

AFRICA ENERGY CORP

# Exploration and Development in South Africa

May 2023

A LUNDIN GROUP COMPANY



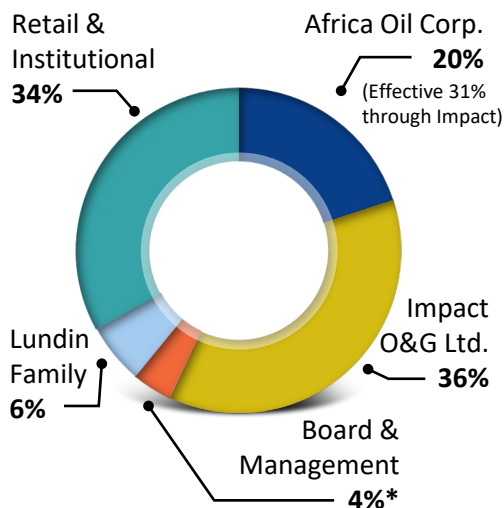
*The Odfjell Deepsea Stavanger rig drilled the Brulpadda-1AX discovery in February 2019 and the Luiperd-1X discovery in October 2020 on Block 11B/12B offshore South Africa.*

# Corporate Profile



- Independent oil and gas exploration company
- Two large gas condensate discoveries on Block 11B/12B offshore South Africa
- Nearby gas infrastructure and demand in Mossel Bay
- Planning gas condensate development with TotalEnergies

## Share Ownership



\* Includes shares held by Ashley Heppenstall and other advisors to the Board of Directors.

## Corporate Snapshot

<b>AFE/AEC</b>	TSX-V/First North Ticker
<b>C\$0.14</b> <b>SEK 1.02</b>	Share Price at May 16, 2023
<b>1,408<sup>(1)</sup></b>	Common Shares (million)
<b>93.0</b>	Stock Options (million)
<b>\$145</b>	Market Cap (US\$ million)
<b>\$5</b>	Debt at Mar. 31, 2023 (US\$ million)
<b>\$2.7</b>	Cash at Mar. 31, 2023 (US\$ million)
<b>8</b>	Number of Employees

(1) Pending transaction with Arostyle may increase shares outstanding by 64.5 million.

## Asset Footprint



## Equity Research

<b>Arctic Securities</b>	Oslo	Daniel Stenslet
<b>Carnegie Securities</b>	Oslo	Oddvar Bjørgan
<b>Fearnley Securities</b>	Oslo	Sander Solheim Nilsen
<b>Pareto Securities</b>	Oslo	Tom Erik Kristiansen
<b>SpareBank 1 Markets</b>	Oslo	Teodor Sveen-Nilsen



