

May 2024

**INVESTOR PRESENTATION** 

# **FORWARD-LOOKING STATEMENTS**



#### **Forward-Looking Statements**

This presentation should be read in conjunction with the section captioned "Risk Factors" in the Company's prospectus referenced above. This presentation contains forward-looking statements or information regarding future events and the future results of Adamas One Corp. (the "Company") based on current expectations, estimates, forecasts, and projections about the markets in which the Company operates and current beliefs and assumptions of the Company's management. Forward-looking statements can be identified by the use offorward-looking terminology, including the terms "believes," "estimates," "expects," "may," "will," or similar words, or in each case, their negative, or other variations or comparable terminology. These forward-looking statements include all matters that are not historical facts such as express predictions of future events and trends. The assumptions and estimates underlying these forward-looking statements are inherently uncertain and are subject to a wide variety of significant business, economic, competitive and other risks and uncertainties that could cause actual results to differ materially from those contained in those statements. In sum, forward-looking statements should not be relied upon as necessarily being indicative of future results, and the inclusion of these statements should not be regarded as a representation that the results reflected therein will be achieved.











# **COMPANY OVERVIEW**



## The Original Lab Grown Diamond Company™

Adamas One Corp. is a state-of-the-art diamond company that utilizes proprietary technology to produce high-quality, single crystal diamonds. Our pioneering and patented CVD (chemical vapor deposition) manufacturing process deposits carbon on diamond seeds to grow pure diamond crystals and create the highest quality Lab-Grown Diamonds.

## **Adamas One Corp**

- The only Publicly Traded Lab-Grown Diamond Manufacturing Company.
- We Developed and Utilize Edge Science:
  - Foundational patents in CVD methods and techniques for LGD diamonds 30+ years of extensive operational experience and expertise Proprietary methodologies, manufacturing machines, and recipes
  - Founded in 2019 based on the assets, key personnel and knowhow dating back to the industries first CVD diamond machines and patents.
- Our Mission: to develop, manufacture and deliver the exceptional lab-grown diamonds, fine lab-grown diamond jewelry and diamond materials to the global consumer and industrial markets.

# **KEY INVESTMENT HIGHLIGHTS**



- Leading Edge Technology that is proprietary and patent protected for both equipment and processes.
- Lab-Grown Diamonds to reach \$55B at 9.8% CAGR in Jewelry Market alone! 1
- Semiconductor and other industrial applications for LGDs offer significant growth and revenue opportunities (semiconductors, telecommunications, quantum computing lasers, EV applications).
- Bridal market dominated by Lab-Grown Diamonds OVER 50% of engagement rings in the US 2023 are Lab-Grown.
- Fashion Jewelry Market embracing Lab-Grown, examples include Pandora.
- Vertically integrated company that maximizes operational efficiencies, revenue and profit margins.



## WHAT IS A DIAMOND?



According to the FTC 2018 Jewelry Guidelines [section 23.12a]:

"A diamond is a mineral consisting of essentially pure carbon crystallized in the isometric system... It's hardness is a 10, specific gravity approximately 3.52 and it has a refractive index of 2.42."

- Diamond is an Ultra Wide Band Gap material being developed for high-speed, high-power semiconductors. Useful in communications and EVs.
- Diamond is the hardest material on earth and is used in precision milling and grinding applications to cut and polish hard materials and alloys as well as geological exploration.
- Diamond has extraordinary heat transfer capabilities and is being developed to remove heat from semiconductor circuitry. Diamond material has @ 50x more thermal conductive properties than silicone.

