HYDROGRAPH

CSE: HG | OTCQB: HGCPF | FRA: M98

IGNITING MATERIAL CHANGE

Investor Presentation
May 2024

Forward-Looking Statement

This deck contains certain “forward looking statements” and certain “forward-looking information” as defined under applicable Canadian securities laws. Forward-looking statements and information can generally be identified by the use of forward-looking terminology such as “may”, “will”, “expect”, “intend”, “estimate”, “upon” “anticipate”, “believe”, “continue”, “plans” or similar terminology. Forward-looking statements and information include, but are not limited to: the use of the net proceeds from the previously announced private placement, anticipated benefits resulting from the Marketing Services Agreement, the future exercise of the Options, ability to successfully increase commercial scale production at its manufacturing facility, and the timing thereof, the potential valuation of Company, any EBITDA predictions, the commercialization of HydroGraph’s products that lead to customer contracts resulting in our potential valuation and EBITDA predictions, and the Company’s business plans and strategies.

Forward-looking statements and information are based on forecasts of future results, estimates of amounts not yet determinable and assumptions that, while believed by management to be reasonable, are inherently subject to significant business, economic and competitive uncertainties and contingencies. Forward-looking statements and information are subject to various known and unknown risks and uncertainties, many of which are beyond the ability of HydroGraph to control or predict, that may cause HydroGraph’s actual results, performance or achievements to be materially different from those expressed or implied thereby, and are developed based on assumptions about such risks, uncertainties and other factors set out herein, including but not limited to: HydroGraph’s ability to implement its business strategies; risks associated with general economic conditions; adverse industry events; stakeholder engagement; marketing and transportation costs; loss of markets; volatility of commodity prices; inability to access sufficient capital from internal and external sources, and/or inability to access sufficient capital on favorable terms; industry and government regulation; changes in legislation, income tax and regulatory matters; competition; currency and interest rate fluctuations; and other risks. HydroGraph does not undertake any obligation to update forward-looking information except as required by applicable law. Such forward-looking information represents management’s best judgment based on information currently available. No forward-looking statement can be guaranteed, and actual future results may vary materially. Accordingly, readers are advised not to place undue reliance on forward-looking statements.

Proceeded by stone, copper, bronze, iron, steel, plastic and silicon, we are now entering the ***graphene*** age.

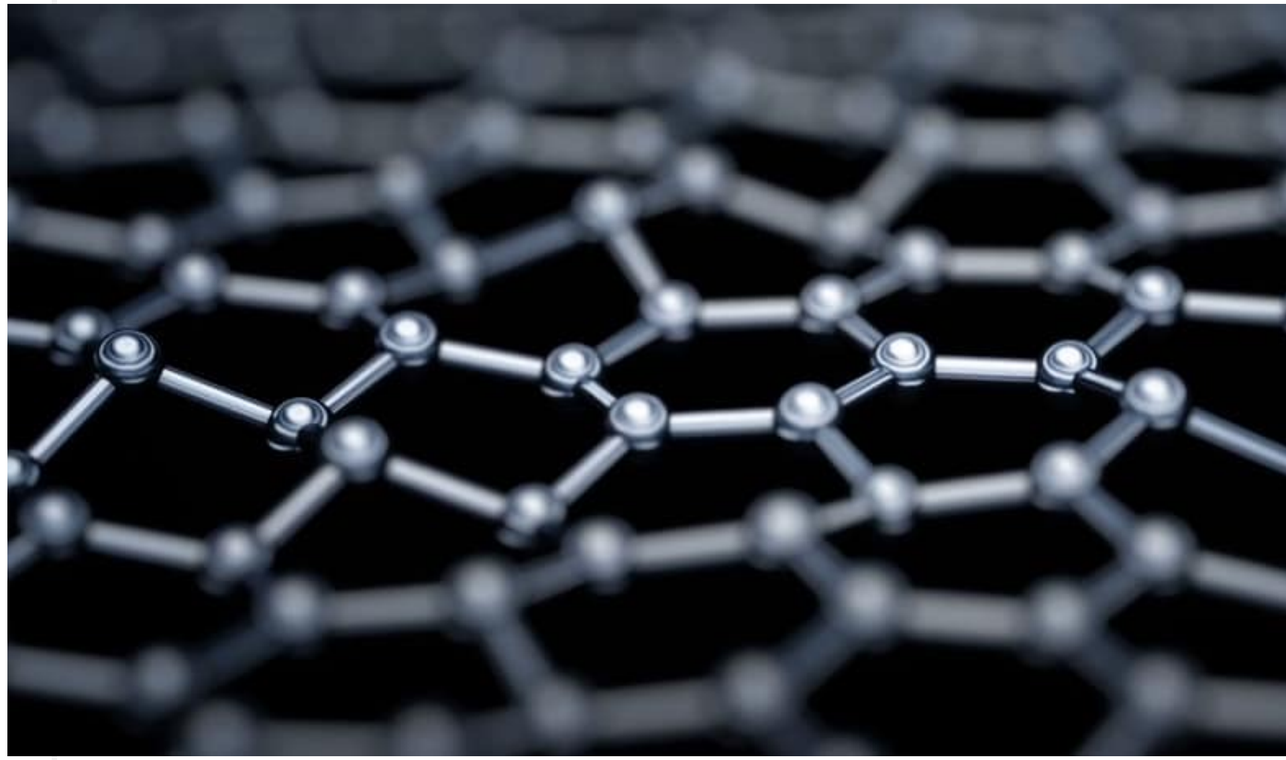
Graphene, a nano material, is made up of pure carbon atoms and is the strongest material known to man; it will help usher in an age of nanotechnology, which will touch virtually every known industry.

