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BUSINESS PLAN PRESENTATION JULY 2024

HPQ SILICA SOLUTIONS MINING TO MANUFACTURING

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OUR VISION & MISSION

VISION

Our vision is to be a leading materials company in the high-purity (HPQ) silica energy and industrial verticals.

MISSION

Our mission is to provide our customers with the highest quality materials, using sustainable and responsible practices, and to continuously improve our offerings through innovation based on customer feedback, while fostering a culture of safety, teamwork, and social and environmental respect.



BUSINESS PLAN ROADMAP

Phase 1 – HPQ Silica Supply

2023

Homerun has announced multiple agreements to secure a substantial supply of Silica from the Belmonte District in Bahia, Brazil, including our partnership with the Bahian State Government. This exceptionally highgrade raw resource can be efficiently processed to serve the premium end-markets for HPQ Silica. The strategic imperative under Phase 1, was to secure a steady and reliable source of HPQ Silica against a backdrop of increasing global demand in sustainable industrial and green energy applications. The Company will continue in its ongoing plans to control the Belmonte Silica Sand District as well as look for other resources of high-grade silica, globally.

Phase 3 – Vertical Integration

2025

Homerun is driving toward revenue and at the same time, under Phase 3, executing on engineering and R&D plans to secure competitive advantages in HPQ Silica verticals serving the Energy Transition. Announcements in this area have already been made (NREL) and will be forthcoming over the entirety of 2024 with deliverables expected in 2025 and beyond.

May 2024 – Homerun Executes LOI With SI&MEX For Up To 365,000 Tonnes Of Solar Glass Per Year

Phase 2 – Infrastructure and Revenue

The Silica Sand from the Belmonte District can be sold in its natural form to a select few organizations that have their own upgrade processing operations, but this is a very low margin opportunity. The supply into higher-value end-uses requires at least a minimal amount of processing (wash, size, dry and bag).

2024

Under Phase 2, the focus is on obtaining the required infrastructure through partnership, purchase, lease and capital expenditure for the mining, transportation, storage and processing to HPQ Silica. Announcements in this area will be forthcoming over the first half of 2024 to facilitate first HPQ Silica revenues in the second half of 2024.



OUR GOALS

- We will be a top supplier of HPQ Silica and manufactured HPQ Silica products into the Energy Transition.
- We will create jobs for and support the local people of Brazil, while respecting the environment and culture of Brazil.

HOMERUN RESOURCE PARTNERS



At the National Renewable Energy Laboratory (NREL), we focus on creative answers to today's energy challenges. From breakthroughs in fundamental science to new clean technologies to integrated energy systems that power our lives, NREL researchers are transforming the way the nation and the world use energy



Babcock & Wilcox is a leader and innovator in the energy transition, making net-zero ambitions a reality today for a cleaner tomorrow. With our proven cleanenergy solutions, we continue to meet the challenges of the ever-changing energy landscape. We have aligned our strategy, culture and day-to-day operations to support these worldwide initiatives.



Minerals Development Oman (MDO) was established with a clear strategic vision to unleash the potential of the mining sector by investing directly in or enabling various projects across a range of material commodities and value chains, to generate sustainable returns for its shareholders, Oman and its people.

Halocell Energy

Halocell Energy is a pioneering company at the forefront of perovskite solar cell technology. Founded with a vision to revolutionize renewable energy, Halocell specializes in the development and commercialization of high-efficiency perovskite solar cells for a sustainable future. With a team of leading experts and innovators in the field, Halocell is dedicated to advancing the performance, stability, and scalability of perovskite solar cells to make them a viable and competitive alternative to traditional siliconbased photovoltaics.



Companhia Baiana de Pesquisa Mineral (CBPM) is the mineral research and development company of the State of Bahia, Brazil. Its activities are centered on expanding and improving geological knowledge of the Bahian territory, by identifying and researching its mineral resources and promoting their use by attracting private initiatives to this end. Founded on December 18, 1972, CBPM is recognized as one of the most dynamic companies in mineral research in Brazil.



Si&MEx Solutions is a technology, engineering and ESG based company with decades of experience in Silicon and Photovoltaics Field. With international footprint, the company is stepping into Manufacturing with high circularity the lowest CO2-equivalente footprint and high automation and digitalization applied to the Photovoltaics Silicon Manufacturing.

