



April 28, 2016

CENTAURUS DIAMOND TECHNOLOGIES, INC.

(OTC – CTDI - \$0.285)

Price Target: \$1.05

Rating: Speculative Buy

CENTAURUS DIAMOND TECHNOLOGIES, INC.

A Disruptive Technology for a \$17 Billion Industry

Rob Goldman
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COMPANY SNAPSHOT

Centaurus is set to commercialize its proprietary, cost-efficient and high-volume diamond production method to provide industrial quality diamonds. The Company's patented technology enables the production of "cultured" diamonds that are chemically, atomically and structurally identical to natural diamonds. The Gemological Institute of America has tested the Company's "cultured" diamonds and has confirmed they are diamonds according to their testing protocols.

KEY STATISTICS

Price as of 4/27/16	\$0.285
52 Week High – Low	\$0.343 - \$0.01
Est. Shares Outstanding	135.2M
Market Capitalization	\$38.5M
3 Mo Avg. Vol.	42,300
Exchange	OTC

COMPANY INFORMATION

Centaurus Diamond Technologies, Inc.
 1000 W. Bonanza Road
 Las Vegas NV 89106
 Phone: 702.382.3385

Web: <http://www.CentaurusTechnologiesInc.com>
 Email : info@centaurustechnologiesinc.com

INVESTMENT HIGHLIGHTS

Once full commercialization commences, Centaurus is poised to emerge as the go-to source for high demand, industrial synthetic diamonds, an estimated \$17 billion market. The Company is set to offer the fastest mass produced, lowest cost, high grade product in the space.

Initial sales of products developed through its patented technology should occur by year-end, with full commercialization in early 2017. The Company should enjoy hockey-stick type top-line growth beginning next year, resulting in \$40M in sales in 2018.

CTDT boasts an enviable leadership team. The current President/CEO held similar positions in key subsidiaries of Mars, Inc., the global food/candy producer. Plus, Centaurus' Chief Science Officer, who developed CTDT's technology, is a famed inventor who has been awarded more than 600 patents that include products familiar to consumers today.

Centaurus recently completed a complementary technology acquisition, with a history of sales. This segment could generate as much as \$3M in the next 18 months alone, once initial sales occur in 2Q16.

According to BUYINS.NET, short selling of the stock, from time to time. However, if management executes its business model, we believe a meaningful short squeeze could occur, driving these shares higher.

With the emergence of a disruptive technology in a multi-billion dollar industry, we rate these shares Speculative Buy. Customers in the semiconductor and other related industries are clamoring for CTDT's type of product, thus driving the Company's growth. Our \$1.05 target price reflects a roughly 3.5x price/sales multiple on an estimated \$40M in revenue in 2018.

COMPANY OVERVIEW

Leveraging its unique proprietary process, **Centaurus Diamond Technologies Inc. (OTC – CTDI)** is poised to emerge as the go-to producer of synthetic (cultured) diamonds for industrial and commercial use. Over the next 6 -12 months, the Company is slated to fully commercialize its cost-efficient, high-volume diamond production technology. Centaurus is initially targeting industrial customers seeking an affordable alternative to the purchase of expensive natural or synthetic diamonds. Demand for high grade, high volume, low priced diamonds is especially strong in the semiconductor space, as many technology applications are enabled singularly by diamonds.

Centaurus' patented technology enables the production of cultured diamonds that are chemically, atomically and structurally identical to natural diamonds. A sample production run was independently tested by the Gemological Institute of America and results of the sample confirmed that the product was a diamond according to its testing protocols. By procuring diamonds produced using the its Magnatek Diamond Synthesis process, Centaurus' industrial diamond customers that use diamonds in tools for cutting, grinding, polishing for use in the construction, electronics, and other industries, can substantially reduce their capital costs.

According to Transparency Market Research, the global synthetic diamond market is projected to grow from \$15.7 billion in 2014 (6.5 million carats) to an estimated \$28.8 billion in 2023 (12.4 million carats.) Today's primary methods of producing synthetic, or cultured diamonds, are dominated by High Pressure and High Temperature (HPHT), and CVD (Chemical Vapor Deposition.) However, these lab-grown approaches represent just a fraction of the diamonds used in the industrial market due to relatively high costs and the ability to 'grow' these diamonds on a large scale. Conversely, Centaurus' disruptive technology is primed to offer a high grade, affordable cultured diamonds for industrial use on a mass-produced basis, beginning in early 2017. Once final testing is completed and the process and product quality are confirmed for mass production, we believe diamond-related revenue could approach \$1M in 2016 through small batch sales, with revenue growing to \$7M next year, and \$40M in 2018.