What We Do

We produce the **highest quality graphene** in the industry at the greatest cost efficiency

HydroGraph uses a patented "explosion synthesis“ process, which yields the highest purity, most powerful graphene in the industry.

- Our production process is the most environmentally friendly process in the world, and ***commercialization has begun***
- Our graphene is being tested in over 20 different applications, from lubricants, coatings and concrete to automotive and energy storage
- Our current scalable production capacity is 10 tons per year
- New production units can be built in 2-3 months



HydroGraph Highlights

Founded: 2017

Employees: 16

Patents Granted: 3 Pending: 7

Graphene Products: 11

Global Quality Problem: Not All Graphene Is The Same

While many companies are developing graphene production methods, the truth is that not all graphene is the same quality

300 companies worldwide claim to produce graphene

An analysis of 60 companies by Advanced Materials journal found:

OTHER PRODUCERS

- There is **almost no high-quality graphene** in the market as defined by ISO
- **No company** produces over **50% graphene** content, with a majority producing less than 10%
- Most companies are producing **fine graphite**, not graphene

Compared to HydroGraph

HYDROGRAPH

- HydroGraph makes identical batches of **pristine graphene** at industrial scale
- HydroGraph produces **99.8% pure carbon content graphene**
- HydroGraph's graphene has been **tested as pure** by 5 labs and verified by the Graphene Council

