
Total current liabilities	665,770	635,000
LONG-TERM LIABILITIES:		
Long-term portion of bank debt	1,086,568	1,267,939
Interest rate swap	83,386	67,900
Total long-term liabilities	1,169,954	1,335,839
TOTAL LIABILITIES	1,835,724	1,970,839
STOCKHOLDERS' EQUITY:	226 115	226 115
	326,115	326,115

Common stock, \$0.10 par value per share, 8,000,000 shares authorized, 3,261,148 shares issued at December 31, 2012 and 2011

issued at December 51, 2012 and 2011			
Capital in excess of par value	9,973,146	9,911,914	
Accumulated deficit	(524,803)	(614,315)	
Treasury stock, at cost, 242,114 and 257,114 shares at December 31, 2012 and 2011, respectively	(529,655)	(562,469)	
Accumulated other comprehensive loss	(50,120)	(40,812)	
Total stockholders' equity	9,194,683	9,020,433	
TOTAL LIABILITIES AND STOCKHOLDERS' EQUITY	\$11,030,407	\$10,991,272	

The accompanying notes are an integral part of these financial statements.

F-2

STATEMENTS OF OPERATIONS

	For the Years Ended December 31,		
	2012	2011	2010
Product sales Costs of goods sold Gross margin	\$5,389,935 2,335,676 3,054,259		\$4,386,196 2,083,718 2,302,478
Gross margin	2,021,227	2,013,001	2,502,170
Sales and marketing expenses Administrative expenses Product development expenses Operating expenses	973,217 918,441 917,600 2,809,258	869,869 856,606 1,720,055 3,446,530	650,889 849,064 1,492,806 2,992,759
NET OPERATING INCOME (LOSS)	245,001	(632,726)	(690,281)
Other expenses, net	52,849	63,955	(6,869)
INCOME (LOSS) BEFORE INCOME TAXES	192,152	(696,681)	(683,412)
Income tax expense (benefit)	102,640	(287,171)	(298,728)
NET INCOME (LOSS)	\$89,512	\$(409,510)	\$(384,684)
Weighted average common shares outstanding: Basic Diluted	3,018,296 3,108,419		2,970,833 2,970,833
NET INCOME (LOSS) PER SHARE:			
Basic	\$0.03		\$(0.13)
Diluted	\$0.03	\$(0.14)	\$(0.13)

The accompanying notes are an integral part of these financial statements.

STATEMENTS OF COMPREHENSIVE INCOME (LOSS)

	For the Years Ended December		
	2012	2011	2010
Net income (loss)	\$89,512	\$(409,510)	\$(384,684)
Other comprehensive (loss) income:			
Interest rate swap, before taxes	(15,486)	(77,531)	9,631
Income tax applicable to interest rate swap	6,178	27,088	
Other comprehensive (loss) income, net of taxes	(9,308)	(50,443)	9,631
Total comprehensive income (loss)	\$80,204	\$(459,953)	\$(375,053)

The accompanying notes are an integral part of these financial statements.

F-4

STATEMENTS OF STOCKHOLDERS' EQUITY

	Common St \$0.10 Par V		Capital in Excess of	Accumulate Surplus	ed Treasury S	Stock	Accumu Other Compre	Total Stockholders'
	Shares	Amount	Par Value	(Deficit)	Shares	Amount	Income (Loss)	Equity
BALANCE, December 31, 2009	3,261,148	\$326,115	\$9,751,442	\$179,879	290,496	\$(635,495)		\$9,621,941
Net loss	_	_	_	(384,684)	_	_	_	(384,684
Other comprehensive income, net of taxes	_	_	_	_	_	_	9,631	9,631
Exercise of stock options	_	_	(563)	_	(3,000)	6,563	_	Payments i

Payments in respect of the and premium, if any, on, a Gloi name of DTC or its nominee we capacity as the registered holded. Under the terms of the indenture Guarantors and the trustee will names the notes, including the registered as the owners of the receiving payments and for all Consequently, neither the Issue trustee nor any agent of an Issue trustee has or will have any res

any aspect
Participant
records rela
on account
interests in
maintaining
any of DTC
Participant
records rela

ownership Notes; or

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(2)

any other n and practic Participant

DTC has advised us that it due date of any payment in resp the notes, is to credit the accou Participants with the payment of DTC has reason to believe that on such payment date. Each rel credited with an amount propor ownership of an interest in the relevant security as shown on t Payments by the Participants at to the beneficial owners of note standing instructions and custo the responsibility of the Partici Participants and will not be the trustee, the Guarantors or the Is the Guarantors nor the trustee v by DTC or any of its Participar beneficial owners of the notes, Guarantors and the trustee may will be protected in relying on its nominee for all purposes.

Transfers between Particip effected in accordance with DT settled in same-day funds, and participants in Euroclear and C in accordance with their respect procedures.

Cross-market transfers bet DTC, on the one hand, and Eur participants, on the other hand, DTC in accordance with DTC's Euroclear or Clearstream, as th respective depositaries; however transactions will require delive Euroclear or Clearstream, as th counterparty in such system in and procedures and within the (Brussels time) of such system. as the case may be, will, if the settlement requirements, delive depositary to take action to effe behalf by delivering or receivir Global Note in DTC, and maki accordance with normal proced settlement applicable to DTC. Clearstream participants may n directly to the depositaries for l

DTC has advised us that it permitted to be taken by a Holo direction of one or more Partici DTC has credited the interests

only in respect of such portion amount of the notes as to which Participants has or have given a there is an Event of Default unthe right to exchange the Globa Notes, and to distribute such no

Although DTC, Euroclear agreed to the foregoing procedinterests in the Global Notes ar Euroclear and Clearstream, the perform or to continue to perform ay discontinue such procedur Issuers, the Guarantors, the trustrespective agents will have any performance by DTC, Euroclear respective participants or indirect respective obligations under the governing their operations.

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Exchange of Global Notes for

A Global Note is exchang in minimum denominations of multiples of \$1,000 in excess o

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the Issuers, to DTC's re trustee in w cause the is Notes; or

DTC (a) no unwilling of depositary (b) has cea registered u and in either appoint a s 90 days;

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there has of an Event of the trustee the Global Notes.

Beneficial interests in a G exchanged for Certificated Not circumstances permitted by the Certificated Notes delivered in Note or beneficial interests in G registered in the names, and iss denominations, requested by or accordance with its customary the restrictive legend referred tunless that legend is not require

Neither the Issuer, the Gua be liable for any delay by DTC Participant or Indirect Participal beneficial owners of interests in Issuers, the Guarantors and the rely on, and will be protected in from DTC or its nominee for al respect to the registration and d principal amounts, of the Certif

Exchange of Certificated Not

Certificated Notes may no beneficial interests in any Glob limited circumstances provided

Same-Day Settlement and Pa

The Issuers will make pay notes represented by the Globa principal, premium, if any, and of immediately available funds by DTC or its nominee. The Iss payments of principal, interest respect to Certificated Notes in above under "Methods of Rec Notes." The notes represented expected to be eligible to trade Settlement System, and any per trading activity in such notes we by DTC to be settled in immed expect that secondary trading in will also be settled in immediated.

Because of time zone diffe account of a Euroclear or Clear purchasing an interest in a Glol in DTC will be credited, and ar reported to the relevant Eurocle participant, during the securitie (which must be a business day Clearstream) immediately follo DTC. DTC has advised us that or Clearstream as a result of sa Note by or through a Euroclean to a Participant in DTC will be settlement date of DTC but wil relevant Euroclear or Clearstre the business day for Euroclear DTC's settlement date.

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Certain Definitions

Set forth below are certain indenture. Reference is made to disclosure of all such terms, as capitalized terms used herein for provided.

"Acquired Debt" means, v
Person:

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"Additional Assets" means

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provided, however, that any sudescribed in clause (2) or (3) is Oil and Gas Business.

