



Invictus Energy Ltd (ASX: IVZ) **Africa Oil Week Presentation** 

**Prospect Forum: "Wells to Watch"** 

SG 4571 – Cabora Bassa Basin, Zimbabwe



6 November 2019

## Disclaimer

This document is for information purposes only. It is not a prospectus, disclosure document or offering document under Australian law or under any other law and does not constitute an offer or invitation to apply for securities. In particular, this document is not an offer of securities for subscription or sale in the United States of America or any other jurisdiction in which such an offer or solicitation is not authorized or to any other person to whom it is unlawful to make such an offer or solicitation. The information in this document is an overview and does not contain all the information necessary to make an investment decision. To the extent permitted by law, no representation or warranty, express or implied, is made as to the accuracy, adequacy or reliability of any statements, estimates or opinions or other information contained in this document, any of which may change without notice. Neither Invictus Energy Limited (Invictus), nor any other person warrants the future performance of Invictus or any return on any investment made in Invictus. Some of the information contained in this document constitutes forward-looking statements that are subject to various risks and uncertainties, not all of which may be disclosed. These statements discuss future objectives or expectations concerning results of operations or financial condition or provide other forward-looking information. Invictus' actual results, performances or achievements could be significantly different from the results or objectives expressed in, or implied by, those forward-looking statements. Prospective investors should make their own independent evaluation of an investment in any securities. The material contained in this document does not take into account the investment objectives, financial situation or particular needs of any individual investor. Invictus does not make any recommendation to investors regarding the suitability of any securities and the recipient must make its own assessment and/or seek independent advice on financial, l

**COMPETENT PERSON'S STATEMENT** The information in this document relating to petroleum resources and exploration results is based on information compiled by Mr Scott Macmillan. Mr Macmillan is a Reservoir Engineer and has a Bachelor of Chemical Engineering and an MSc in Petroleum Engineering from Curtin University. He is a member of the Society of Petroleum Engineers (SPE) and has over 12 years experience in the industry in exploration, field development planning, reserves and resources assessment, reservoir simulation, commercial valuations and business development. Estimated resources are unrisked and it is not certain that these resources will be commercially viable to produce.

**HYDROCARBON RESOURCE ESTIMATES** The Prospective Resource estimates for Invictus' SG 4571 permit presented in this report are prepared as at 26 June 2019. The estimates have been prepared by the Company in accordance with the definitions and guidelines set forth in the Petroleum Resources Management System, 2018, approved by the Society of Petroleum Engineer and have been prepared using probabilistic methods. The Prospective Resource estimates are unrisked and have not been adjusted for both an associated chance of discovery and a chance of development. The Company confirms that there have not been any material changes to the resource estimate since the release of the updated Prospective Resource Estimate on 1 July 2019. For further details on the Prospective Resource refer to the 1 July 2019 ASX announcement the Company is not aware of any new information and that all material assumptions and technical parameters underpinning prospective resource estimate continue to apply and have not materially changed



## Summary



### Invictus Energy Ltd is an upstream E&P company (ASX: IVZ) focused on oil and gas in Sub Saharan Africa

Invictus is the 80% owner and operator of the Cabora Bassa Project containing SG 4571 exploration licence in the Cabora Bassa Basin in northern Zimbabwe

SG 4571 licence contains potentially the largest, seismically defined, undrilled structure onshore Africa (200km<sup>2</sup> under closure)

- 8.2 Tcf + 249 million bbls<sup>#</sup> of conventional gas-condensate in Mzarabani Prospect alone
- Independently assessed by Getech Group plc

New geological and geophysical work has de-risked the acreage - ingredients for working petroleum system present in the basin

- Source, reservoir and seal all present and sampled at outcrop to west of SG 4571 and mapped into the subsurface
- Lower Triassic source rock, key in large scale successful Karoo plays is present in the Cabora Bassa Basin

Substantial local and regional gas and liquids market that is supply constrained

- Gas Sale MOU signed with Sable Chemicals fertilizer manufacturer to supply 70 mmscf/d for 20 years (510 Bcf total)
- Can underpin the development and monetisation of even a modest discovery

Invictus is seeking to develop potential regional markets in addition to significant local natural gas demand in Zimbabwe

Farmout process in progress to select partner to participate in high impact basin opening well



## Strategy and Results Delivery



#### **Strategy**

Build a quality portfolio of high potential assets with low cost entry that can be de-risked through technical work and farmed out on good terms

#### **Results Delivered**

- Secured first mover advantage in high potential acreage at minimal cost
- Unlocked \$30m dataset through application of modern technology
- Technical de-risking and addition of significant value and prospectivity with subsurface work program
  - 9.25 Tcf + 297 mmbbls of conventional gas-condensate
  - Mzarabani Prospect one of the largest conventional exploration targets globally
  - Analysis of new geochem samples from outcrop revealed potential to generate significant volumes of oil and gas
- Commercial de-risking through strong demand from domestic and regional markets
  - Gas Sale MOU with Sable Chemicals for 70 mmscf/d for 20 years (510 Bcf) for fertiliser feedstock in Zimbabwe
  - Significant gas supply shortfall in South Africa identified from 2023
- Strengthened Board with appointment of Dr Stuart Lake
  - Proven oil finder with phenomenal track record of 272 discoveries from 300 wells drilled 90% success rate

#### **Future Plans**

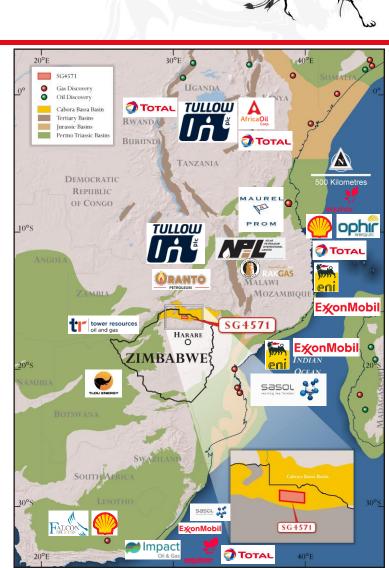
- Complete farm out on good terms to maximise shareholder value
- Secure additional markets and monetisation options
- Drill basin opening exploration well that has the potential to provide multiple ROI