# South Africa

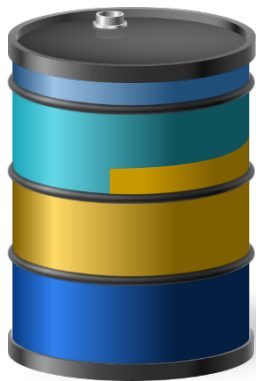
## Attractive Location and Fiscal Terms

### Active Players



### Fiscal Terms

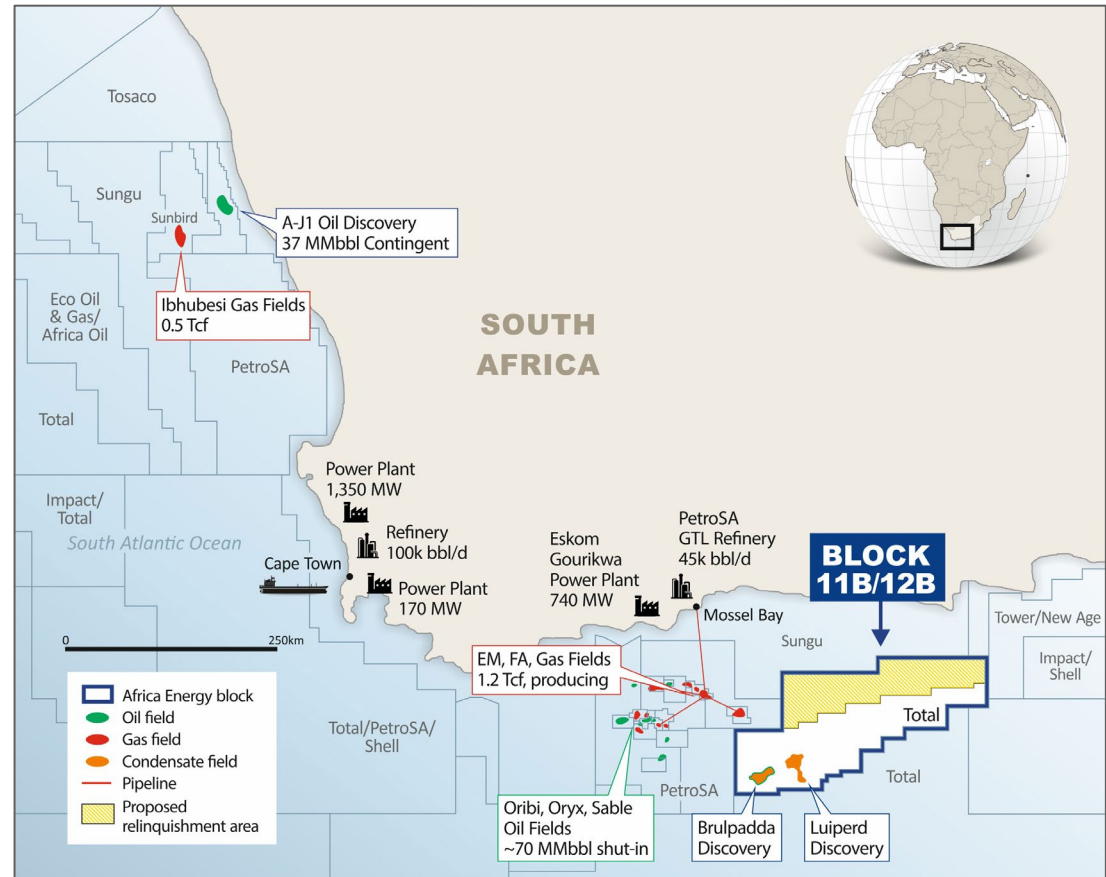
State Take < 30%



- **Royalty: 0.5-5%**
- **Income Tax: 27%**
- Tax benefit from cost uplift
- **After Tax Profit**
- **Tax Deductible Costs:**  
Including cost uplift,  
200% of exploration and appraisal,  
150% of capex and 100% of opex

### State and Black Economic Empowerment (BEE) Participation:

- 10% State back-in rights / 10% BEE participation rights<sup>(1)</sup>



## Existing discoveries and nearby infrastructure

(1) Draft Upstream Petroleum Resources Development Bill proposes an increase in State Participation from 10% to 20%.

# Block 11B/12B

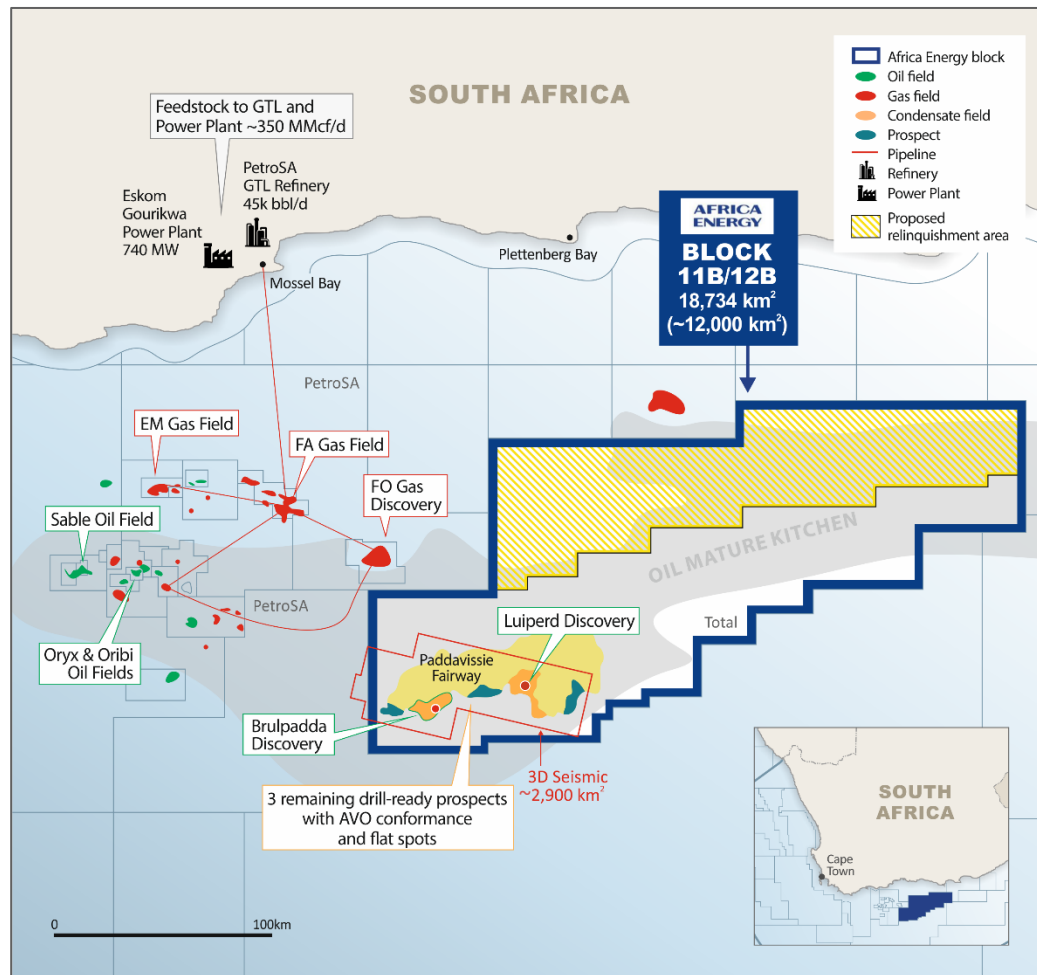
## Large Discoveries with De-Risked Upside

