



**HILLCREST**  
energy technologies™

# ENERGY SOLUTIONS POWERING THE FUTURE

## INVESTOR PRESENTATION

January 2025



# Forward Looking Statement Notice



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There is an offering document related to this offering that can be accessed under the Company's SEDAR+ profile at [sedarplus.ca](https://sedarplus.ca) and the Company's website at <https://hillcrestenergy.tech/>. Prospective investors should read this offering document before making an investment decision.

**No securities regulatory authority has expressed an opinion about these securities and it is an offence to claim otherwise. This offering may not be suitable for you and you should only invest in it if you are willing to risk the loss of your entire investment. In making this investment decision, you should seek the advice of a registered dealer.**

# Investment Highlights

## INNOVATION

up to  
**99.7%**  
Inverter Efficiency

up to  
**13%**  
Improvement  
in Motor Efficiency

**SIGNIFICANT**  
Reduction in EMI

up to  
**50%**  
Reduction in Capacitors

up to  
**60%**  
Reduction in Filters

## IMPACT ACROSS MARKETS

up to **US\$220M**  
in potential costs saving for a 100K-vehicle  
EV model run

up to **US\$13M**  
in potential revenues over a lifetime of  
250MW solar farm  
with a 2% increase in inverter efficiency

up to **US\$6M**  
in potential annual revenues  
from Level 2 EV Chargers  
with a 2% increase in inverter efficiency

up to **US\$250K**  
in potential annual energy savings  
for 100K ft<sup>2</sup> data center  
with a 2% increase in UPS efficiency

## CAPABILITY

Ease of Technology  
**INTEGRATION**

**ADAPTABLE**  
to Numerous Markets

100%  
**OWNED IP PORTFOLIO**

Extensive Industry  
**EXPERIENCE**



# What is a Power Inverter?

## Essential to Electrical Systems



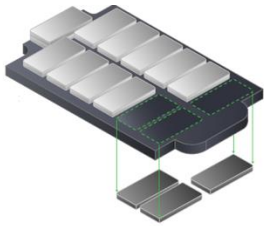
**An inverter** is a power electronic device that converts direct current (DC) power to alternating current (AC) power



# Hillcrest ZVS Traction Inverter

## Benefits Across the Entire Powertrain System

### TRACTION BATTERY PACK\*



up to  
**US\$1,800**  
SAVINGS



up to  
**15% SIZE**  
REDUCTION



up to  
**150 POUND**  
REDUCTION

### DC-LINK CAPACITORS

up to  
**50% SIZE REDUCTION**  
in DC-LINK CAPACITORS

### SEMICONDUCTOR



**OPTIMIZE**  
SEMICONDUCTOR MATERIAL

### TRACTION MOTOR

up to  
**13% EFFICIENCY GAINS**

**IMPROVED RANGE** by up to  
**26%**

### LOWER EMI



LESS EMI SHIELDING AND FILTERS  
**REDUCE COST AND WEIGHT**

### COMBINED SAVINGS

up to  
**US\$1,800**  
in **BATTERY PACK SAVINGS\***



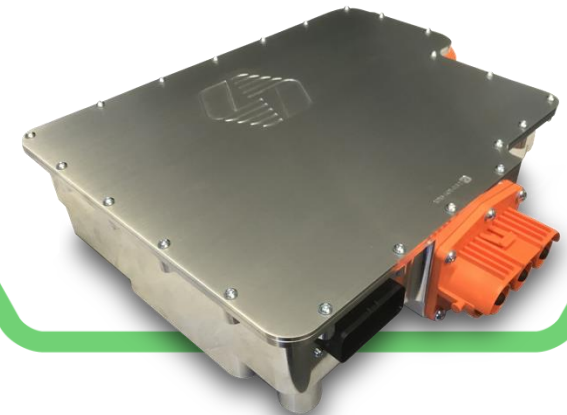
up to  
**\$400** in **MATERIALS SAVINGS\*\***