## SG 4571 Asset Overview

### Invictus is 80% owner and operator of SG 4571 in Cabora Bassa

- Licence area covers 250,000 acres in most prospective part of basin
- SG 4571 granted in August 2017 for initial 3 year period (renewable)
  - First 2 years of work program completed
  - Updated PSC being drafted for presentation to GoZ
- Substantial \$30 million dataset acquired by Mobil during 1990s
  - 2D seismic, gravity, aeromagnetic and geochemical data
  - Data unavailable in public domain post Mobil relinquishment
- Experienced Zimbabwean management team with substantial operating experience and history in country
- Environmental Impact Assessment in progress
- Invictus has reprocessed the dataset and applied updated understanding of other successful rift basin plays to Cabora Bassa
- Elephant scale potential in one of the last undrilled rift basins in Africa on the doorstep of a massive market





## Why Zimbabwe?



### Overlooked jurisdiction for last 20 years due to political and economic instability

New government is **pro-business**, **promoting foreign investment** and has implemented investor friendly reforms

Mines Minister is a former resources industry executive that understands the needs of the resources sector (ex. Anglo, Hwange Colliery and Mimosa Platinum)

### **Amended Indigenization and Empowerment Act**

- 100% foreign ownership of assets
- Guarantee of investor rights
- 100% remittance of earnings

### **Special Economic Zones legislation enshrines:**

- Legal and fiscal stability
- 5-year tax holiday
- 15% corporate tax rate thereafter
- Zero Capital Gains Tax
- Customs duty exemption on raw materials and capital equipment
- Offshore banking and transacting outside local financial system safeguards against local currency effects

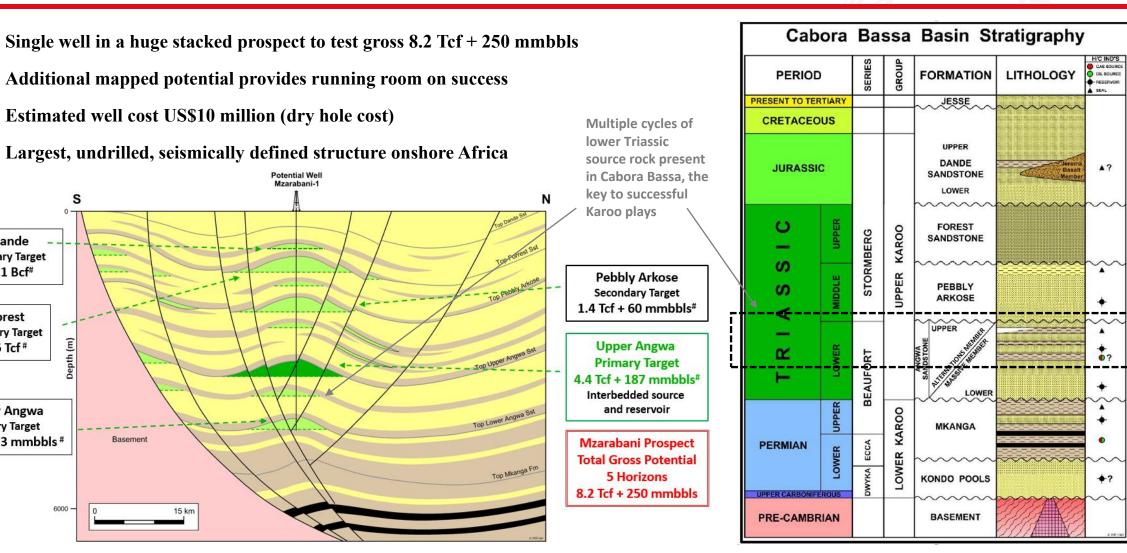


Meeting held on 1 November 2018, Zimbabwe President, His Excellency CDE E.D. Mnangagwa, Minister of Mines Hon. Winston Chitando, Cabinet executives together with Invictus and One-Gas



## Mzarabani Prospect Schematic





INVICTUS Energy limited

٠

٠

٠

٠

Dande **Tertiary Target** 

411 Bcf#

Forest

**Tertiary Target** 

1.6 Tcf #

Lower Angwa

**Tertiary Target** 

391 Bcf + 3 mmbbls #

pth (m)

6000

## SG 4571 – Completed work program



### All work obligations for the initial term have been fulfilled

Since acquiring SG4571, in 2017, Invictus has undertaken an active program of technical studies

- Data gathering, literature review
- Gravity and magnetics reprocessing and interpretation
  - Reprocessed of aeromagnetic and gravity datasets for the whole of Zimbabwe
  - Getech integrated with other data sets and interpreted for basement depth, structural grain, crustal thickness for modelling
- Seismic reprocessing and remapping
  - Transcribed field tapes and reprocessed all seismic data in the basin 11 lines, total 650 km
  - Prospect mapping and volumetrics
- Basin modelling/petroleum systems analysis
  - Getech and Invictus modelling
- Additional field sampling program for geochemistry, reservoir and seal
  - Outcrop sampling to fill gaps from Mobil program with new samples and analyses
- Regional studies
  - Getech paleogeography/paleoclimate models
  - Invictus undertook a separate review of various Karoo basins for insights re critical exploration issues
- Independent prospectivity assessment conducted by Getech and Netherland, Sewell and Associates (NSAI)
- Environmental Impact Assessment commenced due for completion November 2019