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- (b) the attributable properties of Restricted approved oil attributable books and earlier than Company's annual perifinancial st
- (c) the Working C its Restrict no earlier to Company's annual perifinancial st
 - (d) th

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- (2) the sum of

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- (b) a balancing l and its Res the last day recent annu which inter available;
- (c) to clause (1)(a future net r accordance (utilizing the Company's attributable required to parties to fi of the Com Subsidiarie Volumetric the schedul thereto, and
- (d) the revenues, consists of production included in discounted specified in revenues.

would be n payment of and its Res respect to I Production specified w

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"Affiliate" of any specified Person directly or indirectly co or under direct or indirect com specified Person. For purposes "control," as used with respect possession, directly or indirectly cause the direction of the mana Person, whether through the ov securities, by agreement or other that beneficial ownership of 10 Stock of a Person will be deem other Person; and further, that a beneficially owns 10% or more specified Person shall not be de either the specified Person or the because of such common owne Person. For purposes of this de "controlling," "controlled by" a with" have correlative meaning

"Asset Sale" means:

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the sale, lea disposition (including Payment or transaction the disposit all of the pa Company a Subsidiarie governed b indenture d caption " 1 Holders C provisions caption " Consolidat

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or the settle of contract kind;

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the grant in business of of patents, therefor an property;

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any Production Sales; prov Production Sales, othe compensati are reasona and Gas Bu geophysici technical se Restricted Company, incurred, is guaranteed

financing of the acquisit subject the

"Asset Swap" means any se contemporaneous (and in any ed 180 days of each other) purcha any assets or properties used of Business between the Company Subsidiaries and another Personant P

received must be applied in acc described above under the capt Option of Holders Asset Sales an Asset Sale.

"Attributable Debt" in res transaction means, at the time of present value of the obligation payments during the remaining in such sale and leaseback trans period for which such lease has the option of the lessor, be exte shall be calculated using a disc of interest implicit in such trans accordance with GAAP As use sentence, the "net rental payme any such period shall mean the payments required to be paid w by the lessee thereunder, exclude to be paid by such lessee on acc repairs, insurance, taxes, assess similar charges. In the case of a by the lessee upon payment of payment shall also include the no rent shall be considered as r such lease subsequent to the fir be so terminated.

"Available Cash" has the term in the Partnership Agreem of the indenture.

"Beneficial Owner" has the term in Rule 13d-3 and Rule 13d-4. Act, except that in calculating the any particular "person" (as that Section 13(d)(3) of the Exchanbe deemed to have beneficial of that such "person" has the right or exercise of other securities, currently exercisable or is exercised or a subsequent consumer of the security of the security of the security exercisable or is exercised. "Beneficially Owns" and "Beneficially Owns" and "Beneficially Owns" and "Beneficially of the security of the se

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"Board of Directors" mea

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with respect board or co serving a si

"Board Resolution" means certified by the Secretary or an applicable Person to have been of Directors of such Person and effect on the date of such certifithe trustee.

"Business Day" means ead Saturday, Sunday or other day institutions in New York, New payment are authorized or requ

"Capital Lease Obligation determination is to be made, the respect of a capital lease that we required to be capitalized on a with GAAP.

"Capital Stock" means:

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Table of Contents

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money man the assets of Equivalent clauses (1) definition.

"Change of Control" mean the following:

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number of

Exchange A Beneficial indirectly, Voting Sto measured b number of

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Notwithstanding the prece Company or any of its Restricte limited partnership, corporation or other form of entity to a limit corporation, limited partnership an exchange of all of the outsta one form of entity for Equity In entity shall not constitute a Cha following such conversion or e that term is used in Section 13(who Beneficially Owned the C Company immediately prior to to Beneficially Own in the aggs the Voting Stock of such entity applicable, or continue to Bene Equity Interests in such entity t directors, managers, trustees or similar capacity for such entity applicable, and, in either case r Owns more than 50% of the Vo or its general partner, as applica

"Code" means the Internal amended from time to time, and

"Commission" or "SEC" r Exchange Commission.

"Consolidated Cash Flow any specified Person for any pe Income of such Person for such duplication:

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provision f or profits (i taxes accordance Person and for such pe provision f computing Income; pl

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Fixed Char Restricted period, to t Fixed Char computing Income; pl

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depreciatio (including but excludi cash expen period), im based comp other non-c (excluding or expense represents cash charge period or a cash charge in a prior p its Restrict period, to t depreciatio impairmen charges or deducted in Consolidat

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non-cash it Consolidat period, oth revenue in business; a

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to the exter Consolidate period, the deferred reduring such to reserves Volumetric (b) amount with GAAI principal an

Dollar-Der Payments,

in each case, on a consolidated accordance with GAAP.

"Consolidated Net Income any specified Person for any per net income (loss) of such Person Subsidiaries for such period, or determined in accordance with reduction in respect of dividence preferred securities, provided the

> the net inco Person that Subsidiary accounted accounting to the exter

(2)

to the speci Subsidiary

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any "ceiling properties of writedowns under GAA be excluded

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any unreali losses or ch Hedging C resulting fr FASB ASC Derivatives

"Consolidated Net Workin current assets of the Company Subsidiaries except current asset Contracts, less (b) all current li and its Restricted Subsidiaries, included in Indebtedness, (ii) c with asset retirement obligation properties and (iii) any current Contracts, in each case as set for financial statements of the Con accordance with GAAP (exclusion pursuant to FASB ASC Topic Medging).

"continuing" means, with Event of Default, that such Def has not been cured or waived.

"Continuing Directors" m determination, any member of the General Partner who:

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was a mem Directors o or

(2)

was nomin to such Box approval of Continuing members o such nomin

"Credit Agreement" mean Amended and Restated Credit and March 10, 2011, by and among borrower, Wells Fargo Bank, Nadministrative agent and the of time party thereto, including ar collateral documents, instrument executed in connection therewish amended, restated, modified, reor refinanced from time to time

"Credit Facilities" means (including, without limitation, commercial paper facilities or with banks or other institutional investors providing for revolving receivables financing (including receivables to such lenders or the formed to borrow from such lenge receivables), letters of credit or in each case, as amended, restarefunded, replaced or refinance with any capital markets transafrom time to time.

"Customary Recourse Exc respect to any Non-Recourse D Subsidiary, exclusions from the with respect to such Non-Recou bankruptcy of such Unrestricted misapplication of cash, environ willful destruction and other cit excluded by lenders from excul included in separate indemnification-recourse financings.

Table of Contents

"Default" means any even passage of time or the giving o an Event of Default.

"De Minimis Guaranteed amount of Indebtedness that do

"Disqualified Stock" mear by its terms (or by the terms of is convertible, or for which it is case at the option of the holder upon the happening of any ever mandatorily redeemable, pursu obligation or otherwise, or rede holder of the Capital Stock, in to the date that is 91 days after mature. Notwithstanding the pr Capital Stock that would consti solely because the holders of the right to require the Company to such Capital Stock upon the oc control or an asset sale will not Stock if the terms of such Capi Company may not repurchase of Stock pursuant to such provision or redemption complies with th above under the caption " Cert Payments."

"Dollar-Denominated Proproduction payment obligation accordance with GAAP, togeth and obligations in connection t

"Domestic Subsidiary" me Subsidiary of the Company tha laws of the United States or any or the District of Columbia and Capital Stock is Beneficially O

"Equity Interests" means C warrants, options or other right (but excluding any debt security exchangeable for, Capital Stock

"Equity Offering" means a Capital Stock (other than Disqueash on a primary basis by the the indenture, provided that at a Change of Control, any sale of Affiliate of the Company shall Offering.

"Exchange Notes" means Exchange Offer pursuant to the

"Exchange Offer" has the term in the applicable registrati

"Existing Indebtedness" m principal amount of Indebtedne Restricted Subsidiaries (other the Credit Agreement, which is confirst paragraph under the coven Indebtedness and Issuance of P than intercompany Indebtedness of the indenture, until such amo

The term "fair market val." would be paid by a willing buy seller in a transaction not invol either party, determined in goo Directors of the Company in th \$20.0 million or more and othe General Partner.