- Two major gas condensate discoveries
- Massive acreage position with significant upside
- Production Right application submitted
- Negotiating gas offtake terms

Asset Summary	
AEC effective interest	4.9% <sup>(1)</sup>
Partners	TotalEnergies (operator with 45%), QatarEnergy (25%), Canadian Natural Resources (20%)
Basin	Outeniqua Basin
Discovery wells	Brulpadda-1AX / Luiperd-1X + DST
Water depth	1,432 m / 1,767 m
Resources	> 1 Bboe <sup>(2)</sup>
Play type	Submarine fan
Current program	Production Right application and gas commercialization

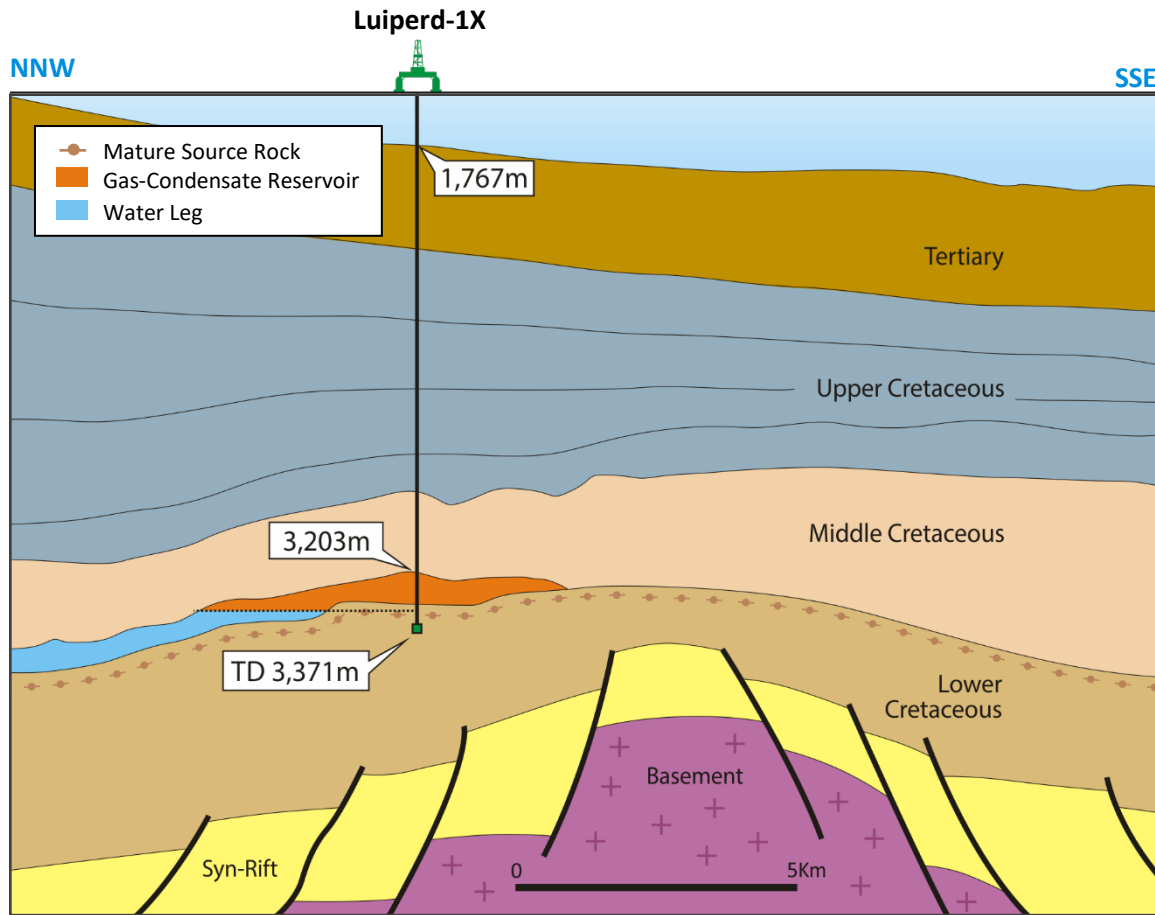
(1) The Company has signed definitive agreements that, subject to approvals and completion, will increase the effective interest in Block 11B/12B to 10%.