**≈99.7%**  
INVERTER EFFICIENCY

UP TO  
**US\$220M**

Costs saving for a  
100,000-vehicle model run



\*Estimates based on battery pack size of 100 kWh, weight of 1,000 lbs. and cost of \$153/kWh

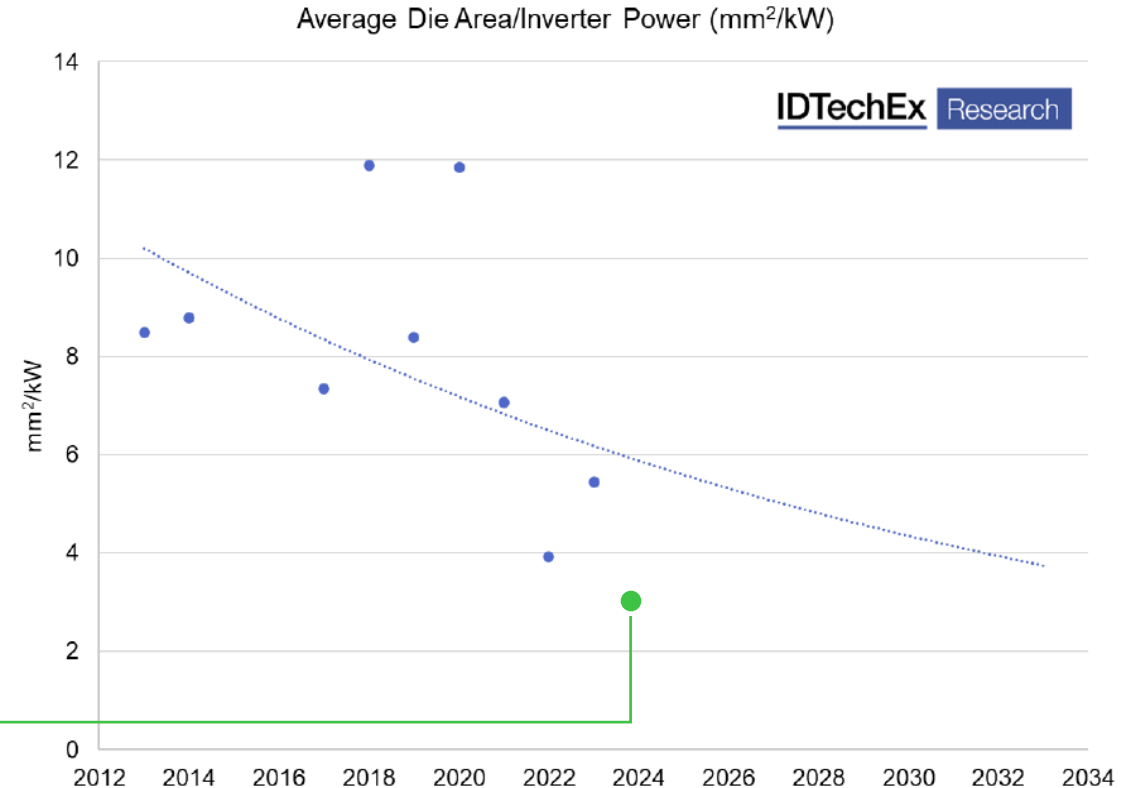
\*\*Based on Hillcrest analysis

# Hillcrest ZVS Traction Inverter

## Cost savings From More Efficient Use of Semiconductors

- IDTechEx analyzed EVs from 2013-2023
- The general trend is that inverter power per unit area is increasing steadily.
- Vehicles analyzed include the Toyota Prius, Polestar 2, BMW i3, and Kia EV6, among others.
- By 2035, IDTechEx estimates that many vehicles will likely have die area per kW power below 4 mm<sup>2</sup> in the inverter.
- Hillcrest ZVS Traction Inverter has already achieved 3 mm<sup>2</sup>/kW**

Hillcrest  
350kVA SiC Inverter



Hillcrest specifications added to IDTechEx analysis. Source: [The Future of EV Powertrains: SiC, GaN, and the Evolution of Power Electronics : IDTechEx Webinar](#)



# Hillcrest ZVS Grid-Tied Inverter

## Next-Generation Capabilities for New Sectors

### POWER QUALITY AND HARMONICS



#### IMPROVED POWER QUALITY AND HARMONICS

Ability to string more inverters in parallel or run faster motors.