"Fixed Charge Coverage to any specified Person for any period, the ratio of the Consolid Person for such period to the Ferson for such period. In the element of the Person or any of its Restricted assumes, guarantees, repays, redefeases or otherwise discharge than ordinary working capital be repurchases or redeems

Table of Contents

preferred securities subsequent the applicable four-quarter refe prior to the date on which the e calculation of the Fixed Charge (the "Calculation Date"), then t Ratio will be calculated giving incurrence, assumption, guaran redemption, defeasance or othe Indebtedness, or such issuance, of preferred securities, and the therefrom as if the same had oc such period. If any Indebtedness interest and is being given pro expense on such Indebtedness average rate in effect from the the Calculation Date had been entire period (taking into accou Contract applicable to such Ind remaining term of such interest than 12 months, then such inter only be taken into account for t equal to the remaining term the that is being given pro forma et at the option of such Person, th calculated by applying such op Person. Interest on Indebtednes determined at an interest rate b prime or similar rate, a eurocur rate, or other rate, shall be deer upon the rate actually chosen, of such optional rate chosen as su

In addition, for purposes of Charge Coverage Ratio:

(1)

acquisition the specifie Restricted through me otherwise (assets used Gas Busine of its Restr by the spec Restricted in each cas transaction Indebtedne reference p reference p Calculation made on th given pro f occurred or four-quarte including a

Flow and a cost reduct

are reasona within the reasonable financial of General Pa those cost s improveme in pro form accordance promulgate or any othe the Commi

(2)

the Consolattributable operations, accordance operations ownership of prior to be excluded

(3)

the Fixed C discontinue determined GAAP, and (and owner disposed of Date, will be extent that to such Fix obligations any of its F following t

(4)

any Person Subsidiary the Calcula to have bee of the spec during such

(5)

any Person Subsidiary the Calcula not to have Subsidiary any time do period; and

Table of Contents

(6)

interest inc by such Pe the applica from cash of such Person Subsidiary or Cash Eq Calculation result of the

Coverage I

"Fixed Charges" means, we Person for any period, the sum.

(1)

the consoli interest inc Restricted period, who (excluding to Dollar-D Payments, financing c interest cha and abando retirement obligations Indebtedne limitation, issuance co discount, n the interest payments a Lease Obli with respec commissio and charge letter of cre financings) payments r to interest i

(2)

the consoli such Person Subsidiarie during such

plus

(3)

any interes another Per such Person Subsidiarie assets of su Restricted not such gu

upon; plus

Restricted

all dividence and whether series of D Person or consecurities of Subsidiarie payable softhe payor (Stock) or to

in each case, on a consolidated accordance with GAAP.

(4)

"Foreign Subsidiary" mea Subsidiary of the Company tha Subsidiary and (b) has 50% or assets located outside the Unite thereof.

"GAAP" means generally principles in the United States, time to time.

"General Partner" means a Delaware limited liability con and permitted assigns under the general partner of the Company with the ultimate authority to n operations of the Company.

The term "guarantee" means by endorsement of negotiable in the ordinary course of business manner including, without limit of assets, acting as co-obligor of or reimbursement agreements in any part of any Indebtedness. Wiguarantee" has a correlative means of the second secon

"Guarantors" means each

the Subsidition other than the indenture and

Table of Contents

(2)

any other F Company t accordance indenture;

and their respective successors until the Subsidiary Guarantee released in accordance with the indenture.

"Hedging Contracts" mea specified Person:

(1)

interest rate rate cap ag collar agree one or mor designed to of its Restr into the agr in interest i

(2)

foreign exc currency presented into financial in protect the Restricted the agreem currency ex to Indebted

(3)

any commo commodity agreement protect aga price of Hy produced, p Person or a Subsidiarie

(4)

other agree designed to of its Restr fluctuation commodity exchange r

and in each case are entered into of business and not for specula

"Holder" means a Person registered.

"Hydrocarbons" means or casinghead gas, drip gasoline, i condensate, distillate, liquid hy hydrocarbons and all constituent thereof and products refined or

"Indebtedness" means, with Person, any indebtedness of succontingent:

in respect of

evidenced or similar i

in respect of credit issue Person that constitute I the amount included in exceed the Indebtedne without duramount of letters of crof such Per

in respect of

representin Obligations respect of s transaction

representin unpaid of t property, e constitutes trade payab

(7)
representin
Hedging C

if and to the extent any of the p letters of credit and obligations would appear as a liability upon specified Person prepared in ac addition, the term "Indebtedness Indebtedness of other

Table of Contents

Persons secured by a Lien on a Person (whether or not such Inthe specified Person) and, to the included, the guarantee by the Indebtedness of any other Persot oany Production Payment, and of production or payment by su such Production Payment, but obligations of such Person with Payment).

The amount of any Indebt any date will be:

(1) the

the accrete in the case with origin

(2)

in the case Hedging C value of the giving rise would be p such date;

(3)

Indebtedne interest on more than a

"Investments" means, with direct or indirect investments b Persons (including Affiliates) i (including guarantees or other capital contributions (excluding and similar advances to officer the ordinary course of business customers in the ordinary cours recorded as accounts receivable the lender), purchases or other consideration of Indebtedness, securities, together with all iter classified as investments on a b accordance with GAAP. If the Subsidiary of the Company sel any Equity Interests of any dire Subsidiary of the Company suc any such sale or disposition, su Restricted Subsidiary of the Co be deemed to have made an Inv such sale or disposition in an ar market value of the Equity Inte Subsidiary not sold or disposed determined as provided in the f covenant described above unde

Covenants Restricted Paymen Company or any Subsidiary of that holds an Investment in a th to be an Investment made by th Subsidiary in such third Person fair market value of the Investr Person in such third Person on acquisition in an amount deterr final paragraph of the covenant caption " Certain Covenants"

"Joint Venture" means any or indirect Subsidiary of the Co Company or any of its Restrict Investment.

"Lien" means, with respect mortgage, lien, pledge, charge, encumbrance of any kind in resor not filed, recorded or otherw applicable law, including any citile retention agreement, any leany option or other agreement interest in and any filing of or a financing statement under the U (or equivalent statutes) of any j precautionary financing statem intended as a security agreement

"Make Whole Premium" in note at any time, the excess, if value at such time of (i) the red at June 1, 2017 plus (ii) any red due on such note through June currently accrued and unpaid in discount rate equal to the Treas points,

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discounted to the redemption d (assuming a 360-day year cons months), over (b) the principal

"Moody's" means Moody' any successor to the rating age

"Net Proceeds" means the received by the Company or an Subsidiaries in respect of any A without limitation, any cash recother disposition of any non-cain any Asset Sale), net of:

(1)

the direct of Sale, included legal, according features of severance of expenses in Asset Sale;

(2)

taxes paid of Asset Sale, into accour or deduction arrangement

(3)

amounts re repayment a Lien on the were the su and

(4)

any amoun reserve esta GAAP or a escrow, in in respect of properties of associated retained by Restricted as such res escrow arra which case only the an reversed or Company of Subsidiarie arrangemei

"Non-Recourse Debt" mea

(1)

as to which any of its R (a) provide (including or instrume Indebtedne indirectly I otherwise, Recourse E lender;

(2)

no default (including of the Inde enforcement Unrestricte upon notice holder of a (other than or any of it declare a declare a declare and Indebtedne the Indebte payable pri and

(3)

as to which notified in have any re or assets of Restricted contemplat definition of Customary

For purposes of determining covenant described under "Ce of Indebtedness and Issuance of in the event that any Non-Reco Unrestricted Subsidiaries cease of such Unrestricted Subsidiary deemed to constitute an incurred Restricted Subsidiary of the Co

"Obligations" means any interest (including interest accr of any petition in bankruptcy o whether or not a claim for post such proceeding), penalties, fee indemnifications,

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reimbursement obligations, dar other liabilities or amounts pay documentation governing any l thereto.