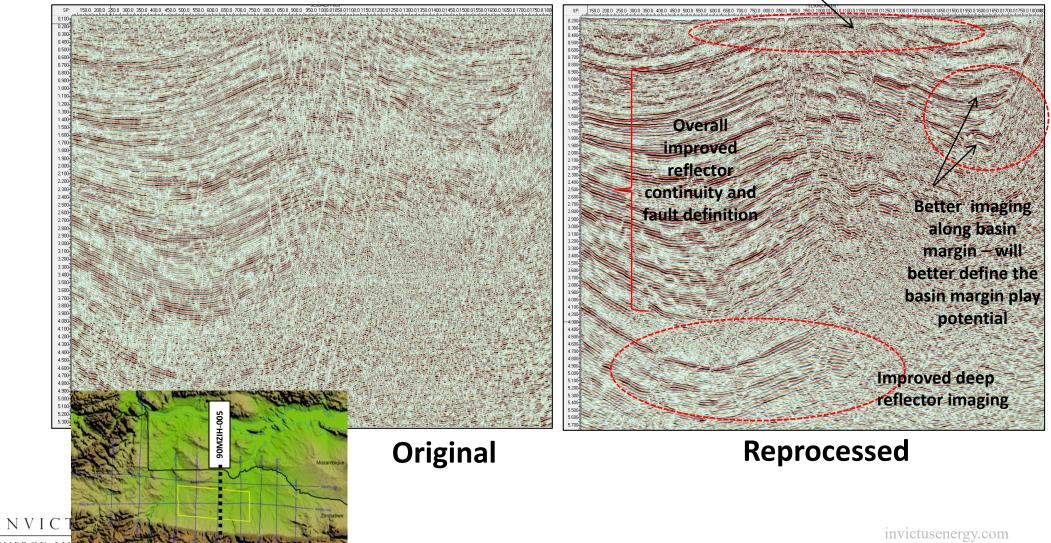
## Seismic Reprocessing Results



9

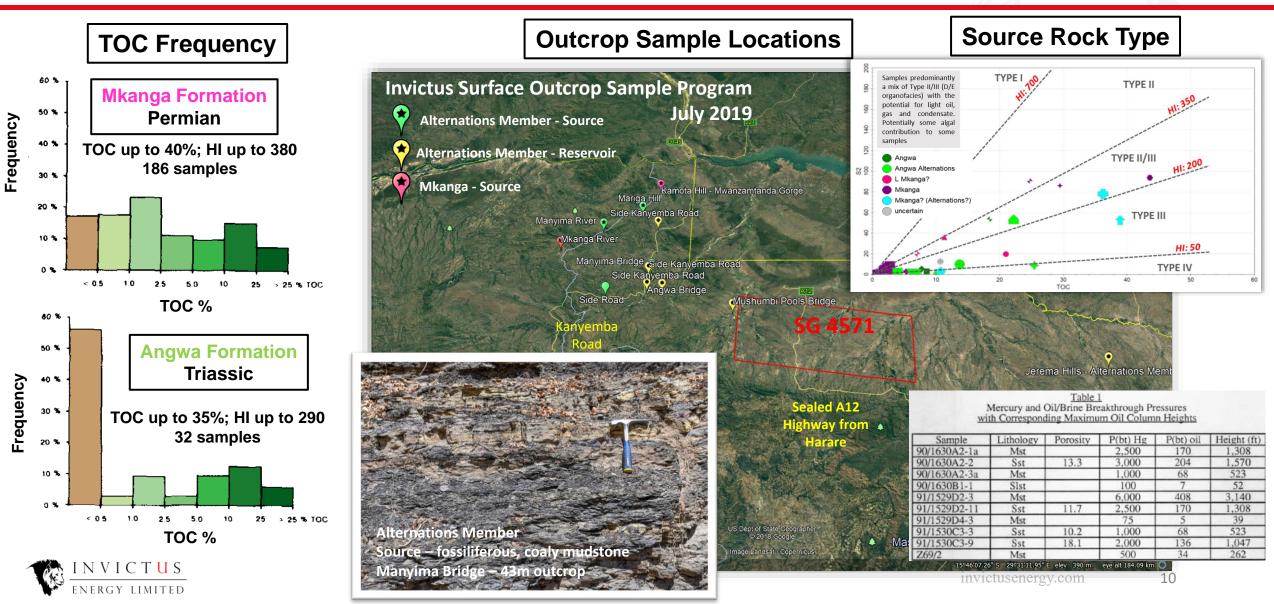
#### Line 90MZIH-005





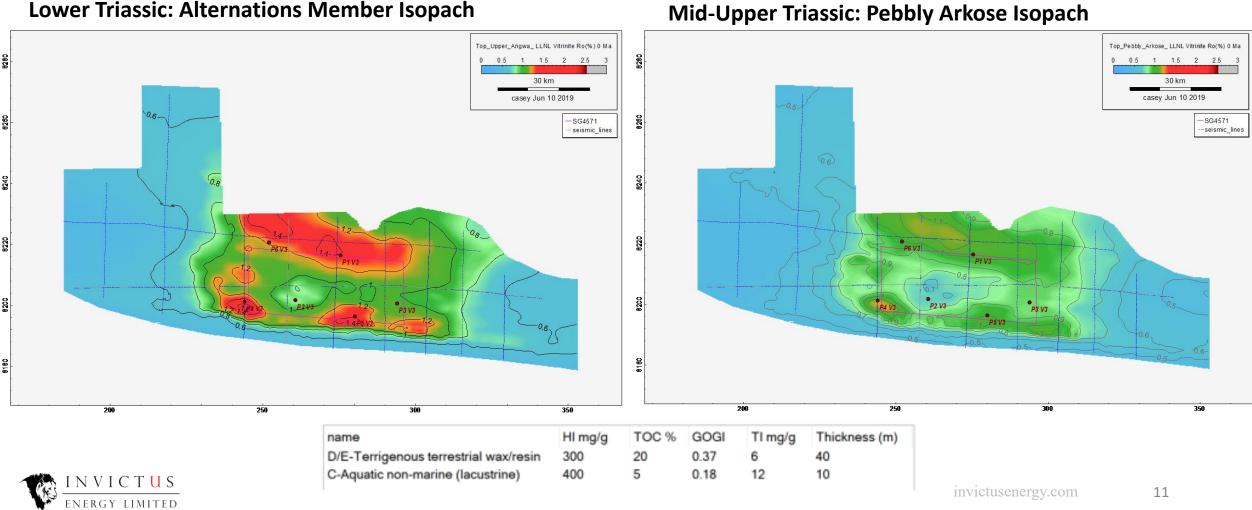
### Source Rock & Seal





### Maturity – Present