https://www.thegraphenecouncil.org/page/Registry

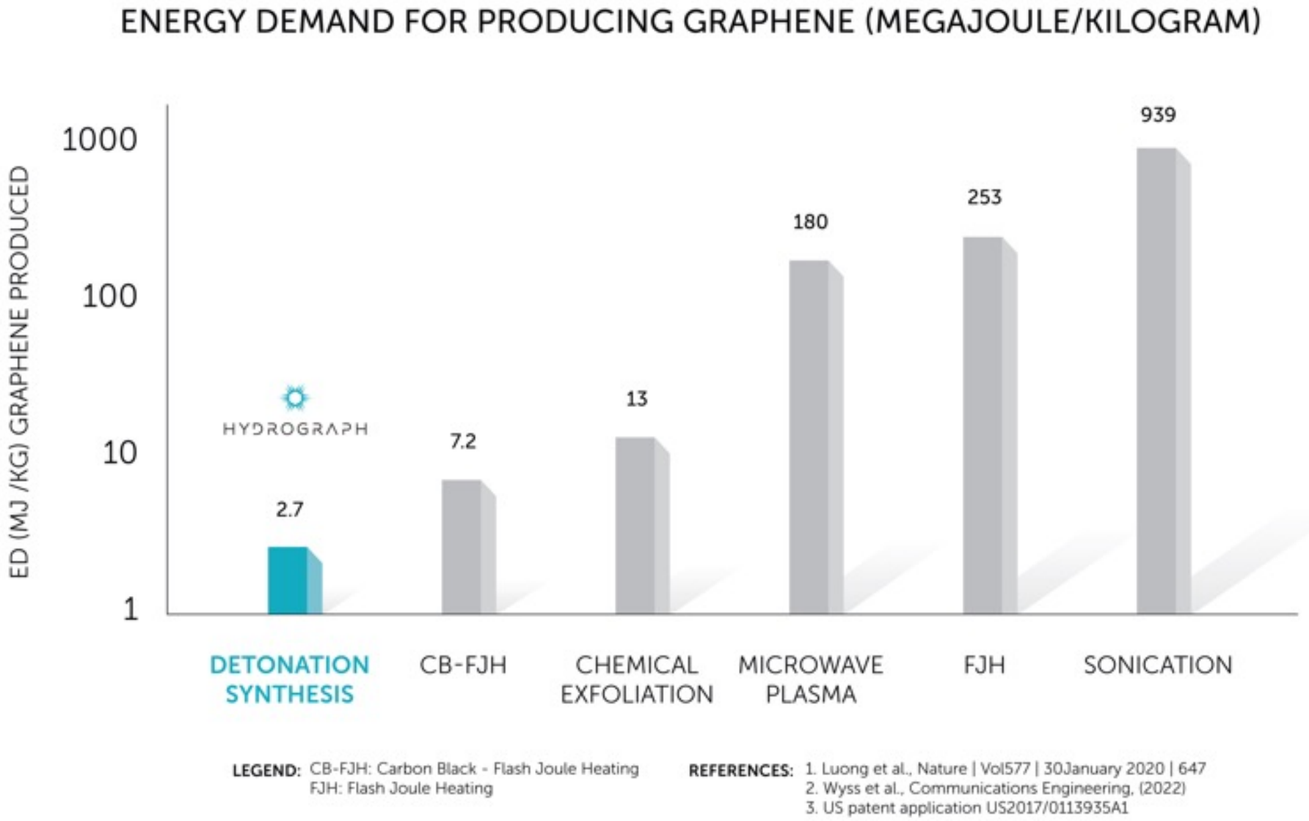
A Sustainable Solution for a Sustainable World

HydroGraph produces pristine graphene with the smallest environmental footprint

- No chemicals or solutions as part of the process
- No greenhouse gas emissions
- Minimal energy consumption

HydroGraph graphene helps customers increase the mechanical properties of materials by 20% to 50%, requiring less of the original material to be produced. For example, our graphene:

- Increases the life of lubricants by 24x, requiring less disposal and cleanup of spent lubricants
- Compressive strength improvements of 33% in concrete
- Increases ultimate strength of PET, a plastic, by 22% at 0.5% graphene added by weight
- 23% increase in ultimate strength for recycled plastics (LDPE)
- Improvements of 22% in Youngs Modulus for epoxy resins



Graphene: The “Wonder” Material Of The Future Made Available Today

PROPERTIES	FACTS	APPLICATIONS
STRENGTH	**200x** stronger than steel	Composite materials and alloys — rubber, plastic, aluminium & concrete
FLEXIBILITY	Can bend & stretch to **120%** of original size	Coatings, additives & wearable technologies
THERMAL CONDUCTIVITY	**10x** conductivity of copper	Composite materials — concrete, coatings, polymers, etc.
IMPERMEABILITY	Hydrogen atoms cannot penetrate its structure	Filters, water purification, gas storage and hydrogen fuel cells
ELECTRICAL CONDUCTIVITY	**1,000x** current capacity of copper	Longer battery life, semi-conductors
ELECTRONIC BEHAVIOUR	Electrons can move at near light speed through it	Improved speed/efficiency for computer chips
OPTICAL PROPERTIES	Highly transparent	Thinner, lighter screens & transparent tensile coatings

Graphene is a material additive, which can fundamentally alter any material, improving strength, conductivity, flexibility and more.