"Oil and Gas Business" m

(1) the acquisi developme and disposi and other F

the gathering processing distributing of any processing or properties

any busined for or deve treatment, prefining), si marketing minerals are association

any other b gross incor "qualifying Section 770

any activity complemen necessary of activities d through (4)

"Partnership Agreement"
Restated Agreement of Limited Company, as amended and in eindenture and as such may be for supplemented from time to t

"Permitted Acquisition Indestedness or Disqualified Stof its Restricted Subsidiaries to Indestedness or Disqualified Stok of any other (a) such Person became a Restricted Subsidiaries, provided that on the Company or an Subsidiaries, provided that on the became a Restricted Subsidiary date such Person was merged of

the Company or any of its Rest applicable, either

(1)

immediatel
such transa
as if the sar
beginning of
four-quarte
such Restri
applicable,
incur at lea
Indebtedne
Charge Co
in the first
described a
" Certain of
Indebtedne
Preferred S

(2)

immediatel such transa as if the san beginning of four-quarte Coverage I would be e Fixed Char Company i transaction

"Permitted Business Invess made in the ordinary course of shall have become customary i Business, including investment actively exploring for, acquirin processing, gathering, marketin Hydrocarbons through agreemed or arrangements that permit on comply with regulatory require ownership or satisfy other objethrough the conduct of the Oil with third parties, including wi

(1)

direct or in oil, natural properties of gathering, storage or r real proper therein; and

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(2)

the entry in joint ventu working in mineral lea farm-out ag agreements agreements agreements transportati oil and natu Hydrocarbo unitization arrangemen agreements partnership general or customary properties, and Investr connection thereto, in into in the and Gas Bu however, In and publicl partnership

"Permitted Investments" n

(1)

any Investr (including, purchases of Subsidiary

(2)

any Investr

(3)

any Investr any Restric Company i such Invest

(a)

(b)

(4)

any Investr receipt of r an Asset Sa to and in co covenant d caption " I Holders A pursuant to items deem

(5)

any Investr exchange f Interests (o Stock) of the

under the d

(6)

any Investr compromis creditors or incurred in business, in plan of reoarrangement insolvency customer, of foreclosure its Restricte to any secu-

(7)

Hedging C

(8)

Permitted I

(9)

other Inves having an a (measured Investment giving effe value), who other Inves this clause outstanding of \$50.0 m Company's Net Tangib however, tl pursuant to any Person Subsidiary of the making such Person Subsidiary date, such

be deemed

pursuant to cease to ha this clause Person con Subsidiary

......

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"Permitted Liens" means:

any Lien w Agreement Facilities;

(2)

Liens in far Guarantors

(3)

Liens on properties of the Company of the Company of the Company of the Company of the Consolidation assets (other thereon, ac proceeds the Person consolidate Restricted of the Company o

(4)

Liens on proof acquisiting Company of the Company o

Company;

(5)

any interes property su Obligation:

(6)

Liens for the payment of purchase probligations to finance to improvement repairs or a property act the ordinar provided the

(a)

(b)

(7)

Liens exist indenture;

(8)

Liens to se tenders, bid surety or ap contracts, g operating le or other ob incurred in business;

(9)

Liens on ar Interests of Subsidiary owned by t Restricted to the exter Debt or oth Unrestricte Venture;

(10)

Liens in res Payments a Liens shall that is the s Payments a

(11)

Liens on pi facilities th law;

(12)

Liens arisin agreements partnership leases, farm agreements for the sale exchange of and related minerals, u declaration mutual inte agreements course of b and its Res customary Business;

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(13)

Liens reser leases for b and for cor such leases

(14)

Liens upon inventory, or proceeds its Restricts such Person bankers' ac securitizati the account the purchas such inventogoods or puthe covenant Covenants and Issuand

(15)

Liens secur Issuers or a notes or the the case ma

(16)

Liens secure equally and Obligations Subsidiary contractual in a manne the covenar " Certain C

(17)

Liens to se Hedging C any of its R

(18)

Liens secur financing u conditions, may extend property of being acqu the proceed or refunded related their

(19)

Liens arisin overriding net revenue interests, re production

rights of pu and other s ordinarily of properties a and its Res otherwise a and Gas Bu

(20)

other Liens or any Rest Company, effect to an aggregate p Indebtedne secured by pursuant to exceed the 2.5% of the Consolidate and

(21)

any Lien re refinancing permitted b (19) above principal a secured by except by a reasonable reasonable expenses re connection amount equ commitmen and (b) no such Lien o permitted t immediatel extension, encumbere

"Permitted Refinancing In Indebtedness of the Company of Subsidiaries issued in exchange which are used to extend, refinal defease or refund other Indebte any of its Restricted Subsidiaries intercompany Indebtedness), pr

(1)

the princip Permitted I does not ex of the Inde refinanced, defeased or interest on amount of

improvement thereto and

incurred in

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(2)

such Permi Indebtedne later than that and has a V Maturity et Weighted A of, the Inderefinanced, defeased on

(3)

if the Indeb refinanced, defeased or in right of J Subsidiary Refinancin subordinate the notes of on terms at Holders of the docume Indebtedne refinanced, defeased or

(4)

such Indebi (other than a Restricted Company (if the Comp primary ob being exten replaced, do

Notwithstanding the prece incurred under Credit Facilities "Incurrence of Indebtedness an Stock" shall be subject only to the definition of Credit Facilitie requirements set forth in the de Refinancing Indebtedness.

"Person" means any indiv partnership, joint venture, assocompany, trust, unincorporated liability company or governme

"Prior Issue Date" means date of the initial issuance of the due 2020.

"Production Payments" m Dollar-Denominated Productio Volumetric Production Paymen

"Production Payments and grant or transfer by the Company to a overriding royalty, net profits i payment (whether volumetric of partnership or other interest in reserves or the right to receive production or the proceeds from attributable to such properties, or transfers pursuant to incentify on terms that are reasonably curbusiness for geologists, geophy of technical services to the Company.

"Qualifying Owners" mea Company and its Restricted Su

"Reporting Default" mean clause (4) under " Events of D

"Restricted Investment" methan a Permitted Investment.

"Restricted Subsidiary" of Subsidiary of the referent Perso Unrestricted Subsidiary. Notwi indenture to the contrary, Finan Restricted Subsidiary of the Co

"S&P" refers to Standard a division of The McGraw-Hill successor to the rating agency

"Senior Debt" means

(1)

all Indebted any of its F outstanding and all obli Contracts v

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any other I Company o

Subsidiarie under the to unless the i such Indeb expressly p subordinate the notes of Guarantee;

(3)

all Obligation items listed clauses (1)

Notwithstanding anything preceding sentence, Senior Del

(a)

any interco Company o Subsidiarie its Affiliate

(b)

any Indebto

For the avoidance of doub include any trade payables or ta Company or any of its Restrict

"Significant Subsidiary" n would be a "significant subsidi Rule 1-02 of Regulation S-X, p Securities Act, as such Regulat of the indenture.

"Stated Maturity" means, installment of interest or principal Indebtedness, the date on which principal was scheduled to be procumentation governing such include any contingent obligative purchase any such interest or originally scheduled for the pay

"Subsidiary" means, with Person:

(1)

any corporbusiness er partnership company) of the total vo

is at the tin directly or or one or m Subsidiarie combination

(2)

any partner limited) or (a) the sole of which is Subsidiary there is mo partner or i managing g managing 1 Person or o such Person thereof) or controls, di majority of partner inte other Votin partnership company, 1

"Subsidiary Guarantee" n Guarantor of the Issuers' Oblig and on the notes.

"Treasury Rate" means th time of computation of United with a constant maturity (as con most recent Federal Reserve St H.15(519) which has become p two Business Days prior to the (or, if such Statistical Release i publicly available source of sin nearly equal to the period from June 1, 2017; provided, however equal to the constant maturity of security for which a weekly ave Company shall obtain the Trea interpolation (calculated to the year) from the weekly average Treasury securities for which s that if the period from the reder is less than one year, the weekl traded United States Treasury s constant maturity of one year s will (a) calculate the Treasury Business Day preceding the

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applicable redemption date and redemption date file with the tr setting forth the Make Whole F Rate and showing the calculated detail.

