Homerun Resources Inc. Announces Multi-Process Testing Results for Santa Maria Eterna High-Purity Silica Sand Project

written by Raj Shah | December 9, 2025

Independent German Testing Firm Dorfner Anzaplan Confirms Multiple High-Value Markets Across Multiple Alternative Purification Routes

KEY HIGHLIGHTS:

- **ULTRA-LOW STARTING IMPURITIES – CONFIRMING RAW WASHED SILICA QUALITY**
  Homerun's washed raw silica sand from its Santa Maria Eterna silica deposit (SME) in Belmonte, Bahia, Brazil analyzed via ICP contained exceptionally high SiO_2 at 99.9694% and low impurities totalling 306 ppm including Fe (6.1 ppm), Al (8.9 ppm), Ti (33 ppm) and Na (4.1 ppm).
- **MULTIPLE ALTERNATIVE PURIFICATION ROUTES WITHOUT HAZARDOUS CHEMICALS**
  Testing validated multiple successful non-HF (hydrofluoric acid-free) purification processes that achieved 92-204 ppm total impurities, enabling Homerun to avoid the environmental and safety risks associated with traditional HF processing. The best result of 92 ppm total impurities was achieved through an innovative thermal treatment combined with caustic processing.
- **QUALIFIED FOR PREMIUM SOLAR GLASS, OPTICAL GLASS AND**

INDUSTRIAL MARKETS

Homerun's SME silica sand tested positive for solar glass and extra clear glass applications which typically require iron impurities below 70 ppm. Homerun's washed raw silica sand tested at less than 7 ppm. The Anzaplan processed silica exceeds specifications for Type I optical glass manufacturing, requiring iron below 1 ppm (Homerun SME silica sand achieved 0.34 ppm). Additional validated applications include engineered stone composites, fused silica, silicon carbide production and ceramics.

December 9, 2025 (Source) – **Homerun Resources Inc. (TSXV: HMR) (OTCQB: HMRFF) ("Homerun" or the "Company")** is pleased to announce exceptional results from comprehensive metallurgical testing completed by Dorfner Anzaplan GmbH, one of Europe's leading independent silica sand testing laboratories based in Germany. The testing program evaluated multiple alternative purification routes for silica sand from Homerun's Santa Maria Eterna silica sand resources in Belmonte, Bahia, Brazil (the "Belmonte Project") confirming the deposit's suitability for multiple high-value industrial applications.

As previously announced, Homerun has completed a 43-101 compliant Technical Report with Mineral Resource Estimate containing a preliminary resource of **25.56 Mt Measured and 38.35Mt Inferred** of high-purity silica sand **(>99.6% SiO2**). This Mineral Resource Estimate is from only one of the three assets controlled by Homerun in the District.

Please view NI 43-101 Technical Report here: https://homerunresources.com/ni-43-101-belmonte/

Dorfner Anzaplan, a globally recognized authority in silica sand characterization and processing, received 25 kilograms of material from Homerun's Belmonte Project in May 2025. The

laboratory conducted an extensive evaluation of several alternative purification technologies specifically designed to avoid hydrofluoric acid, which is traditionally used in high-purity quartz processing but poses significant environmental and handling challenges.

The tested methods included:

- Caustic baking – high-temperature sodium hydroxide treatment
- Phosphoric acid baking – thermal treatment with phosphoric acid
- Caustic leaching – pressurized alkaline dissolution
- Calcination in combination with the above

All three methods successfully reduced impurity levels, with the most advanced treatment pathway, combining calcination at 1,400°C with caustic baking, achieving the best overall performance.

Brian Leeners, CEO of Homerun commented, “These results from Dorfner Anzaplan, one of the world’s most respected independent silica testing laboratories, validate what we’ve believed about our Belmonte Project, we have a world-class silica sand deposit with truly exceptional starting quality. The fact that we can achieve premium use-case specifications without hydrofluoric acid is a game-changer for project economics and environmental permitting. The exceptionally low iron and aluminum content is extraordinarily rare in global silica deposits. Aluminum and Iron are notoriously difficult to remove, so starting with such low levels gives us an inherent competitive advantage that cannot be replicated through processing alone. With multiple confirmed market pathways spanning solar glass, optical glass, engineered stone, silicon carbide, and industrial applications,

we have significant optionality to optimize our product mix for maximum value. The global transition to renewable energy and electrification is driving unprecedented demand for high-purity silica, and the Belmonte Project is positioned to serve these growth markets with a superior environmental footprint."

The raw, untreated silica sand from the Belmonte Project exhibited exceptionally low baseline impurities compared to typical global silica deposits:

Element	Belmonte (ppm)	Industry Context
Aluminum (Al)	8.9	Exceptionally low – Industry leading quality
Iron (Fe)	6.1	Exceptionally low, successfully reduced to 0.34ppm
Titanium (Ti)	33	Moderate level, successfully reduced to 0.87ppm
Sodium (Na)	4.1	Low baseline

"The starting material quality is remarkable," noted the Dorfner Anzaplan report. "The material showed exceptionally low aluminum values", a critical advantage since aluminum is one of the most difficult impurities to remove from silica sand.