Separately, the Company recently completed a complementary acquisition which could generate \$3M in the next 18 months alone, once initial sales occur in 2Q16. The Autogenous Impact Mill Technology, or AIM, is a novel, next generation of pulverization technology that uses physics-based innovation to "autogenously" process material. The technology succeeds in significantly reducing wear and tear on equipment, because there is no metal on metal contact as is the case with ball, hammer or impact mills currently used in mining and milling industries. Due to the way the technology works, the surface area is dramatically increased by 100 times or more thus providing for greater efficiency in many industrial applications.

Centaurus boasts an enviable management team for a firm five times its size. This team includes Chief Science Officer Alvin Snaper, inventor of the Company's technology and a famed engineer who has been awarded 600+ patents, along with new Company President/CEO, Brian Lauzon, a former high level executive of Mars, Inc., the beloved candy and food company. With key development and revenue-generating milestones ahead, we believe that Centaurus is well-positioned to transform and expand the use of synthetic diamonds for a variety of industrial applications, which represents a multi-billion dollar market. Our \$1.05 target price reflects

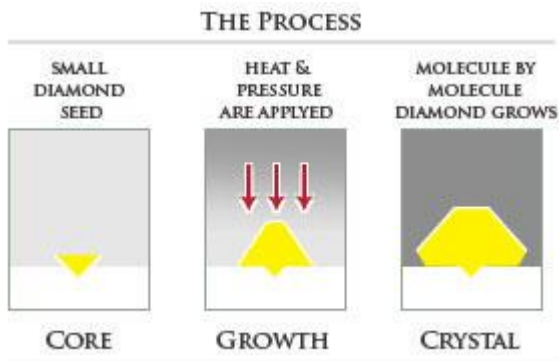
a roughly 3.5x price/sales multiple on an estimated \$40M in annual sales in 2018. We rate these shares Speculative Buy.

INDUSTRY OVERVIEW

Diamonds are made of carbon and the purer the carbon, the better for the manufacture of a cultured product. Natural diamonds are a crystal, which grows deep underground, usually in close proximity to volcanoes. The method in which diamonds are formed is similar to other crystals, but diamonds require tremendous temperatures and pressures to grow in Nature. As a result, most diamonds come up from very deep within the earth, carried by the lava flows from volcanoes.

In contrast to mined diamonds, synthetic, or cultured diamonds are manufactured in a laboratory. According to Transparency Market Research, the global synthetic diamond market is projected to grow from \$15.7 billion in 2014 (6.5 million carats) to an estimated \$28.8 billion in 2023 (12.4 million carats.) The gemological and industrial uses of diamond have created a large demand for rough stones. This demand has been satisfied in large part by synthetic diamonds, which have been manufactured by various processes for more than half a century. However, only in recent years has it become possible to produce gem-quality synthetic diamonds of significant production size.

Figure 1: The HPHT Process
 Source: AntwerpDiamonds.be



The primary methods of producing artificial diamonds are High Pressure and High Temperature (HPHT), and CVD (Chemical Vapor Deposition).

The HPHT method is the one used by most synthetic diamond producers today (both for gem use and industrial use). This process artificially recreates how diamonds are created within the body of our planet. A diamond 'seed' serves as the growth template, and then a carbon source, with a catalyst, is added to enhance growth. Once a crystal is established, the original 'seed' diamond is removed, and what remains is an artificial diamond.

CVD employs extremely low pressure and high temperature, and is used for coating things with diamond. There remain substantial challenges to realizing commercial growth levels against achieving larger single diamonds using this method. A diamond seed is again employed. The carbon growth medium is supplied in gaseous molecular form. The carbon floods onto the diamond seed and growth ensues.

Industrial Diamond Market & Synthetic Diamonds: The Relationship

According to Grand View Research, the global industrial diamond market was worth over \$20 billion in 2014, and actually covers 80% of the entire diamond industry. Industrial diamonds are mainly used as cutting, grinding, polishing, and lapping tools in the tool and die, machining, construction, mining, electronics,

automotive, and medical industries, with increasing demand for abrasives in major end-use industries expected to drive the overall market demand. Synthetic industrial diamonds are preferred over natural forms as their physical properties can be customized as per end-use requirement. Moreover, these diamonds carry inherently lower cost as compared with natural diamonds.