### LOWER EMI



#### LESS EMI SHIELDING AND FILTERS

Reduce cost.

### SYSTEM RELIABILITY AND EXTENDED LIFESPAN



#### IMPROVED SYSTEM RELIABILITY AND EXTENDED LIFESPAN

Reduces operating and capital costs.

### SMALLER FILTERS

up to **60%** FILTER SIZE REDUCTION



UP TO  
**US\$13M**

in potential revenues over a lifetime of 250MW solar farm with a 2% increase in inverter efficiency\*

UP TO  
**US\$6M**

in potential annual revenues from Level 2 EV Chargers with a 2% increase in inverter efficiency\*\*



#### \*Assumptions:

- Capacity factor of 24.5%
- Power purchase price of US\$49.52/MWh
- 25-year life of solar farm

#### \*\*Assumptions:

- Charging utilization rate of 15%
- Power price of US\$0.20/kWh

# Hillcrest ZVS Power Factor Correction

## New Levels of Efficiency and Reduced Capital Costs



UP TO  
**US\$250K**

in potential annual energy savings  
for 100,000 ft<sup>2</sup>  
data center with a 2% increase in  
UPS efficiency\*

### POWER QUALITY AND HARMONICS



#### IMPROVED POWER QUALITY AND HARMONICS

Ability to string more inverters  
in parallel or run faster motors.

### LOWER EMI



#### LESS EMI SHIELDING AND FILTERS

Reduce cost.

### SYSTEM RELIABILITY AND EXTENDED LIFESPAN



#### IMPROVED SYSTEM RELIABILITY AND EXTENDED LIFESPAN

Reduces operating and capital  
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### SMALLER FILTERS