Across all the purification processing methods tested, the Belmonte Project silica demonstrated exceptional response to impurity removal:

- Iron removal: reduced from 6.1 ppm to as low as 0.34 ppm (94% reduction)
- Titanium removal: reduced from 33 ppm to as low as 0.87 ppm (97% reduction)
- Aluminum stability: remained at industry-leading low levels throughout processing

The Dorfner Anzaplan team noted that iron and titanium removal performance exceeded even traditional HF leaching for certain treatment parameters, indicating that the crystal structure of Belmonte Project silica sand is particularly amenable to purification.

VALIDATED MARKET APPLICATIONS

Solar Glass – Premium Market Opportunity

Solar glass manufacturing, driven by the global solar energy boom, requires silica sand with iron content below 70 ppm. Homerun's purified Belmonte Project silica achieved iron levels of 0.34 to 1.4 ppm – more than 50 times better than required specifications. The global solar glass market is projected to exceed $30 billion by 2030, driven by unprecedented solar panel installation demand worldwide. High-purity silica sand is the primary feedstock, with premium pricing commanded by materials that enable maximum light transmission.

Optical Glass – Type I Certification Quality

Optical glass for precision lenses, camera systems, scientific instruments, and telecommunications requires stringent impurity control. Type I optical glass specifications demand:

- Iron (Fe): <1 ppm
- Chromium (Cr): <0.05 ppm
- Manganese (Mn): <0.05 ppm
- Copper (Cu): <0.05 ppm

Homerun's Belmonte Project silica met all Type I specifications across multiple purification tests, with best results showing 0.34 ppm iron and all other coloring elements below detection limits.

Dorfner Anzaplan’s technical evaluation confirmed Homerun’s silica is suitable for:

Silicon Carbide Production:

- Advanced material for semiconductors, electric vehicle power electronics, and high-temperature applications
- Requires >99% SiO_2 purity
- Belmonte Project material exceeds specifications

Fused Silica Manufacturing:

- High-performance material for semiconductors, fiber optics, and aerospace
- Specification: >99.5% SiO_2, <0.02% Fe_2O_3
- Belmonte Project silica qualified for this premium market

Engineered Stone Composites (Quartz Countertops):

- Requires >99.5% SiO_2 with uniform color and minimal discolored particles
- Belmonte Project silica’s low iron and titanium content ensures bright, consistent appearance
- Global engineered stone market valued at $25+ billion annually

Sodium/Potassium Silicate Production:

- Industrial chemicals used in detergents, cement, coatings
- Specification: >99% SiO_2, <0.02% Fe_2O_3
- Belmonte Project material qualified

Frac Sand (Oil & Gas Proppant):

- Hydraulic fracturing applications requiring high-strength, round silica grains
- Specification: >99% SiO_2
- Belmonte Project material qualified

Foundry Sand (Metal Casting):

- High-temperature mold and core production for metal casting
- Belmonte Project material meets requirements

ENVIRONMENTAL ADVANTAGE – NON-HF PROCESSING

A significant finding from the Dorfner Anzaplan testing program is that Homerun's Belmonte Project silica can be successfully purified **without hydrofluoric acid (HF)**, one of the most hazardous industrial chemicals. Traditional high-purity quartz processing relies heavily on HF, which poses:

- Severe environmental risks (groundwater contamination, atmospheric emissions)
- Extreme worker safety hazards (HF exposure can be fatal)
- Regulatory permitting challenges in many jurisdictions
- High insurance and liability costs
- Community opposition to operations

Homerun's validation of **phosphoric acid baking, caustic baking, and with further chemical and thermal treatment pathways** provides multiple environmentally superior processing options. This differentiates the Belmonte Project from competing silica projects that require HF treatment to achieve comparable purity levels.

"The successful demonstration of non-HF purification routes

represents a significant competitive advantage," commented Homerun's COO, Armando Farhate. "These results demonstrate Homerun's ability to deliver high-purity silica products to premium markets while maintaining industry-leading environmental and safety standards."

Qualified Person

The technical and scientific content of this news release has been reviewed and approved by Dr. Roque Yuri Tandel, FAusIMM 3154429, an independent qualified person as defined under National Instrument 43-101, Standards of Disclosure for Mineral Projects.

About Homerun (https://homerunresources.com/)

Homerun Resources Inc. (TSXV: HMR) is building the silica-powered backbone of the energy transition across four focused verticals: Silica, Solar, Energy Storage, and Energy Solutions. Anchored by a unique high-purity low-iron silica resource in Bahia, Brazil, Homerun transforms raw silica into essential products and technologies that accelerate clean power adoption and deliver durable shareholder value.

- Silica: Secure supply and processing of high-purity low-iron silica for mission-critical applications, enabling premium solar glass and advanced energy materials.
- Solar: Development of Latin America's first dedicated 1,000 tonne per day high-efficiency solar glass plant and the commercialization of antimony-free solar glass designed for next-generation photovoltaic performance.
- Energy Storage: Advancement of long-duration, silica-based thermal storage systems and related technologies to decarbonize industrial heat and unlock grid flexibility.
- Energy Solutions: AI-enabled energy management, control

systems, and turnkey electrification solutions that reduce costs and optimize renewable generation for commercial and industrial customers.

With disciplined execution, strategic partnerships, and an unwavering commitment to best-in-class ESG practices, Homerun is focused on converting milestones into markets—creating a scalable, vertically integrated platform for clean energy manufacturing in the Americas.

On behalf of the Board of Directors of
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