Synthetic diamonds are classified by several types of product segments, including bort, grit, dust, powder, and stones. Although stones account for more than half of the product segments, bort is typically used in diamond tip drill bits and as a loose grain abrasive for polishing. Grit and powder are used in diamond grinding wheels, saws, impregnated bits and tools and also as a loose abrasive for polishing. All of these products are valued on the basis of their strength, resistibility towards heat and corrosion, and conductivity towards thermal energy, which is particularly important in the semiconductor space.

Relative to silicon, diamond can run at a 5 times higher temperature without experiencing performance degradation. Moreover, it has 22 times the heat transfer efficiency of silicon, allowing it to be cooled easily. A thin piece of diamond can tolerate grid level voltages. Diamond-based semiconductor devices have been shown to deliver 1 million times the electrical current than those that are silicon-based. This enables processing speed and performance to increase without overheating and enable smaller and more powerful devices (Moore's law). These are some the drivers behind the strong demand for diamonds in the semiconductor and related electronics industries. In fact, industry forecasts suggest that sales to the semi industry alone will rise from \$4.7B in 2014 to \$7.4B in 2023.

MAGNETEK: DISRUPTIVE, TRANSFORMATIVE

Developed and patented by Chief Science Officer (and former Chairman) Alvin Snaper, the Centaurus' Magnetek Diamond Synthesis process converts carbon material into diamond, utilizing the compressive force derived from an abruptly collapsing magnetic field. Interestingly, this novel approach enables the production of high-end industrial quality diamonds by instantaneously combining heat, magnetic fields and collapsing pressures. Magnetek began R&D in 2006, when a sample "created" diamond was sent to the Gemological Institute of America (GIA). The resultant report #14882271 re-confirmed the product to be diamond following the identification by an independent outside consultant.

Here is a description of the process, via an excerpt of the patent "**Synthesis of diamond by extraction of a pulse derived from the abrupt collapse of a magnetic field**":

In the process of this invention, the magnetic pulse forming process is exerted on a charge contained in an electrically conductive container. The container is caused to shrink against the charge, thereby exerting a profoundly strong compressive force on the charge such that, portions of the charge will be converted into the diamond state.

The elapsed time for the process is extremely brief, and the very strong magnetic pulse entirely dissipates in that short time. There does result a temperature increase, but it will scarcely be detected by measurement of the charge. The temperature is developed sub-microscopically only briefly, at the same instant as the pressure pulse exists. The concurrence of these, however brief, has been proved to produce diamond from graphite, as evidenced by an assay made by the Gemological(sp) Institute of America.

Centaurus' goal is to produce diamonds that have multiple industrial applications that can be used in machining and cutting tools, as thermal conductors for high power laser diodes and high power transistors. They can also be used as optical material to replace zinc selenide and as the output window of high power CO2 lasers and gyrotrons. Industrial diamonds are predominately used for their hardness and thermal conductivity, possessing four times the conductivity of copper.

The Company has entered the final phase of its proprietary Magnatek process, wherein specifications and guidelines are established for the commercial mass production of industrial diamonds. During this phase, Centaurus will master the exact methodology of mass-producing diamonds and thus obtain the specifications that can assure maximum efficiency of the Magnatek Diamond Synthesis process. Once that is achieved, management will ramp up manufacturing of the Magnatek technology and apparatus to fully automate the process. The facility is already ISO-9002 compliant and it is anticipated to go into full production by the end of 2016.

Competitive Advantages

Once the operational ramp-up has been completed, each machine will be capable of producing two "rough" carats per cycle with an average cycle of mere minutes resulting in production capacity of over 20,000 carats per year. The current market price for industrial diamond material varies from \$10 to \$300 per carat for most stones, with some specific feature stones such as those destined for surgical scalpels for example, selling for up to \$3000 per carat. At a cost of a few hundred thousand dollars per machine, and with the throughput noted above, it is easy to see that Centaurus can very profitably mass produce affordable, high-grade and low-cost products, thereby eliminating the big stumbling blocks to solving the industry's heavy appetite for product: production and price.

If the Company succeeds in its objective to quickly mass produce high-grade, low-cost, products, it could emerge as the go-to source for customers in this multi-billion dollar industry.

As part of its goal to initially penetrate the low hanging fruit, the Company will launch its diamond production to initial (hit list) customers and also diamond wholesalers, who manufacture "rough" crystals for the Industrial Diamond Market. Industrial diamond output will be marketed through existing broker and agent networks that specialize in specific applications such as low-end abrasives through to high-end specialty knives and cutting devices.