Importantly, this can be done in virtually every application area at cost-breakeven to the customer while reducing CO2 emissions in the production process and improving performance.

On Track to Commercial Production

Product testing completed, ready for commercialization

2014 — DISCOVERY

Dr. Chris Sorensen at KSU discovers Detonation Process for producing high-quality, low-cost graphene

Q3 2016 — PATENT

U.S. patent awarded for the high-yield production of graphene based on Detonation Process

Q2 2017 — LAUNCH

HydroGraph formed to fund and commercialize green, cost-effective manufacture of graphene and other strategic materials

Q1/Q2 2021 — FUNDING/ GRAPHENE PLANT

Private placement of $7.5M by investment houses PowerOne and Haywood

Groundbreaking for production and commercialization facility in Manhattan, Kansas

Q4 2021 — PUBLIC LISTING

Company lists as HydroGraph Clean Power on the CSE

Q2 2022 — TECH PLATFORM

Hyperion technology platform proof of concept and prototype of green, low-cost production of hydrogen, followed by other valuable products

Q1 2023 — SCALE-UP

Commercial scale production capacity of graphene. Business development team engaging with customers and partners.

Q2/Q3 2023 — PRODUCT EXTENSION

Completed construction of commercial-scale graphene unit for wide range of applications

Initiated UK application development capabilities to meet growing customer demand

2024 — ONGOING REVENUE

HydroGraph upscales UK focus to leverage customer access in Manchester, the home of graphene

Targeting first significant multiyear customer contract

Best-in-Class Executive Team

Kjirstin Breure
President and CEO

Bob Wowk
CFO

Ranjith Divigalpitiya
Chief Science Officer

Stephen Corkill
VP Operations

Chris Sorensen
VP R&D

Carl Kernizan
VP Business Development

Mathew Lee
Chief Accounting Officer

Stefan Bossman
Lead Chemist

Randall Zajac
Dir. of Business Dev. – Composites & Resins

- Multiple start-up experiences
- 100+ years of combined industry experience
- Proven track record of success in scaling technology
- C$1.6M+ personal funds committed to date

Our Strategy

Become the leading global producer of high-quality graphene

1 Produce identical batches of **pristine** graphene at industrial scale

HydroGraph has the capacity to produce the highest quality graphene at industrial scale in identical batches.

This is an industry first.

2 Employ centralized production model

To keep IP secure and increase margins HydroGraph will build a centralized facility adjacent to a supply of acetylene.

The cost of gas is primarily in compressing and transportation. Graphene is easy and affordable to ship.

3 Establish production in key geographical regions

As customer demand grows through HydroGraph's application development activities, the Company will build additional centralized facilities to guarantee supply.

4 Expand capabilities to include formation and masterbatch

To increase market penetration HydroGraph will include formulation and masterbatch offerings so customers can easily integrate graphene into their products without going through a testing process with the Company.

Our Target Markets

LUBRICANTS

$160B Global Market

HydroGraph Advantage

- Reduces wear by over 80%
- Extends life by over 24X
- Increases lubricity by over 70%
- Provides anti-corrosion properties, reducing lubricant breakdown
- Environmental benefit: longer life means less oil extracted and less spent oil to be disposed of

COMPOSITES

$90B Global Market

HydroGraph Advantage

- Increases electrical conductivity by 8 orders of magnitude
- Improves thermal conductivity by 14%
- Increases strength by 25% to 35%
- Lightweighting
- Anti-corrosion, provides protective barrier blocking moisture and corrosive agents
- Environmental benefit: reduces amount of material need by ~30%, reducing CO_2 emission

COATINGS

$200B Global Market

HydroGraph Advantage

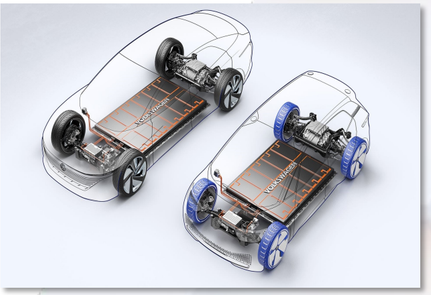
- Enhanced durability: improves mechanical properties and resistance to wear
- Lightweighting
- Enhanced electrical conductivity, increases the flow of electric current
- Anti-corrosion, provides protective barrier blocking moisture and corrosive agents
- Improved thermal conductivity, dissipates heat and prevents overheating