"Unrestricted Subsidiary"
the Company (other than Finan
by the Board of Directors of th
Unrestricted Subsidiary pursua
but only to the extent that such

(1)

has no Inde Non-Recou Person othe of its Restr

(2)

is not party contract, ar understand any Restric Company t agreement, understand the Compa Subsidiary obtained at are not Aff

(3)

is a Person neither the Restricted or indirect for addition maintain or financial co Person to a of operatin

(4)

has not guadirectly or support for Company of Subsidiarie

All Subsidiaries of an Unralso be Unrestricted Subsidiarie

Any designation of a Subs an Unrestricted Subsidiary will by filing with the trustee a Boa to such designation and an offithat such designation complied conditions and was permitted be above under the caption " Cert

Payments." If, at any time, any would fail to meet the precedin Unrestricted Subsidiary, it will Unrestricted Subsidiary for pur any Indebtedness of such Subsidiary for pur any Indebtedness of such Subsidiary for pur any Indebtedness of such Indebted incurred by a Restricted Subsidiary for Such date under the caption "Certain Countries Indebtedness and Issuance of P. Company will be in default of the subsidiary for pur any subsidiary for pur any

"Volumetric Production Production payment obligation revenue in accordance with GA related undertakings and obligations."

"Voting Stock" of any Person the Capital Stock of such Person (without regard to the occurrent vote in the election of the Boar Person.

"Weighted Average Life to applied to any Indebtedness at years obtained by dividing:

(1)

the sum of multiplying then remain fund, serial payments of payment at of the Inde of years (cone-twelfth such date a payment; b

(2)

the then ou of such Ind

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PLAN OF DIST

You may transfer new not exchange offer in exchange for

you acquire exchange of of your bus

you do not knowledge notes from or understa participate the meanin such new n provisions

you are not intend to enthe new no

you are not meaning of Securities

Each broker-dealer that re own account pursuant to the ex for old notes that were acquired result of market-making or othe acknowledge that it will delive connection with any resale of s prospectus, as it may be amend time to time, may be used by a connection with resales of new for old notes, where such old n result of market-making activities.

If you wish to exchange n in the exchange offer, you will representations to us as describ Offer Purpose and Effect of th " Procedures for Tendering Y this prospectus and in the letter if you are a broker-dealer who own account in exchange for oby you as a result of market-matrading activities, you will be rethat you will deliver a prospect resale by you of such new note

We will not receive any p new notes by broker-dealers. No broker-dealers for their own ac exchange offer may be sold fro more transactions in any of the

in the over-

in negotiate

through the new notes methods of

at market p of resale;

at prices re market pric

at negotiate

Any such resale may be m or to or through brokers or deal compensation in the form of co from any such broker-dealer or new notes.

Any broker-dealer that res received by it for its own accou exchange offer in exchange for acquired by such broker-dealer market-making or other trading to be an "underwriter" within the Securities Act. The letter of tra acknowledging that it will deliv prospectus, a broker-dealer wil that it is an "underwriter" withi Securities Act. We agreed to pe prospectus for a period of up to completion of the exchange off to satisfy this prospectus delive Furthermore, we agree to amen prospectus during such

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period, if so requested, in order disposition of any new notes by

We have agreed to pay all exchange offer other than fees the holders and brokerage com if any, and will indemnify the h (including any broker-dealers) including liabilities under the S

CERTAIN U.S. FEDER

The following discussion U.S. federal income tax consideration exchange of old notes for new to be a complete analysis of all discussion is based upon the In 1986, as amended, Treasury Re Revenue Service rulings and pr decisions now in effect, all of v change at any time by legislative administrative action. These ch retroactively in a manner that c holder of new notes. We canno Internal Revenue Service will i of the tax consequences describ we have not obtained, nor do w from the Internal Revenue Serv counsel with respect to the U.S described herein. Some holders institutions, insurance compani companies, tax-exempt organiz or currencies, persons whose fu the U.S. dollar or persons who hedge, conversion transaction, reduction transaction may be su discussed below.

We recommend that each hol advisor as to the particular to exchanging such holder's old including the applicability an state, local or other tax laws of considerations.

The exchange of old notes an exchange or otherwise a tax: U.S. federal income tax purpos will not recognize gain or loss in exchange for an old note in tholder's basis and holding periothe same as its basis and holdin corresponding old note immedia

8.

LEGAL M

The validity of the new no exchange offer will be passed of Houston, Texas.

INDEPENDENT REG ACCOUNTI

The consolidated balance Reserves LP as of December 3 related consolidated statements equity, and cash flows for each year period ended December 3 prospectus by reference from L annual report on Form 10-K fo December 31, 2013 have been USA, LLP, an independent reg firm, incorporated herein by re authority of said firm as expert accounting.

INDEPENDENT RES

Information about our esti and the future net cash flows at natural gas reserves of Legacy December 31, 2013 contained in annual report for the year ender on Form 10-K and incorporated prepared by LaRoche Petroleur independent reserve engineer a estimates are incorporated here authority of such firms as expe

LETTER OF TR

to Ten Outstanding Unregiste Notes du of

LEGACY RELEGACY R

Pursuant to the Exchange dated

THE EXCHANGE OFF WITHDRAWAL RIGHTS W 5:00 P.M., NEW YORK CIT 2015 (THE "EXPIRATION I EXCHANGE OFFER IS EX' ISSUERS (AS DEFINED BE

The Exchange Agent for

Wells Fargo Ba Associa

By Overr

Attn: Corp

By Registered

Attn: Corporate

or Certified	Deliver
Mail:	
Wells Fargo	Wells Fa
Bank, N.A.	Bank, N
MAC	MAC
N9303-121	N9303-1
P.O. Box 1517	6th & Marc
	Avenu
Minneapolis,	Minneapo
Minnesota 55480	Minneso
	55479

FACSIMILE TRANSMIS CONFIRM BY TELEPH

Trust Operations Trust Oper

If you wish to exchange of unregistered 6.625% Senior Not for an equal aggregate principal registered 6.625% Senior Note pursuant to the exchange offer, (and not withdraw) old notes to to the Expiration Date.

The undersigned hereby a prospectus, dated , Legacy Reserves LP and Legacy Corporation (collectively, the "transmittal (the "Letter of Trandescribe the Issuers' offer (the exchange the old notes for a liken new notes that have been registed Act of 1933, as amended (the "Capitalized terms used but not respective meanings given to the

The Issuers reserve the rig time to time, to extend the Exci discretion, in which event the t mean the latest date to which th extended. The Issuers shall not and each registered holder of the extension by oral or written not York City time, on the next bus previously scheduled Expiration

This Letter of Transmittal the old notes. Tender of old not to the Automated Tender Offer Depository Trust Company ("E procedures set forth in the Prose "Exchange Offer Procedures f participants that are accepting to transmit their acceptance to DT acceptance and execute a book Exchange

A-1

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Agent's DTC account. DTC wi computer-generated message k message" to the Exchange Age you to validly tender your old r Offer, the Exchange Agent must Expiration Date, an agent's mes procedures that confirms that:

> DTC has re tender your

> you agree t this Letter

BY USING THE ATOP TENDER OLD NOTES, YOU REQUIRED TO DELIVER T TRANSMITTAL TO THE E HOWEVER, YOU WILL BE TERMS, AND YOU WILL B MADE THE ACKNOWLED REPRESENTATIONS AND CONTAINS, JUST AS IF YO

A-2

PLEASE READ THE INSTRUCTIONS

Ladies and Gentlemen:

- (1) By tenderin Exchange Offer, you Prospectus and this I
- (2) By tendering Exchange Offer, you you have full authoring described above and and deliver any additional by the Issuers to be not complete the tender of the state of the s
- (3) You understold notes pursuant to forth in the Prospectuagreement between the Issuers as to the term in the Prospectus.
- (4) By tendering Exchange Offer, you Exchange Offer is be interpretations contai issued to third parties Securities and Excha "SEC"), including Ex Corp., SEC No-Actio May 13, 1988), Morg SEC No-Action Lette and Shearman & Ster Letter (available July notes issued in excha pursuant to the Excha for resale, resold and holders thereof without registration and prosp of the Securities Act who purchased old no new notes directly fro pursuant to Rule 144 exemption under the such holder that is an within the meaning o Securities Act), provi are acquired in the or holders' business and participating in, and l any other person to p
- (5) By tendering Exchange Offer, you

distribution of such n

warrant that:

You may, if you the representations ar Item 5 above and as Registration Rights A below), elect to have in the shelf registration the registration rights May 13, 2014 (the "F Agreement"), by and initial guarantors par Securities, LLC,

A-3

Merrill Lynch, Pierce Incorporated, RBC C **UBS Securities LLC** Markets Inc., Barclay Morgan Securities Ll the Initial Purchasers election may be made writing at 303 W. Wa Midland, TX 79701, By making such elec of old notes participa to indemnify and hol guarantors, and their of the officers of the who signs such shelf each person who con the guarantors, within Securities Act or the 1934, as amended, ar directors, partners, er and agents of each su against any and all lo liabilities caused by a alleged untrue statem contained in any shel prospectus, or in any amendment thereof, or alleged omission t fact required to be sta make the statements circumstances under misleading; but only relating to the unders by or on behalf of the use in a shelf registra prospectus or any am thereto. Any such inc governed by the term conditions set forth in Agreement, including provisions regarding counsel, contribution set forth therein. The indemnification prov Rights Agreement is exhaustive and is qua Registration Rights A

(6) If you are a receive new notes for exchange for old note result of market- mak trading activities, you tendering old notes in you will deliver a proany resale of such ne acknowledging and by you will not be deem "underwriter" within Securities Act.