AIM

The Autogenous Impact Mill Technology, or AIM, is a novel, next generation of pulverization technology that uses physics-based innovation to "autogenously" process material, and was acquired in November 2015. The technology succeeds in significantly reducing wear and tear on equipment, because there is no metal on metal contact as is the case with ball, hammer or impact mills currently used in mining and milling industries. Due to the way the technology works, the surface area is dramatically increased by 100 times or more thus providing for greater efficiency in many industrial applications. These include mining and mineral processing, waste recycling, pharmaceutical and chemical production and agricultural applications where the farming community can create "rock dust" from substrate material containing high levels of trace elements.

AIM Corp, the predecessor company had previously sold over 100 of the base units (Pulverized 500 pounds/per hour). This first generation of crushing and milling machines utilizes patented physics-based technology. In addition, the Company plans to produce larger units that can process 1, 2, 3 tons/per hour along with a 20 ton/per hour unit. These units will be sold to mining and re-mineralization operations in the US and abroad.

This novel, new generation of pulverization technology uses physics-based innovation to “autogenously” process material. The rollout of this revolutionary technology is in line with the overall company strategy to attain R&D benchmarks, to increase the Company’s IP Portfolio, and to create an additional revenue stream for the company.

The AIM unit is unique and different in the following ways:

- ▶ The simplicity of using and maintaining our equipment in the field reduces down time.
- ▶ The flexibility of applications regarding portability, control over particle size, and ability to operate without water in dry conditions (no liquids required) greatly enhances operating options.
- ▶ Due to the simplicity of the AIM unit’s design, these units require very little maintenance.
- ▶ The longevity and durability of performance in the field is dramatically increased.
- ▶ These units are energy efficient and can be powered with gas, diesel, or electric.

Centaurus management believes that this segment could generate as much as \$3M in the next 18 months alone, once initial sales occur in 2Q16.

MANAGEMENT TEAM

Centaurus boasts an enviable management team for a firm its size, with a President/CEO that formerly held a similar position with key subsidiaries of Mars, Inc., and a Chief Science Officer who has been awarded over 600 patents that include products familiar to consumers today.

Chairman - Leroy DeLisle

Mr. DeLisle is a manufacturing and management executive with fifty years of diverse domestic and international experience in line and staff roles, at both the plant and corporate levels. The majority of his career has been in the automotive industry. Most recently, Mr. DeLisle held the position of President and CEO of PTI Satellite Paint, a full service provider of finishing solutions for industrial automotive applications. Prior to leading PTI Satellite Paint, Mr. DeLisle worked with American Axle and Manufacturing where he participated in project launch, project management, and engineering of major projects.

Mr. DeLisle has held numerous management and C-level positions with a number of companies including: Chrysler Corporation, PTI Management Group, and Paint Tech International. He excels in implementing strategic initiatives that focus on improving quality, increasing production, lowering costs, and increasing value. He has successfully managed a massive turn-a-round taking a Chrysler assembly plant from last place in the corporation to #2 position.

President/CEO - Brian Lauzon

Mr. Lauzon has been in the consumer goods and pharmaceutical industries for over 40 years. He has been an executive officer of major corporations including Mars Inc., Warner Lambert and TJ Lipton. He was a high level executive of Mars Inc. and its affiliates for over 15+ years. In addition to the diversity of experience and strong record of leadership and accomplishment for performance in introducing new products to the market, Mr. Lauzon has been responsible for the double-digit growth in revenue and profits with some of the most powerful brands in the world, including M&M, Snickers, Skittles, Twix, Trident gum, Hall's Cough drops, Roloids, Listerine, Pedigree Pet Food and Uncle Ben. Through his efforts as part of senior management, the companies with which he was associated introduced new products throughout the world with a success rate of over 80%. Mr. Lauzon sits on a number of Boards including the BOD for both UNLV School of Medicine and the Grant A Gift Foundation for Autism.

Chief Scientist - Alvin Snaper

Mr. Snaper has served as a Senior Consultant to a number of major corporations and organizations, including IBM, General Foods, NASA, Boeing, Gillette, Singer, U.S. Air Force, Rocketdyne, General Motors, Lockheed Aircraft, Sanyo, Philips, Gulf Western, Union Carbide, etc. He has been awarded more than 600 patents on proprietary inventions, many for significant industrial products and processes. Some of his inventions and commercial products include the IBM Selectric Typewriter Ball, Tang, the NASA Apollo Photo-Pack, Coating Process for Gillette Razor Blades, and the Electrostatic Painting Process & System for Auto Components Assemblies for General Motors, to name a few. Mr. Snaper holds the single honor and individual distinction of being recognized with 'Best Patent of the Year' award by Design News magazine multiple times, and is the author of numerous technical and scientific papers.