up to  
**60%**

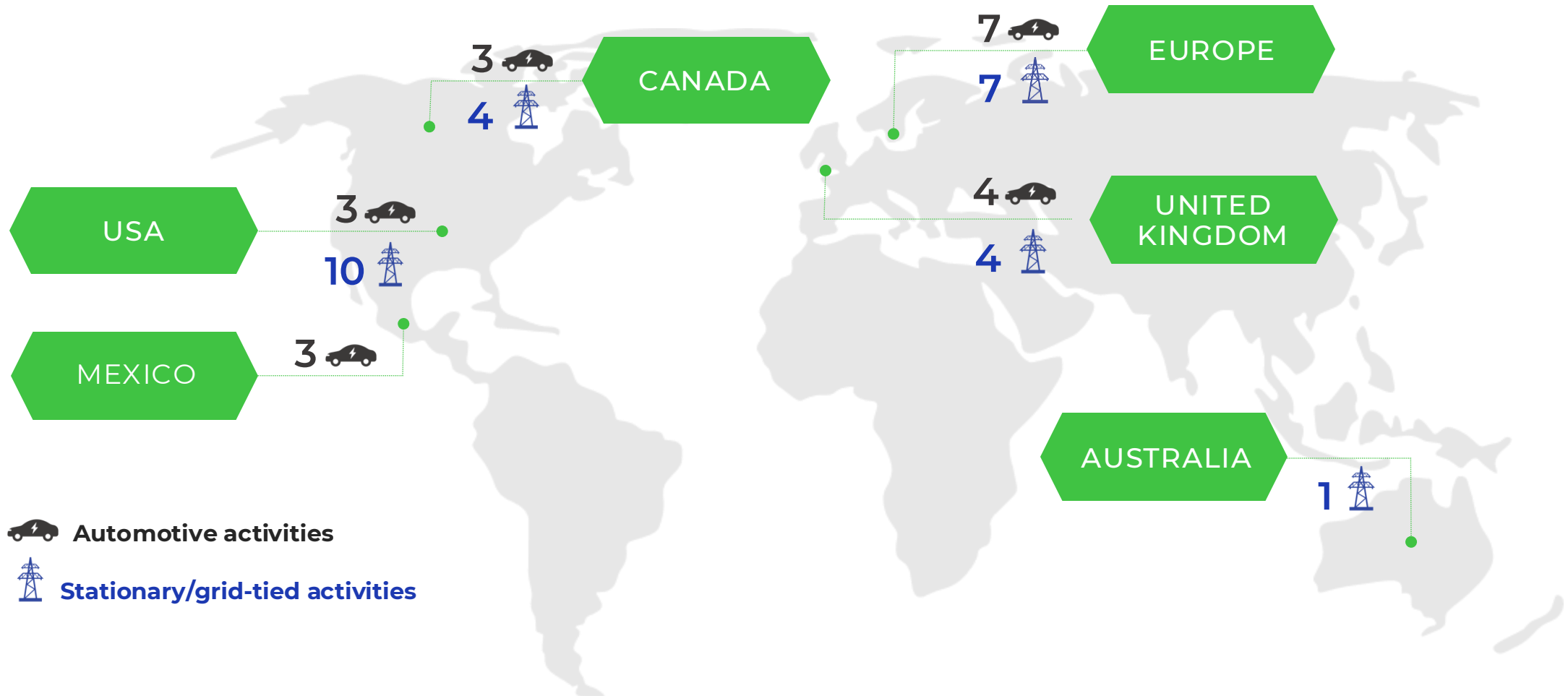
#### FILTER SIZE REDUCTION

**\*Assumptions:**

- Average power price US\$0.12
- Annual data center energy usage of 87,600 MW



# Current Commercial Activities



# Sample of Current Automotive Commercial Priorities

## Strong Momentum in Europe

### EV Traction Inverters

#### **Validated with OEMs & Tier One Suppliers**

Advanced demonstrations and validation testing complete with multiple OEMs and Tier One suppliers.

#### **Joint Development Opportunities**

Multiple high-value joint development opportunities in advanced stages of negotiation.

#### **ZVS Technology Integration**

Ongoing system integration discussions with experts on incorporating ZVS technology into road-ready EVs.

#### **Commercialization Nearing**

Several promising commercial opportunities on the horizon.

### PFC for Onboard Chargers

#### **Engaged with Potential Customers**

Actively engaging with five potential customers.

#### **Upcoming Development Initiatives**

Several joint development opportunities expected to launch within the next few months.

#### **Strategic Speed to Market**

Focused on quick market entry to support near-term cash flow.

# Ocean Batteries AS Development

Experienced Marine Electrification Supplier Going Global

## MARKET EXPANSION

Partnership with Ocean Batteries opens global marine and energy storage markets.

## TECHNOLOGICAL LEADERSHIP

ZVS inverter bring superior efficiency, helping optimize grid-connected ESS.

## REVENUE

Path to securing contracts and advancing commercialization.

**OCEAN**  
*Batteries*

## KEY COMMERCIAL OBJECTIVES

Design & Demonstration  
of 300kVA ZVS Inverter Prototypes

Integrate into Grid-Connect  
Energy Storage Systems (ESS)

Deploy into ESS

Secure Commercial  
Supply Agreement

# Core Technical Team



## ARI BERGER

Senior Controls Engineer

Expert in electric machine control technologies, systems engineering and multi-disciplinary product design; more than 10 years of commercial experience with a track record of deploying new technologies and go-to-market strategies, specifically in the sector of electrification.



## DR. JALAL AMINI

Hillcrest Senior Power Electronics Engineer

Senior power electronics engineer, possessing superior knowledge and experience in grid applications, power quality and renewable energies. He has designed and implemented a variety of power electronic devices including grid-connected devices such as a wind energy converter, active filters, fast chargers and energy storage systems, induction motor drives, and multilevel converters.