- (7) If you are a notes held for your o acquired as a result o trading activities, suc exchanged pursuant t
- (8) Any of you shall be binding upon executors, administra and legal and persona

INSTRUC FORMING PART OF CONDITIONS OF THE

1.

Book-Entr

Any confirmation of a boo Exchange Agent's account at D by book-entry transfer (a "Bool well as an agent's message and required by this Letter of Trans the Exchange Agent at its addression 5:00 p.m., New York City time

2.

Partial Te

Tenders of old notes will be minimum denominations of \$2, of \$1,000 in excess thereof. The of old notes delivered to the Exchange principal amount of all old notes for the principal amount of and new notes issued in exchanaccepted will be delivered to the DTC promptly after the old not exchange.

3.

Validity of

All questions as to the val (including time of receipt), acc tendered old notes will be deter their sole discretion, which dete binding. The Issuers reserve the any or all tenders not in proper exchange of which may, in the Issuers, be unlawful. The Issue right to waive any of the condit or any defect or irregularity in The Issuers' interpretation of th the Exchange Offer (including Letter of Transmittal) will be fi parties. Unless waived, any def connection with tenders of old such time as the Issuers shall de Issuers intend to notify holders with respect to tenders of old n Exchange Agent nor any other duty to give notification of any tenders or incur any liability fo notification. Tenders of old not have been made until such defe

been cured or waived. Any old Exchange Agent that are not pr which the defects or irregularit waived will be returned by the tendering holders, unless other of Transmittal, as soon as pract Expiration Date.

4.

Requests f Additional

Requests for assistance or Prospectus or this Letter of Tra the Exchange Agent at the address set forth on the cover page of the Holders may also contact their bank, trust company or other no concerning the Exchange Offer

5.

Withdraw

Tenders may be withdraw limited withdrawal rights set for the caption "Exchange Offer V

6.

No Guara

There is no procedure for in the Exchange Offer.

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Dealer Prospectus Delivery C

Until , all de transactions in these securities, participating in the offering, maprospectus. This is in addition to deliver a prospectus when actir respect to unsold allotments or

Table of Contents

PART

INFORMATION NO PROSPE

Item 20. Indemnification of

Legacy Reserves LP

Under our partnership agr circumstances, we will indemn to the fullest extent permitted b losses, claims, damages or simi

our general

any departi

any person of a genera general par

any person officer, me trustee of a preceding t

> any person director, of fiduciary o at the reque any departi

any person partner.

Any indemnification under be out of our assets. Unless it of general partner will not be personally obligation to contribute or enable us to effectuate, indemninsurance against liabilities assincurred by persons for our act whether we would have the poperson against liabilities under

Legacy Reserves Finance Con

Section 145 of the Genera State of Delaware, among othe

Delaware corporation to indem or is a party, or is threatened to threatened, pending or complet proceeding (other than an actio corporation) by reason of the fa was a director, officer, employe corporation, or is or was servin corporation as a director, office another corporation or other en (including attorneys' fees), judg paid in settlement actually and in connection with such action, acted in good faith and in a ma believed to be in or not oppose corporation, and, with respect t proceeding, had no reasonable conduct was unlawful. Similar such persons against expenses actually and reasonably incurre connection with the defense or threatened, pending or complet person acted in good faith and believed to be in or not oppose corporation, provided that (unle jurisdiction otherwise provides have been adjudged liable to th indemnification may be made of specific case upon a determinat disinterested directors or by inc written opinion that indemnific indemnitee has met the applica

Section 145 further author purchase and maintain insurance who is or was a director, office corporation, or is or was servin corporation as a director, office another corporation or other

II-1

enterprise, against any liability incurred by him in any such cap status as such, whether or not the otherwise have the power to ince Section 145. Also, the bylaws of Corporation provide for the indofficers, employees or agents of officers who serve at the request directors, officers, employees of enterprise against certain liability circumstances.

Legacy Reserves GP, LLC an Operating GP LLC

Legacy Reserves GP, LLC Legacy Reserves LP, and Lega Operating GP LLC are organiz State of Delaware. Under the E Company Act, a limited liabilit have the power to, indemnify a member or manager or other pe and all claims and demands who

The limited liability comp Reserves GP, LLC provides the indemnified and held harmless against any and all losses, clair and other amounts (collectively any and all claims, demands, ac in which such director may be management of the affairs of the director will not be provided w indemnification if a court of codetermined that such Losses re gross negligence or willful mis

The limited liability comp Reserves Operating GP LLC pr any additional members, any at and any directors or officers of former member, director or off partner, director, officer, fiduci or entity described in clauses (i "Indemnitees") shall be indemn the company from and against damages and settlements arisin demands, actions, suits or proc criminal, administrative or inve member is involved, as a party its status as an Indemnitee. How not be held harmless if there ha non-appealable judgment enter jurisdiction determining that, th faith or engaged in fraud, willfu case of a criminal matter, acted Indemnitee's conduct was unla

Legacy Reserves Operating I

The limited partnership ag Reserves Operating LP provide partner, any additional general of such general partner, (ii) any or any subsidiary of the partner partner, director, officer, fiduci or entity described in clauses (i "Indemnitees") shall be indemn the partnership from and against claims, damages, liabilities, joi judgments, fines and settlemen claims, demands, actions, suits civil, criminal, administrative of the member is involved, as a pa of its status as an Indemnitee. I will not be held harmless if the non-appealable judgment enter jurisdiction determining that, the faith or engaged in fraud, willfi case of a criminal matter, acted Indemnitee's conduct was unla

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Legacy Reserves Services, Inc

Legacy Reserves Services the laws of the state of Texas. Organizations Code ("TBOC") corporations. Section 8.051 of (a) An enterprise shall indemni former governing person, or de expenses actually incurred by t with a proceeding in which the because the person is or was a delegate if the person is wholly or otherwise, in the defense of that determines, in a suit for inc governing person, former gove entitled to indemnification und indemnification and award to the incurred in securing the indemi

Section 8.052 states that: governing person, former gove and after notice is provided as a court may order an enterprise to the extent the court determines reasonably entitled to indemnif relevant circumstances. (b) Thi regard to whether the governing person, or delegate applying to requirements of Section 8.101 (1) to the enterprise; or (2) because received a personal benefit, wit benefit resulted from an action official capacity. (c) The indem court under this section is limit if the governing person, former delegate is found liable: (1) to (2) because the person imprope benefit, without regard to whet from an action taken in the per-

Section 8.101 states that: indemnify a governing person, or delegate who was, is, or is the respondent in a proceeding to t Section 8.102 if it is determine Section 8.103 that: (1) the pers (B) reasonably believed: (i) in person's official capacity, that t the enterprise's best interests; a that the person's conduct was n enterprise's best interests; and (proceeding, did not have a reas person's conduct was unlawful; expenses, the amount of expense reasonable; and (3) indemnifica (b) Action taken or omitted by delegate with respect to an emp performance of the person's du reasonably believed by the pers

the participants and beneficiari purpose that is not opposed to the enterprise. (c) Action taken or another enterprise for a purpose the delegate to be in the interest its owners or members is for a to the best interests of the enter not fail to meet the standard un solely because of the termination (1) judgment; (2) order; (3) set (5) a plea of nolo contendere of

Section 8.102 states that: Subsection (b), an enterprise m person, former governing perso judgment; and (2) expenses, of are reasonable and actually inc connection with a proceeding. this subchapter of a person who enterprise or is found liable bed received a personal benefit: (1) expenses actually incurred by t with the proceeding; (2) does n penalty, a fine, and an excise of excise tax assessed against the employee benefit plan; and (3) relation to a proceeding in which found liable for: (A) willful or the performance of the person's (B) breach of the person's duty enterprise; or

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Table of Contents

(C) an act or omission not come constitutes a breach of a duty of enterprise. (c) A governing perperson, or delegate is considered in relation to a claim, issue, or is established by an order, included a court, and all appeals of the foreclosed by law.