Throughout his illustrious career, Mr. Snaper has founded numerous companies and held management and engineering positions at; Neo-Dyne Research Inc., where he served as founder and developed and perfected products based on his patents; at Advanced Patent Technology Inc. where he served as Vice President – Director Research – Corporate Director; at an Independent Consulting Firm where he served as founder and became the first multi-technology Registered Engineer licensed in California; at McGraw Colorgraph where he was responsible for overseeing all foreign and domestic testing of photographic systems; and at Bakelite Division of Union Carbide where he assisted in the development of a pilot plan for plastics manufacture.

EVP-Business Development/Public Relations - Chaslav "Chas" Radovich

An entrepreneurial spirit has driven Mr. Radovich his entire professional career. He has raised hundreds of millions of dollars for start-up companies in which he has successfully restructured or taken public. Most recently he was involved in raising capital for the pharmaceutical company Cobalis Corp. (CLSC). In 2011, the Retail Industry Community voted Cobalis' flagship product "Prehistin" as product of the year. During his early days in investment banking, Mr. Radovich was a Founder, of the world's first Internet service provider company, Aimsmart (AIMS); a company he eventually took public. In 1985, Mr. Radovich founded Best Electronics during the birth of the computer semiconductor industry.

EVP Sales and Marketing - Diran Kludjian

Mr. Kludjian has over thirty years of experience building and managing sales forces in a variety of industries, including consumer goods, broadcasting, and financial services with revenue responsibilities from \$5 million to

\$600 million. Most recently, Mr. Kludjian was the Executive Vice President of Global Cash Access Inc. (NYSE: GCA). Under Mr. Kludjian's direction, GCA more than tripled its annual revenues to \$600 million and EBITDA to \$100 million, respectively. The solid relationships Mr. Kludjian built with gaming operators and Indian casinos allowed GCA to provide its services to the top ten largest gaming companies in the United States and over 200 Indian casinos nationwide. Prior to GCA, Mr. Kludjian spent five years with First Data Corporation, serving as Vice President of the Chase Banking Alliance for the Travel and Entertainment sector. Mr. Kludjian also has considerable experience in consumer product sales and marketing where he led teams that sold products to department stores, mass merchants, drug chains, wholesale clubs, and supermarkets. Mr. Kludjian is also a co-founder of Casino Retail Development, LLC, which develops Fashion Outlet Malls at Native American Casino sites across the USA.

Earl Belger – Interim CFO

Mr. Belger is the President and Founder of Belger, PC also known as Belger & Associates, PC, a certified public accounting firm located in Fraser, Michigan. The Company was founded in 1981 as a sole practitioner's office. The business was incorporated in 1996 and has grown to its present size through the concept of providing quality accounting, consulting, and tax and validation services. In addition to its clientele in Michigan, the firm has clients located throughout the country. Including Georgia, Florida, South Carolina, California, New York and Ohio.

Mr. Belger has years of experience in tax, audit, accounting and business acquisitions and has performed numerous forensic accounting and business valuations. In the past he served as an accounting instructor at Macomb Community College and is the past president of a Homeowner Association. He currently serves as a member of the Michigan Association of Certified Public Accounting Valuation and Litigation task Force.

Stephen Saunders – Corporate Secretary

Mr. Saunders has relevant experience in IT/Web/Media, product and marketing development and Agricultural research and development; he provides a valuable contribution to success. The list of previous endeavors includes: Owner, Director at Integrated Technical Solutions, a full-service IT/Web/Media development Company based in Newport Beach, CA., Owner, Director at THUNDERgro™, LLC. THUNDERgro™ is a PHYSICS-Based Soil and Hydroponics revitalizer and potentiator for water that is un-precedented in the modern Agricultural space. Stephen and his Brother and Father developed the formula through Living Organic Vitality Enterprises, LLC. Owner, Manager at Living Organic Vitality Enterprises, LLC. with the mission of bringing vitality and life to the world in the form of health, nutrition, and agricultural industry products and services. LOVE specializes in niche agricultural production and local-source supply for the Northwest Lower Michigan area. LOVE also created and produces a PHYSICS-BASED Soil Revitalizer and Hydroponics booster formula that is based on technology that has never before been available in the agricultural arena.