	ADAMAS ONE CORP		
	Mined	Adamas. Lab-Grown	
Hardness (mhos)	10	10	
Specific Gravity (gr/cm3)	3.52	3.52	
Index of Refractivity	2.42	2.42	
Thermal Conductivity (W/cm-K)	22.9	22.9	
Low Ecology Impact	X	<b>~</b>	
No Social Concerns	X	<b>/</b>	
Faceted for Jewelry	<b>/</b>	<b>/</b>	
Consistent for Industrial Uses	X	<b>/</b>	
Grown in the USA	X	<b>~</b>	
Source	Earth	Lab	

# MINED vs LAB GROWN- MONEY TALKS

	Mined	LabGrown ex 1	Lab-Grown ex 2
Retail Source	Blue Nile	Brilliant Earth	Brilliant Earth
Shape	Round	Round	Round
Size (Carats)	2.01	2.06- Larger	3.26- <i>Larger</i>
Color	D	D	D
Clarity	VS1	VVS1 — Better Grade	VVS1- Better Grade
Cut	Ex-Ex-VG	Ex-Ex-Ex- Better Cut	Ex-Ex-Ex- Better Cut
Certification	GIA	GIA 6475228962	GIA 6472513366
Fluorescence	Strong Blue	None- Better	None- Better
Price	\$20,270	\$6140	\$20,410
Date Shopped	10/2/2023	10/2/2023	10/2/2023
Page	2.01 Carat D-VS1 Excellent Cut Round Diamond (bluenile.com)	Lab created diamonds   cultured diamonds   lab grown diamonds (brilliantearth.com)	Lab created diamonds   cultured diamonds   lab grown diamonds (brilliantearth.com)



# KEY METRICS



Stock Symbol: NASDAQ: JEWL			
RECENT PRICE (as of 1/24)	\$0.60		
MARKET CAP	\$21M		
SHARES OUTSTANDING (as of 1/24)	30.1M		
Avg Daily Volume (1-month)	177K		

















## **NEW GROWTH SEGMENT IN ESTABLISHED MARKET**



# Global Lab Grown Diamond Market Overview





#### **LGD GLOBAL MARKET VALUE 2031**

.GD \$55B

 $(US \$)^1$ 

9.8% CAGR

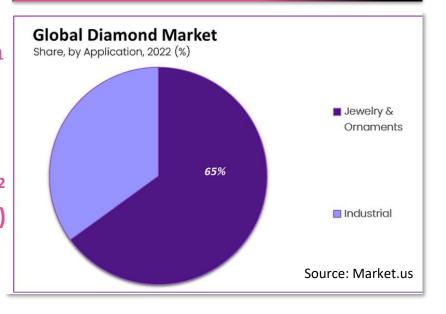
 $(2021-2031)^{1}$ 

#### STRONG SEGMENT GROWTH in DIAMOND MARKET

**Global Diamond Market \$140B (US \$MM)**<sup>2</sup> **4% CAGR** (2023 – 2032)

- Increasing demand in Bridal with 50% US engagement rings in 2023 based on lab-grown
- Signet, the largest jeweler in the US, is carrying lab-grown diamonds in all of their brands.
- Pandora, the worlds largest jewelry company, moved exclusively to lab-grown Diamonds

#### **JEWELRY AND INDUSTRIAL**



#### **KEY DRIVERS**

#### JEWELRY MARKET

- Cost effective natural alternative
- Fashion Jewelry segment growth
- LGD use in Fashion accessories including watches
- Bridal segment

#### INDUSTRIAL MARKETS

- Precision Milling and Grinding
- Scientific Applications

#### **TOP R&D AREAS**

- Semiconductor
- Quantum Computing
- 1. Allies Market Research
- 2. Market.US

# ADVANTAGES OF ADAMAS ONE LAB GROWN DIAMONDS



- Grown in the USA
- Extremely Low Carbon Footprint
- Leading Edge Proprietary Technology
  - Competitive cost structure.
  - High batch sizes for scalability.
  - Precise control of gases and growth environment for consistency and repeatability for Semiconductors and Industry.
- Backed by 36 Foundational WW patents and decades of knowhow
- Deliver size and quality combinations that are extremely rare in nature.