Day

### Generation on structure present day

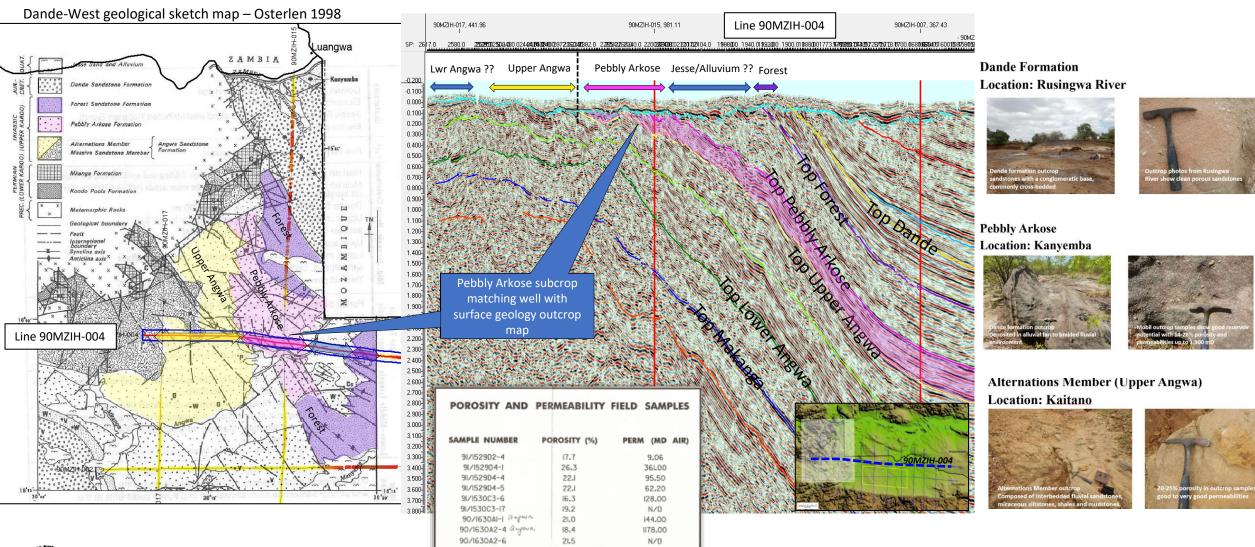


#### Mid-Upper Triassic: Pebbly Arkose Isopach

11

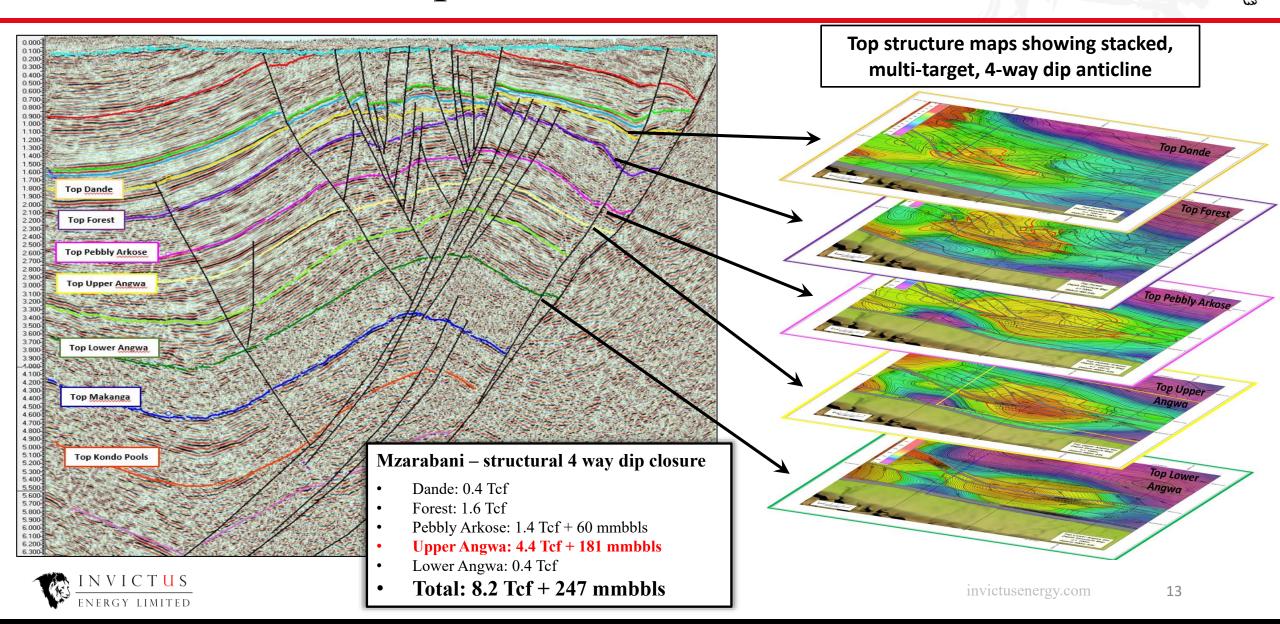
### Reservoirs & Seismic to Surface Geology Calibration