MANAGEMENT

BRIAN LEENERS – CEO/DIRECTOR

Brian Leeners received both his B.Comm. and LL.B. degrees from the University of British Columbia in 1992 and since that time has been focused on the management of private and public venture companies. In 2002, he founded Nexvu Capital Corp. which is a venture capital firm focused on developing companies in the Materials and Technology Sectors. Nexvu provides hands-on business development strategy and expertise for start-up and growth phase companies. Focused on both private and public companies, Nexvu also insulates the operational management from the public company process and provides economies of scale in the regulatory/legal, accounting/audit and investor relations areas. Since formation in 2002, Nexvu has been directly responsible for raising in excess of US\$100 million for Nexvu transactions (not including any public market buy-side volumes).

ANTONIO VITOR – COUNTRY MANAGER BRAZIL

Antionio has vast experience in project management at large corporations, including Transpetro, PwC, Shell, along with 10 years of experience in mining. He was involved in the mining projects Zumbi Mineração Grafite de veio, AMA Gold, Hawking Graphite, 3 S Rare Earths and Copper, Palmeres Rare Earths. He graduated in Business Administration and holds an MBA. He is a Member of IBGC.

DR. MAURO CESAR TERENCE - CTO

Dr. Mauro Cesar Terence - Graduation in Chemistry from Universidade Presbiteriana Mackenzie (1994), Masters in Nuclear Engineering from Universidade de São Paulo (1996), Doctorate in Nuclear Engineering from Universidade de São Paulo (2002). Experienced in Material and Metallurgical Engineering, in the following subjects: Advanced Materials, Nano Materials, Biomaterials, Ceramics, Blends and Polymers.

ARMANDO FARHATE – CHIEF OPERATING OFFICER

Armando Farhate, a Brazilian citizen, has more than 36 years of industry experience, with the last 13 years being in the mining sector. He has occupied C-Level and Upper Management positions in mining companies in Brazil, Canada, Namibia and Botswana and is currently a Director on the Board for three Canadian mining and exploration companies. He brings extensive experience in all areas of this industry segment, with special focus on Operations, Sales & Marketing, Engineering and Mineral Resource Development.

NANCY ZHAO - CFO

Ms. Zhao has over 9 years of experience working with public companies, having served as the CFO for several publicly traded entities, contributing her financial acumen to organizations such as First Hydrogen Corp (TSXV-FHYD), and Neo Battery Materials Ltd (TSXV-NBM). Ms. Zhao is currently a board member of First Hydrogen Corp. Holding the designation of CPA, Ms. Zhao has a comprehensive educational background, including a diploma in Financial Management from British Columbia Institute of Technology, and a bachelor's degree in chemical engineering from Tianjin University of Technology. Ms. Zhao's professional journey encompasses diverse roles, including years of valuable experience as a procurement agent for Sinopec in China.







BUSINESS PLAN PHASE 1

HPQ SILICA SUPPLY

PHASE 1 – HPQ SILICA SUPPLY

GOAL: 100 Million Tonnes of <u>*Owned*</u> and <u>*Permitted*</u> Raw Silica Sand Resources by End of 2024



SILICA RESOURCES

CBPM Lease Taperoa Rights (Excl. Agmt) **Concessions / 4 Applications** SDP (Supply Agreement)

CURRENT NEGOTIATIONS Vendor 1 (CBPM Lease) Vendor 2 (CBPM Lease) Vendor 3 (CBPM Lease)

(Raw Si Grade ABOVE 99.75)

RESOURCE PERMIT STATUS

100 MM Tonnes - MRE to Permit TBD – 90 Day Due Diligence 3/4 Applications OK - 7930 ha +80 MM Tonnes - Permitted

40 MM Tonnes - In Permit Process **20 MM Tonnes - In Permit Process** 100 MM Tonnes - Permit

VERIFIED HPQ QUALITY

ACHIEVED: Homerun Produces Ultra-Pure 99.999% Si02 from Raw Sand Extremely low Iron (Fe) Content Suitable For Energy and Technology Applications