# THE ORIGINAL LAB GROWN DIAMOND COMPANYTM



## **ADAMAS ONE**

- We manufacture high-end single crystal diamonds that are colorless and near-colorless type 2A whites at high clarity
- Our U.S.-based operations grow eco-friendly, conflict-free diamonds in a controlled lab environment in Greenville, South Carolina
- Utilizing the technology and proprietary processes from our extensive patent portfolio, we can produce larger, high-quality diamonds at maximum capacity
- Our patented proprietary technology delivers more costeffective lab-grown diamonds (with the lowest cost structure) than competitive lab-grown diamonds because our proprietary growers can precisely control diamond deposition over a larger growth area, resulting in large batches of diamonds



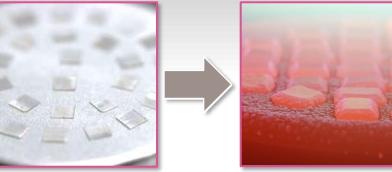
# PATH TO AN ADAMAS ONE LAB-GROWN DIAMOND





Thin slices of diamond seeds are carefully prepared













Diamond seeds are loaded on proprietary grower plate in a reactor

Diamond growth in one of Adamas' proprietary reactors

White Diamond "core" that has been laser cut

Laser cut Diamond preform is sent for polish

**Round Brilliant Cut** 1.25 ct white diamond

# **ADAMAS R&D & MANUFACTURING**



## HIGHLIGHTS

- All R&D and manufacturing is performed at the company's state of the art facility located in Greenville, South Carolina
- Developmental focus on improving diamond quality, quantity, growth rates, and batch sizes using patented Diamond Technology
- Automated proprietary manufacturing processes (CVD) and equipment designed to enhance manufacturing facilities and reduce costs while increasing yield
- High scalability
- Eco and Social friendly / low carbon footprint



# COMPANY OPERATING HISTORY



## **CVD PROCESS**

- Adamas' heritage is directly linked to the invention of the CVD manufacturing process
- Designed and patented

## **INTELLECTUAL PROPERTY**

Foreign Patents

28 U.S. Patents

36 TOTAL PATENTS

# PROPRIETARY INFORMATION AND TRADE SECRETS

- Custom-designed reactors and equipment
- Diamond recipes
- Seed recipes and replication
- Laser equipment and slicing techniques



## **POSITIVE MEDIA AND INDUSTRY AWARENESS**



LVMH invests \$90 Million in lab-grown diamond company Lusix

Published June 14, 2022



WWD

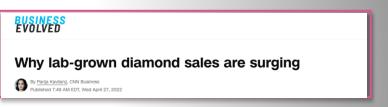
Lab-Grown Diamonds 'Poised to Reach Mass Market' as Popularity Grows

Misty White Sidell
November 18, 2020 · 3 min read

Advertisement

DIAMONDS / INDUSTRY

The Argyle Diamond Mine Is Shutting Down



THE WALL STREET JOURNAL.

THE FUTURE OF EVERYTHING
Diamond Mines Are Drying Up. Are Lab-Grown Gems the Answer?

Oct 30, 2020, 10:18am EDT | 3,538 views

Lab-Grown Diamonds Need To Be On Every Jewelry Store's Shopping List



Pamela N. Danziger Senior Contributor ① 🕀

Retail

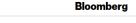
I study the world's most powerful consumers — The American Affluent

LAB-GROWN \* AUG 30, 2023

Pandora's New Lab-Grown Diamond Campaign Stars Pamela Anderson

Plus, Luciano Rodembusch, president of Pandora North America, shares his insight on valuation and sustainability.

Lenore Fedow
lenore.fedow@nationaljeweler.com



# Real Diamond Jewelry for 50 Percent Less! Just Don't Call It Natural

The centuries-old diamond industry is getting shaken up by small producers and industry giants alike.