## HARALD HENGSTENBERGER

Managing Director, Owner & Founder, Systematec GmbH

Leader of the Systematec team and established electrical engineer with more than 25 years of experience designing, manufacturing, testing and validating hybrid and electric vehicle powertrains



## JAMES HAMOND

Hillcrest Senior Technical Consultant

Having worked in the consumer, industrial and defense sectors, Mr. Hamond is a jack-of-all-trades, spanning hardware, embedded software, control and adaptive algorithms, register-transfer level (RTL), thermal management and mechanical design. He has worked with soft switching systems for over 15 years, most recently as CTO and co-founder of Pre-Switch Inc.

# Industry Expertise



## DAN COKER

Hillcrest Strategic Advisor

Veteran automotive executive and pioneering entrepreneur possessing exceptional leadership capabilities and global network. During his 20+ years as president and CEO of Gentherm, Mr. Coker stewarded remarkable growth from inception to a \$1 billion enterprise that fundamentally altered automotive thermal management.



## DR. HEINZ-GEORG BURGHOFF

Hillcrest Commercialization Consultant

Automotive business and product strategy expert in vehicle electronics. Dr. Burghoff spent over 20 years with DaimlerChrysler AG, where he held various management positions in passenger car development, heading up electric/electronic development as well as directing battery technology and strategy.



## NAD KARIM

VP Business Development

Seasoned executive with over 20 years experience. Mr. Karim has successfully launched and managed businesses across diverse sectors, including cloud networking, electric vehicle batteries, semiconductor IP, additive manufacturing, and advanced battery technologies.



## DAN MATHIESON

Hillcrest Strategic Consultant

Mr. Mathieson is an innovative trailblazer with a legacy of five successful mayoral terms, renowned for his adeptness in network building. His visionary leadership transformed his community into a hub for cutting-edge automotive technologies. He currently serves on the advisory board for the Auto Manufacturers Association's Project Arrow.

# Capital Overview

As of January 2, 2025

## Stock Listing

CSE: HEAT  
 OTCQB: HLRTF  
 FRA: 7HI

|  |                 |
|--|-----------------|
| Basic Shares Outstanding                 | <b>99.3M</b>    |
| Fully Diluted Shares Outstanding         | <b>143.3M</b>   |
| Warrants Outstanding (Average CAD\$0.47) | <b>28.6M</b>    |
| Options Outstanding                      | <b>8.1M</b>     |
| Restricted Stock Units                   | <b>7.3M</b>     |
| Market Cap (January 2, 2025)             | <b>CAD\$21M</b> |
| 3-month Daily Average Trading Volume     | <b>530,037</b>  |

## Ownership

|                               |            |
|-------------------------------|------------|
| Insider Ownership             | <b>11%</b> |
| Family Offices                | <b>12%</b> |
| German Advisor to the Company | <b>5%</b>  |
| Close Business Associates     | <b>16%</b> |
| Retail Investors              | <b>56%</b> |



## Summary

**100%**

OWNED IP PORTFOLIO

**99.7%**

~ PEAK INVERTER EFFICIENCY



**\$13M**

In USD POTENTIAL  
ADDITIONAL SOLAR POWER  
GENERATION REVENUES

**\$2,200**

In USD POTENTIAL  
SAVINGS PER VEHICLE

**7**

CO-DEVELOPMENT PROJECTS  
WITH EV AND GRID-CONNECT  
POWER SYSTEM PARTNERS

# HAVE QUESTIONS?

GET IN TOUCH WITH HILLCREST ENERGY TECHNOLOGIES

[dcurrie@hillcrestenergy.tech](mailto:dcurrie@hillcrestenergy.tech)

+1 604 609 0006

[www.hillcrestenergy.tech](http://www.hillcrestenergy.tech)