FINANCIALS

We note that some of the current financials may be a bit dated and not reflect the Company's current standing, including the very low 29M share public float. However, we believe that based on industry demand, and management's development and revenue milestones, we can forecast financial data for the next 3 years, on a preliminary basis. With AIM sales commencing in Q2 and diamond sales starting late in the year, we

believe that Centaurus can generate \$1M in total revenue in 2016. For 2017, the first full year of commercialization, should enable the Company to generate a total of \$7M in revenue with gross margin in the diamond business hovering around the 80% range, with operating profit recorded for the full year. For 2018, we preliminarily forecast \$40M in sales, which could prove to be conservative, given the industry demand, with substantial operating profit, aided in part by the 80%+ gross margin.

RISK FACTORS

In our view, CTDT's biggest operational risks are twofold. First, the Company needs to demonstrate it can consistently and profitably mass produce artificial diamonds for industrial use. Second, it must execute its sales and marketing plan. We believe that CTDT will be very successful in its development efforts but understand that the timing of the start of commercialization could push meaningful revenue generation out to a later date, or in a smaller initial ramp, thus impacting the Company's revenue ramp or time to profitability. Competition from larger firms or even from newer entrants is a typical concern and is also consistent with firms of CTDT's size and standing.

Volatility and liquidity are typical concerns for microcap stocks that trade on the over the counter market. Moreover, according to BUYINS.NET, there is considerable shorting of the stock, from time to time, which can enhance volatility. Nonetheless, if management executes its business model, we believe a meaningful short squeeze could occur, driving these shares higher. Separately, since management has worked diligently and successfully to essentially re-boot the Company's R&D and pre-commercial launch efforts, some of the financial data may be a bit dated. Still, we believe that CTDT will be fully reporting sometime in 2Q16/3Q16.

Finally, the shares outstanding of this stock could increase due to potential capital needs or to execute future acquisitions. However, since the proceeds of any future funding would likely be used in large part to close on M&A or penetrate the market with its flagship offerings, we believe that any dilutive effect from such a funding would be nullified by a related increase in overall market value.

CONCLUSION

With full commercialization of a disruptive technology on the horizon, Centaurus is poised to emerge as the go-to source for industrial synthetic diamonds, an estimated \$17 billion market. In the coming months, we believe that Centaurus will commence the mass production of high-grade, low-cost, synthetic diamonds, with high throughput, that carry high profit margins for the Company, and low price tags for its prospective customers.

Initial sales of products developed through its patented technology should occur by year-end, with full commercialization in early 2017. We expect the Company to enjoy hockey-stick type top-line growth beginning next year, resulting in \$7M in revenue, to be followed by \$40M in sales in 2018. Centaurus recently completed a technology acquisition of a new generation of pulverization technology uses physics-based innovation to "autogenously" process material, with a history of sales. Centaurus management believes that this segment could generate as much as \$3M in the next 18 months alone, once initial sales occur in 2Q16.

CTDT's leadership team is enviable for a firm five times its size. The current President/CEO held similar positions in key subsidiaries of Mars, Inc., the global food/candy producer. Plus, Centaurus' Chief Science Officer, who developed CTDT's technology, is a famed inventor who has been awarded more than 600 patents that include products familiar to consumers today.

According to BUYINS.NET, there is shorting of the stock, from time to time. However, if management executes its business model, we believe a meaningful short squeeze could occur, driving these shares higher.

We rate these shares Speculative Buy with a \$1.05 target price which reflects a roughly 3.5x price/sales multiple on an estimated \$40M in annual sales in 2018.

RECENT TRADING HISTORY FOR CTDI

(Source: www.Stockta.com)



SENIOR ANALYST: ROBERT GOLDMAN

Rob Goldman founded Goldman Small Cap Research in 2009 and has over 20 years of investment and company research experience as a senior research analyst and as a portfolio and mutual fund manager. During his tenure as a sell side analyst, Rob was a senior member of Piper Jaffray's Technology and Communications teams. Prior to joining Piper, Rob led Josephthal & Co.'s Washington-based Emerging Growth Research Group. In addition to his sell-side experience Rob served as Chief Investment Officer of a boutique investment management firm and Blue and White Investment Management, where he managed Small Cap Growth portfolios and *The Blue and White Fund*.

ANALYST CERTIFICATION

I, Robert Goldman, hereby certify that the view expressed in this research report accurately reflect my personal views about the subject securities and issuers. I also certify that no part of my compensation was, is, or will be, directly or indirectly, related to the recommendations or views expressed in this research report.

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