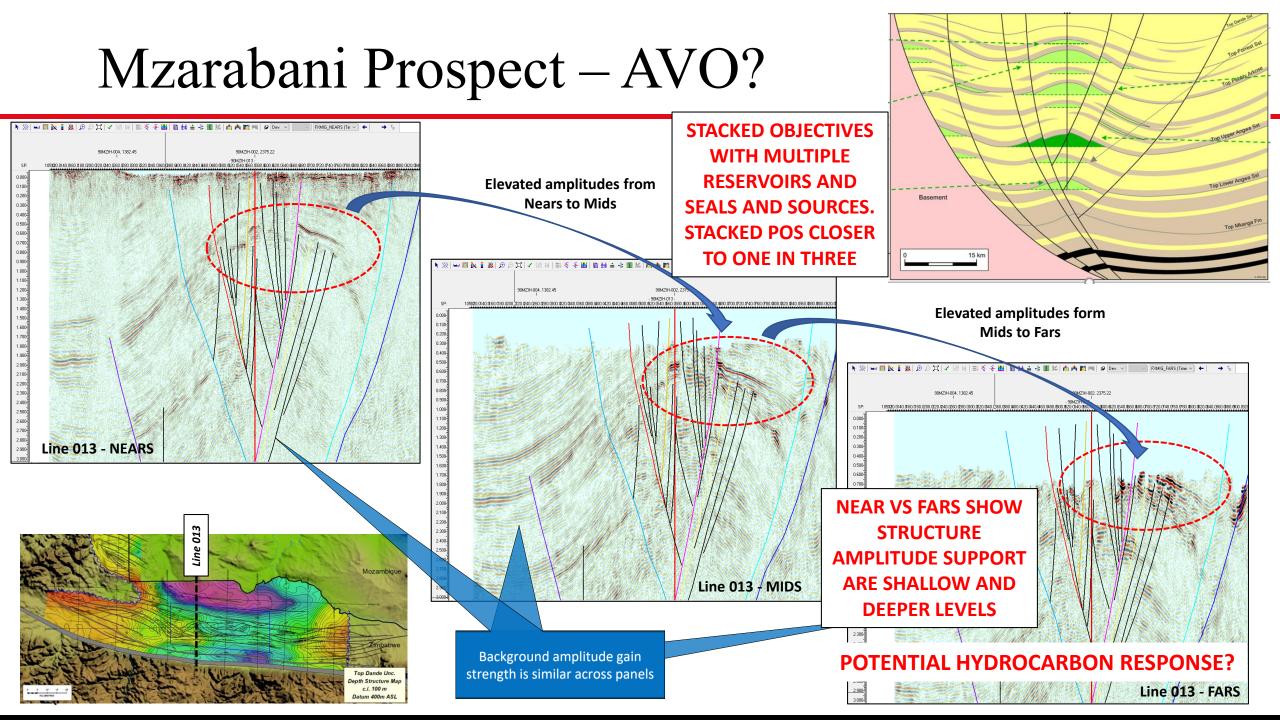






## Mzarabani Prospect – Massive Stacked Potential





## Early entry into new plays can yield massive rewards

### Transformational success for junior explorers has come from frontier exploration

• First movers generally secure the best acreage, best terms and most lucrative markets

Company	Play Opening Discovery	НС Туре	
Carnarvon Petroleum	Dorado – Western Australia	Oil	
Africa Oil Corp	Ngamia - Kenya	Oil	
Cove Energy	Windjammer - Mozambique	Gas	
Ophir Energy	Pweza – Tanzania	Gas	
Hardman Resources	Mputa – Uganda Chinguetti – Mauritania	Oil	
FAR	SNE – Senegal	Oil	
Kosmos Energy	Jubilee – Ghana Greater Tortue – Senegal / Mauritania	Oil Gas	
Cobalt	Cameia – Angola	Oil	
Heritage	Kingfisher – Uganda	Oil	
Tullow	Mputa – Uganda Kingfisher – Uganda Ngamia – Kenya	Oil	



## Domestic and Regional Gas Market Overview



### **Zimbabwe: Strategic Location**

- Southern Africa desperately short of gas
- Zimbabwe serves as the gateway and import/export corridor for Zambia, Botswana, DRC and Malawi to the port of Beira in Mozambique
- Zimbabwe is relatively industrialised compared to majority of African countries and has large local demand
- Gas Sale MOU signed with Sable Chemical Industries Ltd to replace imported ammonia: 70 mmscf/d for 20 years (510 Bcf total volume) demonstrates strong local gas demand
- South Africa gas supply from offshore Mossel Bay and onshore Mozambique is dwindling coupled with a lack of supply alternatives
- Rovuma gas fields in northern Mozambique unlikely to service regional market in near to mid term due to:
  - Long distance to market (>2600km)
  - Lack of consumers along potential pipeline route to the tie in point
  - Committed LNG export volumes to 2030+, so unlikely to supply gas into the region before then
- In addition to Zimbabwe and South Africa market, Zambia and DRC can be serviced through small scale LNG trucked to large off-grid mining operations to replace diesel fired power generation

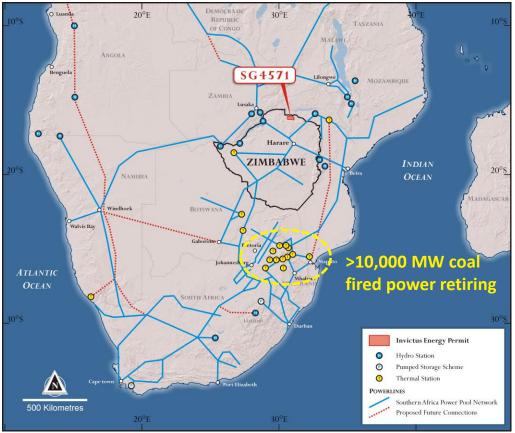


## Southern Africa's Energy Crisis



### **Zimbabwe: Strategic Location**

- Southern Africa is facing an energy crisis with increasing shortages of electricity hampering industry and investment
- Majority of power in the region is coal and hydroelectric
- Southern African Power Pool (SAPP) established in 1993 enables cross-border electricity trading between states
- 12 member countries representing a population of 230 million people
- Electricity trading across the SAPP is run out of Harare
- The spine of the SAPP transmission network runs through Zimbabwe giving it the greatest access to other member states
- South Africa's aging coal fired power plants are being retired
  - >10,000 MW of power supply (~20%) will be lost in next few years
  - Expect short-medium term supply gap to be filled by diesel fired power generation (equivalent fuel cost ~US\$27/GJ gas price)
  - Gas to Power has become increasingly important to the regional power needs
- SAPP network provides a virtual pipeline route to monetise gas within and across borders through Gas to Power projects