(2) Resource numbers obtained from third-party public disclosure and have not been subject to independent audit by the Company.



# Block 11B/12B

## Luiperd Gas Condensate Discovery



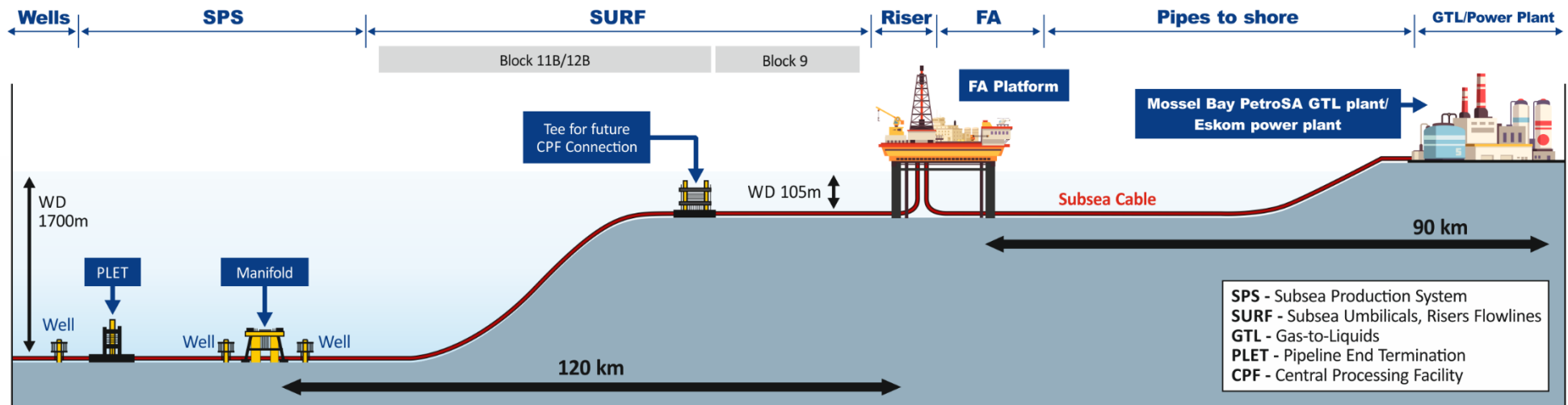
### Paddavissie Objective

- 73 meters net gas condensate pay
- Gas down to bottom of reservoir
- Possible oil rim down-dip
- Significantly de-risks remaining three Paddavissie Prospects
- Drill stem test (DST) flowed 33 MMcfpd natural gas and 4,320 bpd condensate on 58/64" choke
- Reservoir connectivity better than expected
- Absolute open flow (AOF) potential expected to be significantly higher than restricted DST flow rate
- Positive DST results improve development scenario

# Block 11B/12B Proposed Fast-Track Development

Planning Luiperd Early Production System (EPS) with existing nearby infrastructure