# Hillcrest + Systematec GmbH

## Our Strategic Partnership



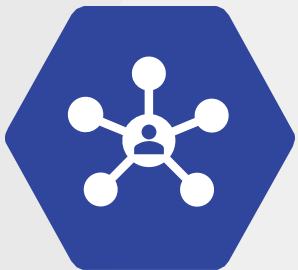
### Joint Development

- ✓ Continuous collaborative agreement
- ✓ Hillcrest directs projects and owns IP
- ✓ Seamless integration with Hillcrest engineering team



### Capabilities

- ✓ Full spectrum power electronics engineering services based in Germany
- ✓ 13-member multi-disciplinary team with extensive industry experience
- ✓ Comprehensive insight into EV industry



### Relationships

- ✓ Customers include numerous automotive OEM's and Tier 1 suppliers
- ✓ Extensive industry network in auto, electrical & electronics
- ✓ Impeccable reputation

Learn more about Systematec: [Systematec GmbH](#)

# Executive Team



**DON CURRIE**

CEO and Director

Trusted relationship and business builder with decades of North American equity markets exposure and public company financing success. Extensive experience owning and operating private businesses and serving on select public company boards.



**JAMIE L. HOGUE**

Chief Operating Officer

More than two decades of progressive leadership, organizational development, marketing, and financial analysis expertise with proficiency in the fields of energy, water, natural resources, and sustainability policy.



**DARYN GORDON**

Chief Financial Officer

Chartered Professional Accountant (CPA, CA) with more than two decades of public company practice. Mr. Gordon started his career with global auditing firms Grant Thornton LLP and PwC Canada and transited to providing CFO services to Canadian public companies 14 years ago.



**JAMES BOLEN**

Chief Commercialization Officer

Veteran executive who is expert at leading innovation teams from concept development to commercial success. Mr. Bolen is the former president and CEO at Global Power Technologies USA, a global leader in ultra-reliable power systems for remote industrial architecture.

# Board of Directors



## DAVID FARRELL

Independent Chair

Mr. Farrell (B.Comm (Finance), LL.B, ICD.D) Mr. David Farrell is a corporate director with over 25 years of corporate and investment banking experience, and has negotiated, structured and closed more than US\$25 billion worth of M&A and structured financing transactions for numerous junior companies.



## MICHAEL MOSKOWITZ

Independent Director

Seasoned technology executive and previous leader of Panasonic's North American business operations. Mr. Moskowitz enables technological innovation in key areas, such as sustainable energy, smart mobility, immersive experiences, integrated supply chain and consumer lifestyle.



## DON CURRIE

CEO and Director

Trusted relationship and business builder with decades of North American equity markets exposure and public company financing success. Extensive experience owning and operating private businesses and serving on select public company boards.



## KYLIE DICKSON

Independent Director

Canadian CPA who has played a pivotal role in multiple financings and M&A transactions. She was previously VP of Business Development at Equinox Gold Corp., VP Business Development at Trek Mining, CFO for JDL Gold Corp., Anthem United Inc. and Esperanza Resources, and served as the Corporate Controller of Minefinders Corporation.

## Board of Directors (Continued)



**MICHAEL KRZUS**

Director

Former CEO and Director of NYSE listed company with 38 years energy industry experience including senior technical and executive management positions with both large and small publicly listed companies in Canada, USA, Australia and the Netherlands.



**TOM MILNE**

Independent Director

Senior financial executive with extensive international experience in energy E&P, pipelines, oil sands & communication technology; served as director of both public and private companies including chairman of audit committee for AMEX-listed oil sands company.

**ROBERT LAMBERT**

Independent Director

Currently Deputy Chairman of Jadestone Energy Inc., founder of Ipex Energy Ltd. And a partner in Oilfield Capital International LLP. Over the past 12 years held positions of CEO of Petra Petroleum Inc., Senior Independent Director of Eland Oil & Gas PLC, CEO of GB Petroleum Ltd., and previously held various executive management and senior operational roles with Conoco Inc. over a 25-year international career.