Source: Southern Africa Power Pool



#### invictusenergy.com

\*Estimates from Australian Energy Market Operator GSSO Report

\*Estimates from Power Africa Natural Gas Roadmap for Southern Africa Report

18

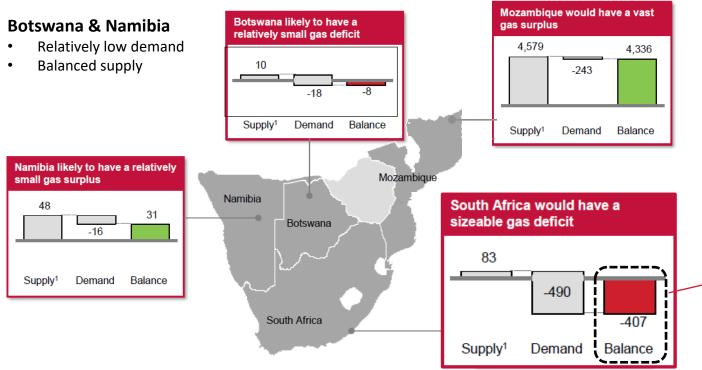
### Regional Supply/Demand Balance – Power Africa Study

Courtesy: USAID SOUTHERN AFRICA ENERGY PROGRAM - POWER AFRICA:

NATURAL GAS ROADMAP FOR SOUTHERN AFRICA - Published June 2018

#### LOCAL GAS SUPPLY AND DEMAND BALANCES

PJ/year, 2030; (balances calculated using total recoverable reserves, assuming "medium" demand scenario)



#### Mozambique sitting on vast gas surplus, however:

- Long distance to market > 2,600km
  - Equivalent to touted West-East Australia pipeline distance
- LNG volumes committed > 2030
- Controlled by large IOCs unwilling to supply gas for domestic/regional use
- Lack of customers along majority of pipeline route
- No regasification infrastructure in South Africa

### South Africa facing a significant gas deficit before 2030 due to lack of supply:

• Low Scenario Supply Deficit\*: 730 mmscf/d (268 PJ/year) (equivalent to Eastern + South East Australia industrial consumption<sup>#</sup>)

• Med Scenario Supply Deficit\*: 1,100 mmscf/d (407 PJ/year) Tequivalent to Western Australia total domestic consumption\*)

• High Scenario Supply Deficit\*: 2,000 mmscf/d (725 PJ/year) (greater than Eastern + South East Australia total domestic consumption<sup>#</sup>)

1 Supply volumes estimated based on high level approach which assumes that remaining reserves are produced over 30 years (typical field life and most of fields are untapped yet), leading to a flat production profile, which is converted into PJ/year

SOURCE: Demand figure derived from bottom-up evaluation (IRP 2016, EIA energy balances, IPP gas-to-power programme, among others); supply volumes derived from WoodMackenzie, complemented with various public sources (e.g. Tlou Energy, South African journal of science)



## South Africa's Gas Supply Crisis

### Pande-Temane: Supplies 85% of South Africa's Gas

#### Decline Commences 2023

### South Africa approaching gas supply cliff edge, industrial users warn

18th September 2019 BY: TERENCE CREAMER

he Industrial Gas Users Association of Southern Africa (IGUA-SA) warned on Wednesday that South Africa is in the midst of a gas supply crunch, which will worsen dramatically from 2025 onwards in line with depleting production from Sasol's Pande and Temane gasfields, in southern Mozambique.

The association includes large industrial companies that collectively consume 50-million gigajoules of a gas yearly, employ 46 000 people and have combined yearly revenues of R150-billion. It is forecasting a yearly shortfall of 98-million gigajoules from 2025 onwards, including Sasol gas demand.

Speaking at an energy event organised by Nedbank and EE Publishers, IGUA-SA executive officer **Jaco Human** said that the pace of the decline might be delayed by a few years as a result of proposed investments by Sasol in Mozambique. Nevertheless, additional sources would still be required not only to replace dwindling Mozambican supply, but also to meet any new industrial demand.

Mining Weekly 18 Sept 2019

### Mossel Bay FA Complex: Supplies 15% of South Africa's Gas



Image: capspire.com

During a presentation to parliament, national oil company Petroleum, Oil and Gas Corporation of South Africa (PetroSA) said it expects its Mossel Bay gas-to-liquid refinery to run out of domestic gas supplies by the end of 2020.

Africa Oil and Power 9 Sept 2019

### South Africa urgently seeking gas as energy transition stalls

South Africa's power sector plans envisage a big role for gas, but first the country needs to find the feedstock

South Africa is on the hunt for gas supply to realise its ambitions to shift its power sector from one based almost entirely on heavily polluting coal to a cleaner set-up relying largely on renewable energy supported by gas.



19

## Domestic and Regional Gas Market Overview

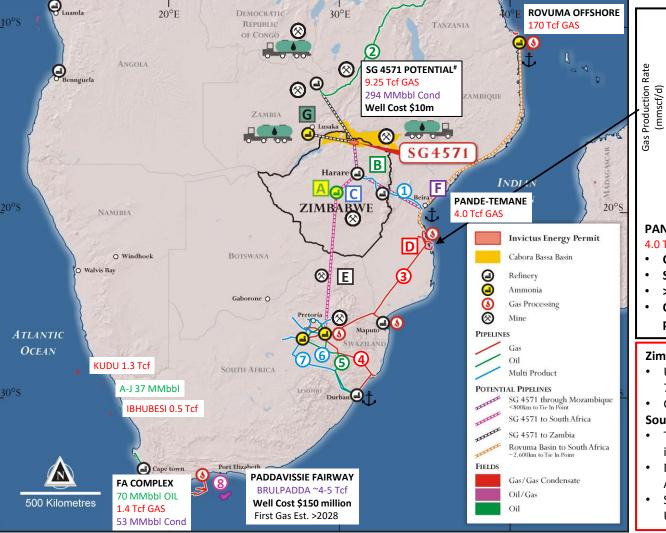
# A

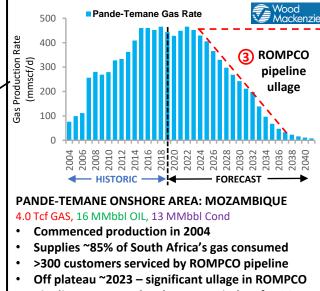


	<u>Customer</u>	<u>Use</u>
A	Sable Chemicals	Fertiliser
В	Gas to Power	Power
С	Industrial Customers	Industrial
D	Export to South Africa (Secunda)	Industrial, Petrochem
Ε	SA Energy & Metallurgical SEZ	Industrial
F	Condensate Export	Petrochemicals
G	Small Scale LNG Trucked	Power, Industrial