CONCRETE

$860b Global Market

HydroGraph Advantage

- Increases strength by 30%
- Reduces 446 kg of CO_2 for every tonne of concrete produced – 1% market penetration is equivalent to taking 5.4 million cars off the road
- 3X faster cure period
- Reduces water permeability, lowering exposure to freeze/thaw damage and rebar exposure to corrosive agents



ENERGY STORAGE

$250B Global Market

- **HydroGraph Advantage**
- 47% increase charge acceptance rate in lead acid batteries, resulting in faster charge cycles
- Extends battery life by reducing sulfation
- Outperforms leading cathode catalyst in lithium air batteries
- Increases battery capacity
- Advances in EV technology expected to continue to drive demand for faster charging cycles and battery capacity

HydroGraph's Path to Market

Graphene demand is ready for commercial scale

Primary Target Markets

Composites | Coatings | Batteries

$1.0B

Estimated HydroGraph Priority Market Size By 2028

Secondary Target Markets

Concrete | Lubricants

$1.5B

Estimated HydroGraph Priority Market Size By 2028

Pursue partnerships and advance R&D to unlock business development opportunities in secondary target markets

MANCHESTER 1824

The University of Manchester
Graphene Engineering Innovation Centre

- HydroGraph partners with the GEIC (Graphene Engineering Innovation Center), in Manchester UK in 2023
- The GEIC, containing all relevant industrial prototyping machines and characterization devices needed to commercialize graphene materials, is expediting the path to market
- As graphene was discovered in 2004 in Manchester, it remains a hotspot for graphene activity and talent
- The GEIC remains a primary point for customers to engage with graphene experts
- As the GEIC is a university affiliated institution, the GEIC staff must be unbiased when evaluating which graphene to select for a customer project
- HydroGraph has their own lab and staff
- HydroGraph's graphene has performed exceptionally well across applications
- This gateway to customer interest is affordable and effective for the Company
- HydroGraph plans to continue to upscale this effort to unlock additional application areas and engage with new customers
- Once HydroGraph has the data for a new material, the data is used by HydroGraph's business development team