	Al [ppm]	Fe [ppm]	Na [ppm]	K [ppm]	Li [ppm]	Ti [ppm]	Zr [ppm]	Ca [ppm]	Mg [ppm]	Cr [ppm]	Mn [ppm]	Cu [ppm]	Sum [ppm]
Chemical analyses of raw quartz sand													
Raw quartz sand	17.5	5.5	2.7	1.3	0.08	150	5.2	90	33	0.13	0.12	< 0.05	306
Physical processing													
Fraction 0.1 - 0.5 mm	10.6	3.3	1.5	0.9	0.12	23.5	8.7	98	35.1	< 0.05	< 0.05	< 0.05	182
After scrubbing	12.4	2.4	1.7	1.3	0.08	21.5	0.59	98	36.1	< 0.05	< 0.05	< 0.05	174
Flotation F1	12.2	1.7	2.2	1.4	0.17	16.4	0.44	97	35.7	<0.05	<0.05	0.12	167
NonMag 3	11.0	1.8	1.6	1.7	0.08	25.8	0.52	94	34.6	0.05	< 0.05	< 0.05	172
NonMag 4	13.1	1.7	1.6	1.6	0.29	19.4	0.51	91	34.5	0.05	0.08	0.4	164
NonMag 5	11.0	1.6	1.7	1.6	0.10	17.5	0.74	88	33.1	0.05	< 0.05	< 0.05	155
Flotation F2 of NonMag 5	12.7	1.6	2.1	1.2	0.19	18.8	0.62	85	33.9	< 0.05	< 0.05	<0.05	156
Chemical processing after scrubbing													
Acid washing AW1 (HF std.)	10.3	1.3	1.7	0.86	<0.1	13.5	0.30	86	34.8	< 0.05	< 0.05	< 0.05	149
Acid washing AW 2 (HCI)	10.4	1.6	1.6	1.1	<0.1	21.3	0.45	89	35.4	< 0.05	< 0.05	< 0.05	161
Typical products													
Optical glass Type I		<1								< 0.005	< 0.005	< 0.005	
Optical glass Type II		<5								<0.1	<0.1	<0.1	

In Collaboration with UC Davis, Homerun has developed a femtosecond thermal laser processing method to purify raw silica sand to a level of 99.999% purity

AVERAGE USD PRICES FOR HPQ SILICA GRADES



- HMR Raw (In Ground) Material Grades AVG +99.75% Si02
- Standard Physical **Processing Achieves** Grade +99.985% Si02
- BREAKING: Homerun **Achieves Ultra-Pure** 99.999% Si02 with femtosecond thermal laser processing method at UC Davis
- Pyramid is representation of market size per use case.

CLEAR GLASS GRADE \$50 - \$150 USD/T



BUSINESS PLAN PHASE 2



INFRASTRUCTURE **& REVENUE**

PHASE 2 – INFRASTRUCTURE & REVENUE

GOAL: Production of Processed Silica in 2024



- Immediate plan is to move the • extracted silica sand from Santa Maria Eterna (the mine) to tide water through Belmonte.
- From Belmonte the silica sand • will be transported by large ocean barge to storage at the port of Ilheus.
- Advanced processing will take • place at the port of Aratu in Salvador.
- Significant cost reductions with • infrastructure in place.



The mine will require extraction, first phase processing, loading facilities and double haul trucks.



BELMONTE DISTRICT

- Mine Infrastructure
- **Road Infrastructure**
- **Power Infrastructure**
- **Nat Gas Infrastructure**
- **Barge Loading Facility**
- Single Barge capacity of 10,000t
- Multi Barge use capabilities

PHASE 2 – INFRASTRUCTURE & REVENUE **GOAL: Production of Processed Silica in 2024**

PORT OF ILHEUS

- **Storage Facility** ullet
- **Processing Facility**
- Loading Facility
- **Shipping Facility** •
- **Energy Infrastructure** \bullet
- **Recent Significant** \bullet **Government Funded Port Upgrades**
- Physical Upgrading of **HPQ Silica**



PORT OF ILHEUS HAS IMMEDIATE SHIPPING CAPACITY

PHASE 2 – INFRASTRUCTURE & REVENUE **GOAL: Production of Processed Silica in 2024**

PORT OF ARATU

- **Storage Facility** \bullet
- Loading Facility
- Shipping Facility
- **Energy Infrastructure** •
- Advanced/Thermal Processing Will Take Place at Port of Aratu
- Nearby Major City Camacari
- **BYD Opening Facility in Camacari where** • production set to begin early 2025
- Mass Tonnage Capabilities at Aratu \bullet