By Hyla Bauer

August 22, 2018 11:33 PM

# **STRONG GEMSTONE ECONOMICS**



# **Current Factory Economics**

## Factory In Transition & At Scale<sup>4</sup>

NUMBER OF CROWERS	100	25	50	100
NUMBER OF GROWERS  PLATE SIZE	10° 50% 4-inch	Transition to 100% 6-inch <sup>1</sup>	Transition to 100% 6-inch²	Transition to 100% 6-inch <sup>3</sup>
Annual Revenue	\$10.2M	\$75M	\$150M	\$300M
Gross Profit	\$5.95M	\$48M	\$110M	\$220M
Gross Profit Margin	59%	64%	73%	73%
EBITDA <sup>5</sup>	\$2.3M	\$36.75M	\$90M	\$150+M
EBITDA Margin	33%	49%	60%	50+%

#### NOTES:

- (C) Current set up for production on 10 machines
- (1) Increase to 6 inch plate on 25 machines based on an \$8.5 million investment in new equipment
- (2) Increase to 6 inch plate on 50 machines based on an \$8.5 million investment in new equipment
- (3) Increase to 6 inch plate on full scale production of 100 machines
- (4) Assumes sales of rough diamonds only; does not contemplate strategic growth into new channels or efficiencies gained from vertical integration
- (5) EBITDA and excluding non-cash compensation and expense

## SEMICONDUCTOR MARKET AND SEGMENTS



- 2022 \$600B Worldwide; 12% CAGR¹
- Projecting \$1 Trillion by end of the decade!
- Driver Applications: Automotive, Wireless communications, Internet of Things, Computing (cloud, AI)<sup>1</sup>
- Capex: \$181B in 2022<sup>2</sup>
  - Higher as industry increases capacity and R&D spending
- CHIP Act: United States investing \$52B in US based Semiconductors<sup>3</sup>
- Growth segments required functions
  - High Density uP, ASIC, SOC technologies where heat removal and heat density is a challenge
  - Power Electronics where efficiencies are critical, Wide Band Gap solutions evolving
  - > High speed and high-power analog where wide band gap materials possible

#### NOTES:

- 1. Global Semiconductor Industry Outlook 2022 (kpmg.com)
- 2. Semiconductor industry capital expenditure 2023 | Statista
- 3. FACT SHEET: One Year after the CHIPS and Science Act, Biden-Harris Administration Marks Historic Progress in Bringing Semiconductor Supply Chains Home, Supporting Innovation, and Protecting National Security | The White House

# DIAMOND PROPERTIES FOR SEMICONDUCTOR



Property	Units	Silicon	GaAs	GaN	Diamond
Bandgap	eV	1.1	1.43	3.4	5.5
Saturated drift velocity	10e7 cm/s	1	1	1.4	2.3
Electron mobility	Cm2/V-s	1240	4167	1000	7300
Hole mobility	Cm2/V-s	480	400	11	5300
Breakdown field	MV/cm	0.3	0.4	4.95	13
Thermal conductivity	W/cm-K	1.45	0.55	2.53	22.9

Source: Lincoln Laboratory, Diamond surface conductivity

## **APPLICATION OF DIAMOND – SUPERLATIVE PROPERTIES**



## Ultra Wide band gap

- > Enable power electronics to be faster, smaller, more efficient and more reliable<sup>1</sup>
- > Enables electronic devices to work at higher temperatures, voltages and frequencies<sup>1</sup>
- > The Opportunity: Lab grown diamonds bring manufacturing consistency and cost in a UWBG material.

## Thermal conductivity

- Important to power electronics because heat removal is the limiter of performance especially in power and optoelectronic applications<sup>2</sup>
- The Opportunity: Lab-grown diamonds as thermal interfaces to high heat and high heat density chips and chip packaging in power electronics and highly integrated uP and SOC circuits

## Nitrogen vacancies

- Optical defect centers (nitrogen vacancies) have been proposed as QuBit platform for Quantum computing applications<sup>2</sup>
- > The Opportunity: Lab-grown diamonds with precise dopant levels for QuBit functions

#### NOTES:

- 1. Wide Bandgap Semiconductors: Pursuing the Promise (energy.gov)
- 2. Ultrawide-Bandgap Semiconductors: Research Opportunities and Challenges Tsao 2018 Advanced Electronic Materials Wiley Online Library