HYDROGRAPH

HydroGraph's Commercialization Process

Generate application development data via the GEIC

Collaborate with customers through the GEIC and through internal BD activity

Engage in product development, if successful move to industrial trial

Scale up production

Sign customer contracts

1-3 years

HydroGraph BD Highlights

as of May 2024

20

Customers testing HydroGraph's graphene in products

20+

Different Applications Discussed

10t/yr

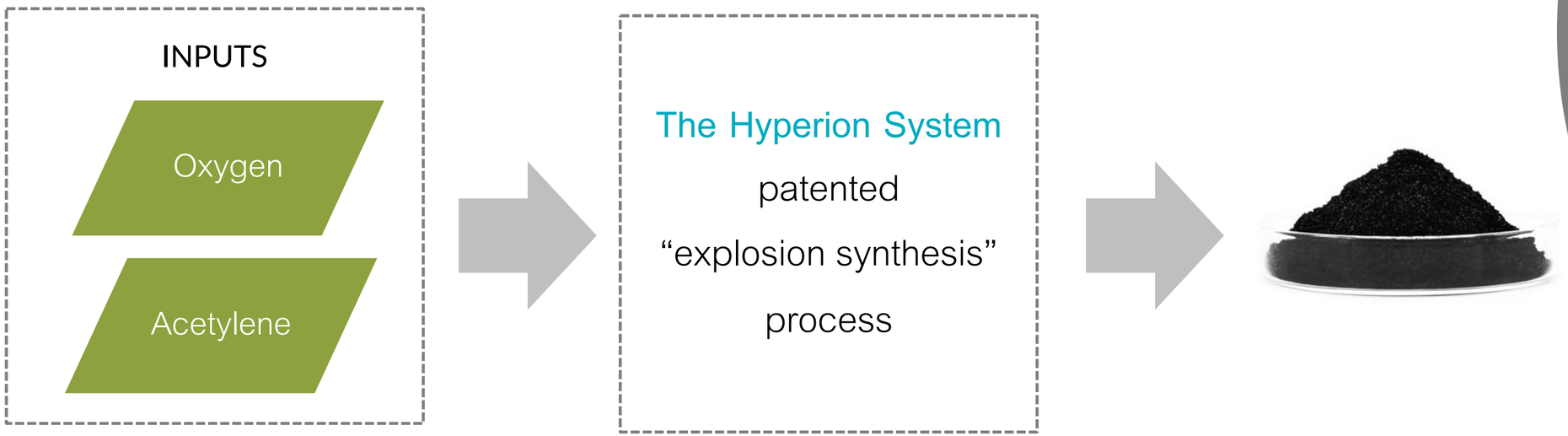
Commercial production capacity

New units to be produced simultaneously, in 2-3 months

HYDROGRAPH

Our Technology: The Hyperion System

Disruptive, patented and scalable



New units can be produced within three months and will be located near cost-effective gas sources or at a customer location if volumes needed are at a scale where supply chain security is a concern. If co-located, HydroGraph will maintain, own and operate all units.

Currently building additional units to increase capacity; and planning the opening of a larger US facility as commercial interest grows.

Readily Available Feedstock

EXTENSIVE APPLICATIONS

HydroGraph’s **Hyperion System will change the landscape of nanotechnology**.

Detonation Chamber

PATENTED HYPERION PROCESS

Uses minimal energy and **produces no waste.** Ideal for commercial deployment: **modular, scalable,** and **eco-friendly**.

99.8% Pure Graphene

HIGHEST QUALITY MATERIALS

We produce the **highest-purity, most crystalline** graphene in the market.

Patented Technology

Fractal Graphene
Patented No: 9,440, 857 B2

The 2016 patent for the high-yield production of fractal graphene via detonation is the founding technology for HydroGraph. The detonation closed system produces the highest quality products, while conserving energy, preventing emissions and is modular and scalable for clients. Additionally, the HydroGraph portfolio now contains patents relating to the production of nanomaterials, applications involving nanomaterials and clean energy.

REACTIVE GRAPHENE

Disc. No.: 2019-064; Attorney Docket No.: 52468

Title: "Graphene/Graphene Oxide Core/Shell Particulates and Methods of Making and Using the Same"

PCT Application No.: PCT/US2020/038055

Filing Date: June 17, 2020

GRAPHENE INK

RE: Disc. No. 2019-066

Title: "Nano-inks of Carbon Nanomaterials for Printing and Coating"

PCT Patent Application No.: PCT/US2020/039547

Filing Date: June 25, 2020

GRAPHENE ENHANCED CARBON FIBER

Disc. No.: 2017-008; Docket No.: 49240-US

Title: "Additive Manufacturing of Continuous Fiber Thermoplastic Composites"

U.S. Application No.: 16/487,622 (PCT/US2018/018800)

HYDROGEN PRODUCTION

Disc. No.: 2021-027; Attorney Docket No.: 54713-PCT

Title: "Process for Synthesis of Syngas Component"

U.S. Provisional Patent Application No.: 63/161,625

Filing Date: March 16, 2021

Partnerships and Industry Certification

MANCHESTER 1824
The University of Manchester
Graphene Engineering Innovation Centre

The GEIC, at the University of Manchester, helps companies develop and launch new technologies, products and processes that exploit the remarkable properties of graphene and other 2D materials.

جامعة خليفة
Khalifa University

RIC2D, at Khalifa University, is part of a strategic investment by the Government of Abu Dhabi, to advance the scientific development and commercial deployment of technologies derived from graphene and other 2D materials.

VERIFIED GRAPHENE®
PRODUCER
THE GRAPHENE COUNCIL

The Verified Graphene Producer ® Certification

- The highest standard in the industry!
- The only credential with independent, third party, in-person inspections of graphene production facilities
- Verification of production methods and volumes, and quality control processes
- Based on the Graphene Classification Framework (GCF).