PHASE 2 – INFRASTRUCTURE & REVENUE

GOAL: Production of Processed Silica in 2024



FACILITY / EQUIPMENT

PRE CASH-FLOW Mine Extraction Mine Processing Mine Transport

POST CASH-FLOW Stage 2 - Processing Stage 3 - Processing System

- Service Provider -> Internal Wash, General Sort, Dry, Bag Service Provider -> Internal
- Physical upgrade @ Ilheus Thermal upgrade @ Aratu **NREL - Processing Enduring Energy Storage**

HPQ SILICA MARKETS



- ACCIDENTS AND SPILLS

- GOLF AND VOLLEYBALL SANDS
 FORENSIC TESTING

HPQ SILICA MARKETS

"Our entire society is built on sand. Sand is the primary substance used in the construction of roads, bridges, highspeed trains and even land regeneration projects. Sand, gravel and rock crushed together are melted down to make the glass used in every window, computer screen and smart phone. Even the production of silicon chips uses sand."

"Yet, the world is facing a shortage..." CNBC - 2021





BELMONTE SILICA SAND DISTRICT (BAHIA, BRAZIL)



BUSINESS PLAN PHASE 3

VERTICAL INTEGRATION

PHASE 3 – VERTICAL INTEGRATION RESEARCH & DEVELOPMENT - 2024





HPQ Silica sand is used to make the solar glass for both silicon and perovskite solar cells. HPQ Silica is also a raw material for silicon wafers that are the primary component of solar cells. These wafers are then processed and assembled into solar cells, which are combined into modules with solar glass to create a solar panel.

HPQ silica sand is used in multiple capacities in the production of lithium-ion batteries, which are commonly used in portable electronic devices, electric vehicles, and energy storage systems. Specifically, silica is used as a coating material for the electrodes in the battery. The silica coating helps improve the stability and performance of the battery, leading to increased efficiency and longer lifespan.

In addition to the electrode coating, silica is also used as a separator material in lithium-ion batteries. Silica to silicon is now being utilized in hybrid and pure silicon anodes.

PHASE 3 – VERTICAL INTEGRATION

RESEARCH & DEVELOPMENT - 2024

INTERNAL R&D (CTO - Dr. Mauro)

BATTERY ANODES

Silicon Anodes and Hybrids

NEXT GENERATION SOLAR

Perovskite Portfolio of NREL

NREL (Dept of Energy - USA)

PROCESSING

- Upgrade processing of silica within the Enduring Energy **Storage System**
- **COOPERATIVE RESEARCH AND DEVELOPMENT AGREEMENT WITH U.S. DEPARTMENT OF ENERGY'S NATIONAL RENEWABLE ENERGY** LABORATORY

METALLURGY / MATERIALS

- Metallurgy / Processing to HPQ for Quartz Crucible, PV Silicon and Battery Anode
- Enduring Energy Storage processing integration

NEXT GENERATION SOLAR

Perovskite Portfolio of NREL





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PRODUCT DEVELOPMENT (UC-DAVIS)

SILICA TO SILICON

Metallurgy / Processing to HPQ for Quartz Crucible, PV **Silicon and Battery Anode**

SILICON & GRAPHITE

- Carbide-based refractories and oxycarbide glasses,
- creating combined material solutions utilizing high-purity silica and graphite.

PEROVSKITE (Halocell Energy)

PEROVSKITE SOLAR CELLS (PSC)

- Collaborate to develop and produce the highest efficiency and most stable outdoor Solar Glass / PSC solutions.
 - Maximize life span of solar cells
 - Maximize overall performance of solar cells
 - **Provide best performance cells at lowest cost**
 - Incorporate PSC into solar glass production as final device

PHASE 3 – VERTICAL INTEGRATION

HOMERUN SIGNS LOI WITH SI&MEX FOR UP TO 365,000 TONNES **OF SOLAR GLASS PER YEAR**



- Supply Chain.
- Brazil starting in 2024.
- •

2024 - Technical Collaboration and the Commercial Supply of Glass from Homerun to the Si&Mex Solar Manufacturing facility in Camacari, Bahia, Brazil.

• The primary focus of the partnership between Homerun and Si&Mex is for Homerun to provide Si&Mex with up to 365.000 tonnes per year of solar glass supply, under agreed specifications and commercial terms.