Section 8.105(b) states that indemnify an officer to the same indemnification is required undependent of the same governing person.

Item 21. Exhibits and Fina Schedules.

(a) The following documenthis Registration Statement, incincorporated herein by reference Company under the Securities indicated in parentheses:

Exhibit Number

4.1* Registration Rig June 29, 2006, I Holdings LP an Legacy Reserve Registration Rig (Incorporated b Reserves LP's F

Form S-1 (File September 5, 20

- 4.2* Registration Rig March 15, 2006 Reserves LP, Le and the other pa "Founders Regi Agreement") (In Legacy Reserve Statement on Fo No. 333-134056 Exhibit 4.3).
- 4.3* Registration Rig April 16, 2007, Associates, Inc. Reserves GP, L Reserves LP (Ir Legacy Reserve Form 10-Q (Fil-May 14, 2007, 1
- 4.5* Registration Rig May 13, 2014, I Reserves LP, Le Corporation, the

and Wells Farge Lynch, Pierce, I Incorporated, R UBS Securities Markets Inc., B Morgan Securit of the Initial Pu (Incorporated b Reserves LP's C (File No. 001-3 Exhibit 4.2).

- 4.6* Indenture, dated among Legacy Reserves Finance Guarantors name Bank, National (including the form 2020) (Incontent Legacy Reserve Form 8-K (File December 10, 2
- 4.7* Indenture, dated among Legacy Reserves Finand Guarantors nam Bank, National (including form due 2021)(Incon Legacy Reserve Form 8-K (File May 31, 2013, 1
- 5.1** Opinion of And the validity of the
- 12.1** Statement regar

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Exhibit Number 21.1*	List of subsidiar (Incorporated by Reserves LP's A Form 10-K (File February 27, 20
23.1**	Consent of BDC
23.2**	Consent of LaR Consultants, Ltd
23.3**	Consent of And in Exhibit 5.1).
24.1**	Power of Attorn

25.1**

Incorporated by refer

Statement of El Wells Fargo Ba

*

Filed herewith.

(b) Financial Statement S

Schedules are omitted bec required or are not applicable of information has been included the notes thereto or elsewhere l

Item 22. Undertakings.

Insofar as indemnification the Securities Act may be perm and controlling persons of the i advised that, in the opinion of t Commission, such indemnifica and is, therefore, unenforceable for indemnification against suc payment by any registrant of ex a director, officer or controlling the successful defense of any a asserted by such director, office connection with the securities b registrant will, unless in the opmatter has been settled by cont a court of appropriate jurisdicti such indemnification by it is ag expressed in the Securities Act the final adjudication of such is

Each registrant hereby und

To file, during any period being made, a post-effective an registration statement to:

- (a) include any Section 10(a)(3) of the
- (b) reflect in th events arising after th registration statemen post-effective amend individually or in the fundamental change in this registration sta the foregoing, any involume of securities value of securities of which was registered the low or high end o offering range may b prospectus filed with Rule 424(b) if, in the volume and price rep change in the maxim set forth in the "Calci table in the effective

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(c) to include a with respect to the pl previously disclosed statement, or any ma information in this re

That, for the purpose of do under the Securities Act of 193 amendment shall be deemed to statement relating to the securioffering of such securities at the be the initial bona fide offering

To remove from registrati post-effective amendment any registered that remain unsold a offering.

That, for the purpose of de the Securities Act of 1933 to an registrant is subject to Rule 430 pursuant to Rule 424(b) as part relating to an offering, other th relying on Rule 430B or other reliance on Rule 430A, shall be included in the registration stat first used after effectiveness; pr statement made in a registration that is part of the registration st document incorporated or deen reference into the registration s is part of the registration staten with a time of contract of sale p supersede or modify any staten registration statement or prospe registration statement or made immediately prior to such date

That, for the purpose of de registrant under the Securities a purchaser in the initial distribut primary offering of securities of to this registration statement, reunderwriting method used to se purchaser, if the securities are of purchaser by means of any of the communications, the undersign seller to the purchaser and will sell such securities to such purchaser.

- (a) any prelimi prospectus of the uncerrelating to the offering pursuant to Rule 424
- (b) any free wr the offering prepared registrant or used or undersigned registrar

- (c) the portion prospectus relating to material information registrants or their se behalf of such registr
- (d) any other c offer in the offering the purchaser.

That, for purposes of determined the Securities Act of 1933, each annual report pursuant to Section the Securities Exchange Act of applicable, each filing of an errannual report pursuant to Section Exchange Act of 1934) that is in the registration statement sharegistration statement relating to therein, and the offering of such shall be deemed to be the initial thereof.

To deliver or cause to be of prospectus, to each person to wor given, the latest annual repoincorporated by reference in the pursuant to, and meeting the reor Rule 14c-3 under the Securit and, where interim financial in

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presented by Article 3 of Regulative prospectus, to deliver, or caperson to whom the prospectus quarterly report that is specificate reference in the prospectus to prinancial information.

To respond to requests for incorporated by reference into Items 4, 10(b), 11 or 13 of this day of receipt of such request, incorporated documents by first equally prompt means. This incontained in documents filed state of the registration statemer responding to the request.

To supply by means of a pall information concerning a trabeing acquired involved therein of and included in the registration became effective.

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SIGNAT

Pursuant to the requirement the following registrant certifie grounds to believe that it meets filing on Form S-4 and has duly statement to be signed on its bettereunto duly authorized, in the Texas, on December 16, 2014.

LEGACY

By: LEG RES its go

By:

POWER OF A

Each person whose signat constitutes and appoints Cary I Westcott, or either of them, each without the other, his or her lay agents, with full power of subs for him or her and in his or her any and all capacities, to sign a this registration statement, incl post-effective amendments, and exhibits thereto and other docu advisable in connection therew Exchange Commission, granting attorneys-in-fact and agents, an and authority to do and perforn thing requisite and necessary to premises, as fully to all intents might or could do in person, he confirming all that said attorne each of them, or the substitute them, may lawfully do or cause hereof.

Pursuant to the requirement 1933, as amended, this Registration signed below by the following and on the dates indicated.

/s/ CARY D. BROWN Cary D. Brown	Chairman, President a Chief Exec Officer (Principal Executive Officer)
/s/ JAMES DANIEL WESTCOTT	Executive President a Chief Fina Officer
James Daniel Westcott	(Principal Financial Officer) II-8

Signature

Title

Table of Contents

Signature	Title
/s/ MICAH C. FOSTER Micah C. Foster	Chief Accountin Officer and Controller (Principal Accountin Officer)
/s/ PAUL T. HORNE Paul T. Horne	Executive President, Operating Officer and Director
/s/ KYLE A. MCGRAW Kyle A. McGraw	Executive President, Developm Officer and Director
/s/ DALE A. BROWN Dale A. Brown	Director
/s/ WILLIAM R. GRANBERRY William R. Granberry	Director
/s/ G. LARRY LAWRENCE G. Larry Lawrence	Director
/s/ KYLE D. VANN Kyle D. Vann	Director
/s/ WILLIAM D. SULLIVAN William D. Sullivan	Director II-9

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SIGNAT

Pursuant to the requirement the following registrant certific grounds to believe that it meets filing on Form S-4 and has duly statement to be signed on its be thereunto duly authorized, in the Texas, on December 16, 2014.