#### **OPERATING MAJOR PIPELINES**

	<u>Pipeline</u>	<u>Product</u>	<u>Dia</u>	<u>Capacity</u>	<u>Length</u>	
1	Harare-Beira	Multi	10"	25 mbpd	550km	
2	TAZAMA	Crude	12"	22 mbpd	1,710km	
3	ROMPCO	Gas	26"	475 mmscfd	870km	
4	LILLY	Gas	16"	65 mmscfd	600km	
5	СОР	Crude	18"	127 mbpd	550km	
6	MPP24	Multi	24"	150 mbpd	830km	
$\bigcirc$	DJP	Refined	12" 64 mbpd 57		570km	
8	FA	Gas Cond	18"	250 mmscfd	85km	
Source: Transnet						





PANDE-TEMANE GAS PRODUCTION PROFILE

pipeline opens up development window for SG 4571

Zimbabwe Domestic Market Options: > 120mmscf/d

- Underpinned by Sable Chemicals Gas Sale MOU 70mmscf/d x 20 years: Total 510 Bcf
- Gas to Power plus industrial users

#### South Africa Export Market Options: > 500 mmscf/d

- Twin existing Harare-Beira pipeline route and tie into ROMPCO pipeline 1 43
- New build pipeline through Zimbabwe to South Africa
- South Africa indicative LNG benchmark price of US\$7.53-\$7.95/mmbtu\* \*Estimates from Power Africa



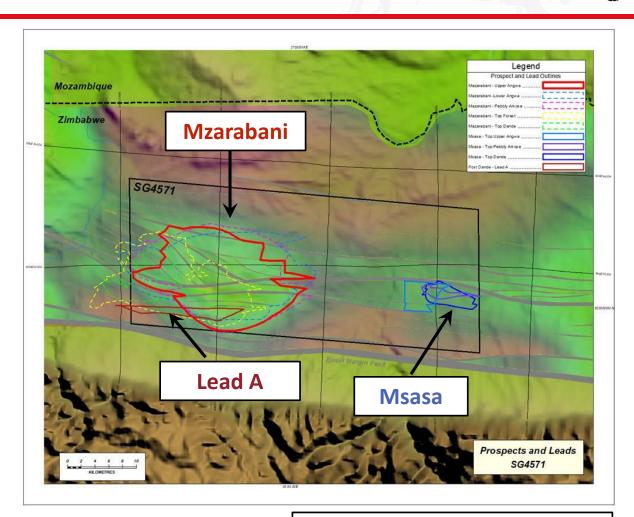
Brulpadda discovery has cost \$200 + \$150 million (original well + side track) to test 4-5 Tcf + condensate Mzarabani will cost \$10 million to test up to 8.2 Tcf + 250 mmbbls condensate



SG 4571 Prospect & Lead Map

## SG 4571 Prospects and Leads Volumetrics

- Mzarabani structural 4 way dip closure
  - Dande: 0.4 Tcf
  - Forest: 1.6 Tcf
  - Pebbly Arkose: 1.4 Tcf + 60 mmbbls
  - Upper Angwa: 4.4 Tcf + 181 mmbbls
  - Lower Angwa: 0.4 Tcf
  - Total: 8.2 Tcf + 247 mmbbls
- Msasa structural 4 way dip closure
  - Pebbly Arkose: 99 Bcf + 4 mmbbls
  - Upper Angwa: 210 Bcf + 9 mmbbls
  - Lower Angwa: 743 Bcf + 31 mmbbls
  - Total: 1.05 Tcf + 44 mmbbls
- Lead A structural 3 way high side fault trap
  - Dande





# Environmental Impact Assessment (EIA)

- EIA field work completed including community consultations and baseline studies
- EIA report being compiled and expected to be completed in November 2019
- Completion and approval of EIA study will fulfil the environmental approvals required for on the ground activity including future exploration drilling
- Feedback received from the community will be used to develop future CSR program
- The local community has provided their full support for the project









22





### Farm In Enquiries

Mike Lakin

deliver@envoi.co.uk



### **Contact Details**

Scott Macmillan info@invictusenergy.com

+61 (8) 6102 5055

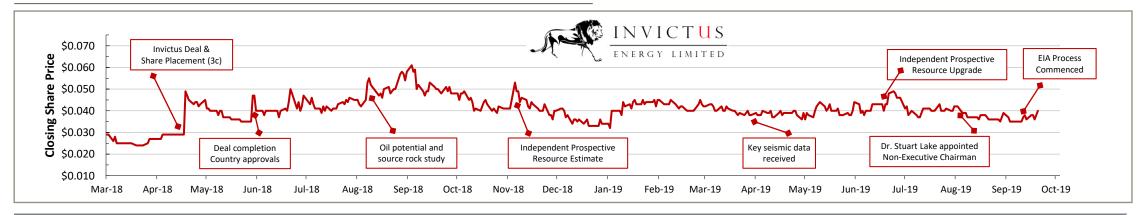
invictusenergy.com

## Company Overview



Key Statistics – ASX: IVZ	
Shares Outstanding	391,501,892
Performance Shares	75,767,103
Options (ex 6c, 9c & 12c)	44,000,000
Directors & Management	24.10%
Top 20 Shareholders (5 September 2019)	43.40%
Market Cap @ \$0.03	A\$11,745,057
Cash – no debt (30 September 2019)	A\$1,450,000
EV	A\$10,295,057
52 Week High / Low	A\$0.073 / 0.026

Performance Share Milestones				
Class B	31.5 M	A farmout which includes a commitment to drill a well to a minimum planned depth of 3,000 meters with respect to the Cabora Bassa Project.	20/06/2020	
Class C	44.2 M	Drilling of an exploration well in the Cabora Bassa Project that results in the maiden booking of Contingent Resources or Reserves (as those terms are defined in the Guidelines for Application of the Petroleum Resources Management System (2011 Edition).	20/12/2021	