• The Parties will jointly develop plans for a High Purity Solar Crucible Manufacturing plant for Ingot and Wafer manufacturing in the Silica to Solar

Si&Mex plans to produce up to 5GW in annual production (circa 10 to 12) million Solar Modules including bi-facial glass-on-glass) in Camacari, Bahia,

With 113,147 MW of solar capacity in the pre-construction phase, Brazil ranks second to China (241,744 MW) in solar pre-construction globally

PHASE 3 – VERTICAL INTEGRATION **GLASS PLANT PLANNING - 2024**

GLASS PLANT

Location **Engineering and Construction Solar Glass Line Container Glass Line Float Glass Line Alt Power Opportunities** Hydrogen Opportunities

RFP for Engineering for a Solar Glass and Container Glass Plant with 1000 t/day capacity in **Bahia**, **Brazil**

DETAILS

Port of Aratu in Camacari Homerun Utilization First Major Offtake Partner in H1 First Major Offtake Partner in H2 Brazil Alt Energy Producer Babcock & Wilcox

SOLAR INNOVATION - PEROVSKITE PV

RESEARCH & DEVELOPMENT



INTERNAL R&D (HOMERUN CTO - DR. TERENCE MAURO +)

DEVELOP AND INTEGRATE WORLDCLASS PEROVSKITE SOLAR IP FOR BRAZIL

NREL (USA DEPT OF ENERGY)

ACCESS TO THE DEEPEST PEROVSKITE SOLAR IP PORTFOLIO IN THE WORLD (NREL PROVIDED THE CORE IP THAT CHINA DEVELOPED INTO A DOMINANT GLOBAL SOLAR POSITION)

HALOCELL ENERGY

INTEGRATE COMMERCIAL-READY PEROVSKITE SOLAR AND SOLAR GLASS SOLUTIONS



BATTERY INNOVATION – ANODES

RESEARCH & DEVELOPMENT



DEVELOPMENT OF BATTERY ANODE POWDERS (SILICON & HYBRID GRAPHITE ANODES)

CO- DEVELOPMENT OF BATTERY ANODE POWDERS (HYBRID GRAPHITE ANODES)

METALLURGY & PROCESSING SILICA TO SILICON BATTERY ANODES

NEW ELECTROTHERMAL TECHNIQUES FOR PROCESSING SILICA TO SILICON



PHASE 3 – VERTICAL INTEGRATION



RESEARCH & DEVELOPMENT - 2024

The National Renewable Energy Laboratory (NREL) is in the late stages of prototype testing a new thermal energy storage technology that uses inexpensive silica sand as a storage medium. Economic Long-Duration Electricity Storage by Using Low-Cost Thermal Energy Storage and High-Efficiency Power Cycle (ENDURING) is billed as a reliable, cost-effective, and scalable solution that can be sited **ANYWHERE**!

ENDURING heats a thermal storage medium — **silica sand** — with excess solar or wind energy. Particles are heated to 1,200°C by passing them through an array of electric resistive heating devices. The heated particles are then gravity-fed into insulated concrete silos to be stored for thermal energy. One of the most attractive features of the ENDURING system is its ability to be installed as part of the grid network. Furthermore, this system could help phase out traditional coal and natural gas plants and could even be placed on existing infrastructure on decommissioned sites respectively. NREL believes that a single baseline, ENDURING system can store up to 26,000 MWh of thermal energy; equivalent to the annual energy consumption of more than 400 households. Furthermore, the technology could be rolled out at costs ranging between 2 to 4 USD per kWh, making it a low-cost thermal energy storage solution.

The Parties will analyze the economic benefits of using Homerun's silica sand for energy storage, including energy arbitrage from energy storage and grid service, processing of the silica sand by using low-cost electricity in energy storage, and generating potential income from processed materials after its use for energy storage



SHARE STRUCTURE As of July 23, 2024

Exchange		
Common shares		5
Stock options - amount & avg price		
Warrants - amount and avg price		
Fully Diluted		7
FD Market Cap	\$	1
FD Insider Ownership %		
	-	

Note: Ongoing CAPEX Finance discussions with Investment, Private and Development Banks in Canada and Brazil.







CONTACT US FOR MORE INFORMATION



Address

2110 - 650 West Georgia Street Vancouver, British Columbia, Canada

CEO - Brian Leeners brianleeners@gmail.com WhatsApp: +1 604-862-4184

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Our Website www.homerunresources.com



Business Development info@homerunresources.com CAD-TSXV: HMR USA-OTC: HMRFF GDR-WKN: 5ZE / A3CYRW



ThankYou

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