HydroGraph is currently one of only five companies to be certified globally and the first company in the Americas to be certified.

Why Invest?

1 | HIGHEST PERFORMING

HydroGraph produces the highest performing graphene in the industry at industrial scale

2 | CONSISTENT RESULTS

Unlike other graphene producers, HydroGraph produces identical batches

3 | GREENEST FOOTPRINT

The Hyperion System, the Company's production unit, uses the lowest energy in the industry and produces no waste

4 | GLOBAL REACH

HydroGraph's high-performance graphene can improve virtually every industry and has near unlimited potential impact

5 | STRONG ECONOMICS

HydroGraph unlocks value for the customer by strengthening competitive advantage

6 | SIGNIFICANT VALUATION UPSIDE

Low CAPEX process, large end markets, rapid market growth and differentiated products all lead to significant upside

Key Catalysts

- Expanded application development capabilities
- Close first major multiyear contract in 2024
- Increased product line

Capital Structure

Basic shares outstanding	208M
Options outstanding	16M
Warrants outstanding	49M
Fully diluted	272M
Market cap. April 23rd	CA$24M

THANK YOU

We appreciate your interest in HydroGraph and thank you for taking the time to review our presentation.

If you have questions, please feel free to reach out to us. You can access the contact page on our website at hydrograph.com or through the QR code to the right. Contact information for our top executives is also provided through QR codes for your convenience.

Website

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Bob Wowk, CFO
bob.wowk@hydrograph.com

HYDROGRAPH

Patent #9,440,857

FRACTAL GRAPHENE

Patent for the high-yield production of graphene via detonation

Market Problem

Graphene has been recognized as the first "super material" of the 21st century. However, commercialization of graphene was not feasible before now.

Conventional methods for producing graphene were:

- Producing inferior and inconsistent graphene, sometimes graphite
- Very expensive
- Not scalable
- Inconvenient
- Involving toxic chemicals
- Using vast amounts of electricity
- Addressable markets include:
  - Lubricants
  - Energy storage
  - Resins
  - Specialty chemicals
  - Coatings

HydroGraph Patented Solution

Now: HydroGraph's proprietary detonation technology – Hyperion System– produces turbostratic graphene that is:

- 99.8% pure
- 2 to 7 layers thick
- Identical from batch to batch
- High value
- Uses very little energy
- Green: using acetylene & oxygen as feedstock with net-zero emissions
- Scalable
- Modular design that can be deployed virtually anywhere

"The Hyperion method to create graphene is an example of an elegant synthesis. Fill a chamber with acetylene and oxygen, ignite the mixture with a small spark, and voila, high-purity graphene is formed."

– Dr. Chris Sorensen, the creator of the Hyperion process

Patent Filed

REACTIVE GRAPHENE

Graphene/Graphene Oxide Core/Shell Particulates and Methods of Making and Using the Same

Market Problem

Certain high-valued applications require additional functionalization to:

- Enhance bonding and integrating graphene with other materials
- Bring attractive properties, such as tensile strength, elasticity and conductivity, to more complex materials
- Address applications in a vast number of areas, including:
  - Medicine and biology
  - Resins and composites
  - Dispersions
  - Functional coatings
  - Plastics

HydroGraph Patented Solution

HydroGraph has responded by producing Reactive Graphene, which can bond more easily to other materials thanks to its reactive shell that is functionalized with carboxylic acid groups.

- HydgroGraph leaves the graphene inner core intact, a huge advantage compared to standard graphene oxide which is only 70% carbon content vs. HydroGraph's 96%.
- HydroGraph's reactive graphene is a "pristine functionalized graphene"
- Due to the success of the material, HydroGraph has extended the product line to include a host of other functionalizations

"We can tailor this graphene to virtually any application; just name it. We can perform the entire palette of organic chemistry reactions on the graphene's surface and keep it intact. The future is extremely bright with regards to us integrating graphene into just about any material you can imagine"

– Dr. Stefan Bossman, HydroGraph's lead chemist