## **OPPORTUNITES TO WORK WITH ADAMAS ONE**



## **Collaboration:**

- Working with Oak Ridge National Laboratories on thermal conductivity, neutron bombardment and transport mechanisms.
- Adamas makes high-purity diamond substrates suitable for power electronics.
- Seeking partner working in FET, HEMT R&D with ultra wide band gap materials.
- Adamas can control doping (B and N)
- Adamas Nitrogen vacancies are present at <50ppb, N0 vacancies predominate, aligned magnetically.<sup>1</sup>
- We can control precise dopant levels in the diamond suitable for QuBit applications.
- Adamas best-in-class cost structure and uniformity enables that diamond can be used in traditional electronic packaging as thermal pathway.

#### NOTE:

1. Study by University of Warwick (UK)

## **EXECUTIVE LEADERSHIP**



## John "Jay" Grdina - Chairman & Chief Executive Officer

Mr. Grdina is the founder of Adamas One and has served as President, Chief Executive Officer, and Chairman of the Board since September 2018. Prior to founding the Company, Mr. Grdina was a founder of AMMO, Inc. (NASDAQ: POWW), a publicly traded ammunition company, where he served as Chief Marketing Officer from 2016 to 2019. From 2012 through 2015, Mr. Grdina served as a director and Chief Executive Officer of NOHO, Inc., a former publicly traded lifestyle beverage company. In 2008, Mr. Grdina helped create and the celebrity blogs TheDirty.com and Kikster.com. Mr. Grdina is the founder and former Chief Executive Officer of Club Jenna, Inc., which was sold to Playboy Enterprises in 2006. While at Playboy Enterprises from 2006 to 2009, Mr. Grdina was a Senior Vice President and the President of Production.

### **Steven Staehr** – Chief Financial Officer

Mr. Staehr has served as the company's Chief Financial Officer since September 2019. Mr. Staehr served as Chief Financial Officer for Mix 1 Life, Inc., a former publicly traded nutritional supplement company, from October 2016 to August 2018 and served as the sole officer and director from February 2017 to August 2018. Mr. Staehr served as Chief Financial Officer of NOHO, Inc., a former publicly traded beverage company, from October 2013 to May 2015. Mr. Staehr served as sole officer and director of Monarchy Resources, Inc., a former publicly traded company, from June 2013 to August 2013. From 2007 to 2014, Mr. Staehr also served as Corporate Controller of Cash Systems, Inc., a publicly traded provider of cash access products and related services to the gaming industry until its merger with a subsidiary of Global Cash Access Holdings, Inc. in August 2008. Mr. Staehr served as Chief Financial Officer of Western Capital Resources, Inc., a publicly traded company operating in the cellular retail and consumer finance industries, from November 2007 to December 2008. Mr. Staehr served as a Senior Vice President of Encore Productions, a Las Vegas-based event planning and production entertainment and convention provider, from 1998 to 2007. From 1990 to 1998, Mr. Staehr served in various chief financial officer and principal accounting officer roles with several Las Vegas gaming companies, including MGM Mirage Resorts, Boyd Gaming, and Caesars World. Mr. Staehr worked with the public accounting firm Deloitte Touche Tohmatsu Limited until 1998 after attending the University of Nevada, Las Vegas, where he received a BSBA degree. Mr. Staehr is currently a licensed Certified Public Accountant in the state of Nevada.

## **Gerald McGuire** – Chief Operating Officer

Mr. McGuire brings over 30 years of executive and high-tech experience commercializing new technologies and delivering differentiated products to market. Mr. McGuire has started and grown profitable businesses and created lasting product brands. He is particularly adept at mastering new business models and managing businesses with high levels of R&D investment. Mr. McGuire's semiconductor experience at Analog Devices, Inc and Fairchild Semiconductor as well as his lab-grown diamond experience with Scio Diamond, make him well-suited to drive the commercialization of lab-grown diamond at Adamas One.



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