LEGAC CORPO

By:

,

POWER OF A

Each person whose signat constitutes and appoints Cary I Westcott, or either of them, each without the other, his or her law agents, with full power of subs for him or her and in his or her any and all capacities, to sign a this registration statement, incl post-effective amendments, and exhibits thereto and other docu advisable in connection therew Exchange Commission, granting attorneys-in-fact and agents, an and authority to do and perforn thing requisite and necessary to premises, as fully to all intents might or could do in person, he confirming all that said attorne each of them, or the substitute them, may lawfully do or cause hereof.

Pursuant to the requirement 1933, as amended, this Registra signed below by the following and on the dates indicated.

Signature

Title

/s/ CARY D. BROWN Cary D. Brown	Director, President a Chief Exec Officer (Principal Executive Officer)
/s/ JAMES DANIEL WESTCOTT James Daniel Westcott	Executive President a Chief Final Officer (Principal Financial Officer)
/s/ MICAH C. FOSTER	Chief Accounting Officer and
Micah C. Foster	Controller (Principal Accounting

Officer) II-10

Table of Contents	
Signature	Title
/s/ KYLE A. MCGRAW	Director
Kyle A. McGraw	
/s/ PAUL T. HORNE	Director
Paul T. Horne	II-11

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SIGNAT

Pursuant to the requirement the following registrant certifie grounds to believe that it meets filing on Form S-4 and has duly statement to be signed on its bettereunto duly authorized, in the Texas, on December 16, 2014.

LEGAC OPERA

By: L

By: L

By: L

By:

1

POWER OF A

Each person whose signat constitutes and appoints Cary I Westcott, or either of them, each without the other, his or her law agents, with full power of subs for him or her and in his or her any and all capacities, to sign a this registration statement, incl post-effective amendments, and exhibits thereto and other docu advisable in connection therew Exchange Commission, granting attorneys-in-fact and agents, an and authority to do and perforn thing requisite and necessary to premises, as fully to all intents might or could do in person, he confirming all that said attorne each of them, or the substitute them, may lawfully do or cause hereof.

Pursuant to the requireme 1933, as amended, this Registra signed below by the following and on the dates indicated.

Title

Signature

/s/ CARY D. BROWN Cary D. Brown	Chairman, President a Chief Exec Officer (Principal Executive Officer)
/s/ JAMES DANIEL WESTCOTT	Executive President a Chief Fina Officer
James Daniel Westcott	(Principal Financial Officer) II-12

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Signature	Title
/s/ MICAH C. FOSTER	Chief Acco
Micah C. Foster	(Principal Accounting Officer)
/s/ PAUL T. HORNE	Executive President,
Paul T. Horne	Operating and Direct
/s/ KYLE A. MCGRAW	Executive President, Development
Kyle A. McGraw	Officer and Director
/s/ DALE A. BROWN	Director
Dale A. Brown	
/s/ WILLIAM R. GRANBERRY	Director
William R. Granberry	Director
/s/ G. LARRY LAWRENCE	Dimentor
G. Larry Lawrence	Director
/s/ KYLE D. VANN	Director
Kyle D. Vann	
/s/ WILLIAM D. SULLIVAN	Director
William D. Sullivan	II-13
	1.

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SIGNAT

Pursuant to the requirement the following registrant certifie grounds to believe that it meets filing on Form S-4 and has duly statement to be signed on its bettereunto duly authorized, in the Texas, on December 16, 2014.

LEGAC OPERA

By: L

By: L

By: /s

POWER OF A

Each person whose signat constitutes and appoints Cary I Westcott, or either of them, each without the other, his or her law agents, with full power of subs for him or her and in his or her any and all capacities, to sign a this registration statement, incl post-effective amendments, and exhibits thereto and other docu advisable in connection therew Exchange Commission, granting attorneys-in-fact and agents, an and authority to do and perforn thing requisite and necessary to premises, as fully to all intents might or could do in person, he confirming all that said attorne each of them, or the substitute them, may lawfully do or cause hereof.

Pursuant to the requirement 1933, as amended, this Registra signed below by the following

and on the dates indicated.

Signature	Title
/s/ CARY D. BROWN Cary D. Brown	Chairman, President a Chief Exec Officer (Principal Executive Officer)
/s/ JAMES DANIEL WESTCOTT	Executive President a Chief Fina Officer
James Daniel Westcott	(Principal Financial Officer)

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Table of Contents

Signature	Title
/s/ MICAH C. FOSTER	Chief Acco
Micah C. Foster	(Principal Accounting Officer)
/s/ PAUL T. HORNE	Executive President,
Paul T. Horne	Operating and Direct
/s/ KYLE A. MCGRAW	Executive President, Development
Kyle A. McGraw	Officer and Director
/s/ DALE A. BROWN	Director
Dale A. Brown	
/s/ WILLIAM R. GRANBERRY	Director
William R. Granberry	Director
/s/ G. LARRY LAWRENCE	Director
G. Larry Lawrence	Director
/s/ KYLE D. VANN	Director
Kyle D. Vann	
/s/ WILLIAM D. SULLIVAN	Director
William D. Sullivan	II-15

Table of Contents

SIGNAT

Pursuant to the requirement the following registrant certific grounds to believe that it meets filing on Form S-4 and has duly statement to be signed on its be thereunto duly authorized, in the Texas, on December 16, 2014.

LEGAC SERVIO

By: /s

.

POWER OF A

Each person whose signat constitutes and appoints Cary I Westcott, or either of them, each without the other, his or her law agents, with full power of subs for him or her and in his or her any and all capacities, to sign a this registration statement, incl post-effective amendments, and exhibits thereto and other docu advisable in connection therew Exchange Commission, granting attorneys-in-fact and agents, an and authority to do and perforn thing requisite and necessary to premises, as fully to all intents might or could do in person, he confirming all that said attorne each of them, or the substitute them, may lawfully do or cause hereof.

Pursuant to the requirement 1933, as amended, this Registra signed below by the following and on the dates indicated.

Signature

/s/ CARY D. Director, BROWN President a

Title

Cary D. Brown	Chief Exec Officer (Principal Executive Officer)
/s/ JAMES DANIEL WESTCOTT	Executive 'President a Chief Final Officer (Principal
James Daniel Westcott	Financial Officer)
/s/ MICAH C. FOSTER Micah C. Foster	Chief Accounting Officer and Controller (Principal Accounting Officer)
/s/ KYLE A. MCGRAW	Director
Kyle A. McGraw	
/s/ PAUL T. HORNE	Director
Paul T. Horne	II-16

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INDEX TO I

Exhibit Number

- 4.1* Registration Right June 29, 2006, be and Legacy Rese Reserves GP, LL Rights Agreemer reference to Lega Registration State No. 333-134056) Exhibit 4.3).
- 4.2* Registration Righ March 15, 2006, Reserves LP, Leg the other parties the Registration Righ (Incorporated by Reserves LP's Reform S-1 (File N September 5, 200
- 4.3* Registration Right April 16, 2007, b Associates, Inc., and Legacy Rese reference to Lega Report on Form filed May 14, 200
- 4.5* Registration Righ May 13, 2014, by Reserves LP, Leg Corporation, the and Wells Fargo Lynch, Pierce, Fe Incorporated, RB UBS Securities L Markets Inc., Ban Morgan Securities the Initial Purcha (Incorporated by Reserves LP's Cu (File No. 001-33) Exhibit 4.2).
- 4.6* Indenture, dated among Legacy R
 Reserves Finance
 Guarantors name
 Bank, National A
 (including the for
 due 2020) (Incorp
 Legacy Reserves
 Form 8-K (File N
 December 10, 20

- 4.7* Indenture, dated a Legacy Reserves Finance Corporat therein and Wells Association, as to the 6.625% senion 2021)(Incorporat Reserves LP's Cu (File No. 001-33). Exhibit 4.1).
- 5.1** Opinion of Andre the validity of the
- 12.1** Statement regard
- 21.1* List of subsidiari (Incorporated by Reserves LP's Ar (File No. 001-33; 2013, Exhibit 21.
- 23.1** Consent of BDO
- 23.2** Consent of LaRo Consultants, Ltd.
- 23.3** Consent of Andre Exhibit 5.1).
- 24.1** Power of Attorne signature page at
- 25.1** Statement of Elig Wells Fargo Ban

*

Incorporated by refer

**

Filed herewith.

II-1′