Positioned with strong register, significant director and management ownership with performance shares linked to milestones that will enhance the value of the company and share price



## Directors and Management

#### Dr. Stuart Lake – Non-Executive Chairman

Dr Lake has over 34 years of global experience in the Petroleum industry and significant expertise, having operated assets in 20 countries worldwide, including in over ten African countries. He brings a combination of in-depth technical knowledge and a world class track record as an oil and gas finder, having led many teams in maintaining a 90% exploration success rate (from over 300 wells in 11 countries including deep-water and new plays) throughout his career. Dr Lake has held a wide variety of roles in international Oil and Gas companies including President and CEO for Castle Petroleum, As former CEO of AGM Petroleum, the operator of the offshore South Deepwater Tano Block in Ghana, he lead the company to a recently reported new oil discovery in July 2019 from the exploration drill campaign. He remains a Senior Advisor to Aker Energy, that recently acquired Hess Ghana assets, in which Dr Lake and his team at Hess Corporation had made 7 consecutive deepwater discoveries. He was also the former CEO of African Petroleum Corporation Ltd, where he successfully concluded a number of farmouts and commercial deals for their West African portfolio in a challenging market and successfully listed the company on the Oslo Bors in Norway. He is also former Vice President of Exploration in the Hess Corporation, leading highly successful Exploration campaigns, including Ghana, Libya and 30 onshore discoveries in Russia.

#### Scott Macmillan – Managing Director

Mr. Macmillan is a Reservoir Engineer and founder of Invictus Energy. He is a member of the Society of Petroleum Engineers (SPE) and has over 12 years experience in exploration, field development planning, reserves and resources assessment, reservoir simulation, commercial valuations and business development. He worked for Woodside Energy as a Senior Reservoir Engineer on large offshore oil and gas field developments and as Business Advisor in the Global New Ventures team focused on Africa exploration. He was the Senior Reservoir Engineer for AWE Ltd working on the Waitsia Gas Field which is the largest onshore gas discovery in Australia in the last 40 years. He has extensive business experience in Zimbabwe.

#### **Brent Barber – Country Manager**

Mr. Barber is an exploration geologist with over 40 years applied experience. He is the Technical Director of Invictus Energy Resources and Managing Director of Geological Organisation Logistics and Design (GOLD). He has been involved in the exploration and evaluation of mineral prospects and mining venture throughout Africa and in South America and SE Asia. When employed by Mobil Exploration he headed the hydrocarbon exploration undertaken along the Zambezi Valley in both Zambia and Zimbabwe. Mr. Barber is based in Harare and currently focuses on the acquisition, assessment and design and management of exploration prospects.

#### **Barnaby Egerton-Warburton – Non-Executive Director**

Mr. Egerton-Warburton holds a Bachelor of Economics and is a graduate of the Australian Institute of Company Directors and a member of the American Association of Petroleum Geologists. Mr. Egerton-Warburton is currently Managing Director of Eneabba Gas Limited (ASX: ENB) and Non-Executive Director of iSignthis Limited (ASX: ISX). Mr. Egerton-Warburton has over 20 years investment banking experience with a focus on the energy sector.

#### Eric de Mori – Non-Executive Director

Mr. de Mori has over 15 years investment banking experience in ASX listed companies spanning natural resources, biotechnology and technology. Mr. de Mori has held several major shareholder positions with ASX listed companies and is currently a Director and co-founder of ASX listed Adriatic Metals Ltd. (ASX: ADT).

#### Gabriel Chiappini – Non-Executive Director and Company Secretary

Mr. Chiappini is an experienced ASX director and has been active in the capital markets for 17 years. He has assisted in raising \$AUD450m and has provided investment and divestment guidance to a number of companies and has been involved with 10 ASX IPO's in the last 12 years. He is a member of the AICD and CA ANZ. Mr. Chiappini is a director of Black Rock Mining, (ASX: BKT) Eneabba Gas Limited (ASX: ENB)



## Independent Prospective Resource Estimate

### **Elephant scale potential**

Total Prospective Resource of **9.25 Tcf + 294 million barrels**<sup>#</sup> **of conventional gas / condensate** (gross mean unrisked) across SG 4571 in Mzarabani and Msasa prospects

SG 4571		Gross Unrisked Estimated Prospective Resources <sup>#</sup>							
		Source: Getech Group plc as at 26 June 2019							
Cabora Bassa Project		Gas (Bcf) – 100% Gross			Condensate (mmbbl) – 100% Gross				
Prospect	Stratigraphic Level	Low	Best	High	Mean	Low	Best	High	Mean
	Dande	51	230	950	411	-	-	-	-
	Forest	301	1,215	3,359	1,584	-	-	-	-
Mzarabani	Pebbly Arkose	271	1,037	2,973	1,404	7	38	136	60
IVIZALADATI	Upper Angwa	721	2,902	9,657	4,414	18	107	434	187
	Lower Angwa	95	317	775	391	0	2	6	3
	Total*	1,439	5,701	17,714	8,204	26	147	576	249
Msasa	Pebbly Arkose	49	93	156	99	1	4	8	4
	Upper Angwa	107	198	327	210	2	8	17	9
	Lower Angwa	71	351	1,738	743	2	13	74	31
	Total*	228	642	2,221	1,052	5	24	99	44
SG 4571 Licence	Total* Gross (100%)	1,666	6,343	19,935	9,256	31	171	676	294
SG 4571 Licence	Total* Net IVZ (80%)	1,333	5,074	15,948	7,405	25	137	541	235

• Independently verified by Getech Group plc from 12 month study on SG 4571

Table 1: SG4571 Licence Area Prospective Resource Estimate Summary - Getech Group plc. (\*Note: Total figures are the arithmetic sum of the individual horizons for each respective prospect)

**\*Cautionary Statement:** The estimated quantities of petroleum that may be potentially recovered by the application of a future development project relate to undiscovered accumulations. These estimates have both an associated risk of discovery and a risk of development. Further exploration, appraisal and evaluation are required to determine the existence of a significant quantity of potentially movable hydrocarbons. Prospective Resource assessments in this release were estimated using probabilistic methods in accordance with SPE-PRMS standards.