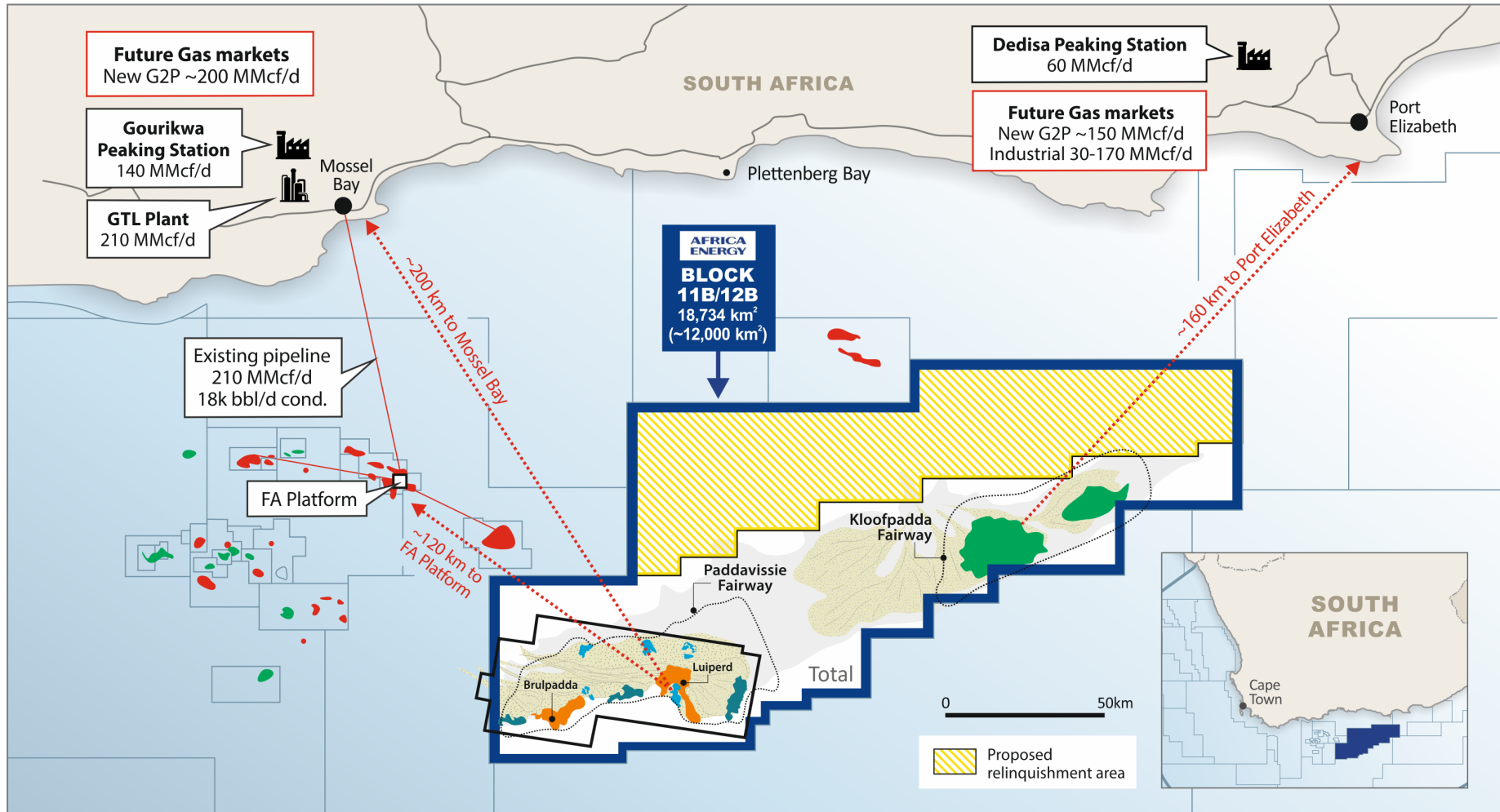
- Production Right (PR) application submitted in September 2022
- PR approval expected 12-18 months after submission (Q1 2024)
- Negotiating gas offtake terms during PR application process
- Final Investment Decision (FID) expected after PR approval
- First production expected 24-36 months after FID



Note: Company estimates.

# Block 11B/12B

## Potential Domestic Gas Market



Full field development expected as domestic gas market expands

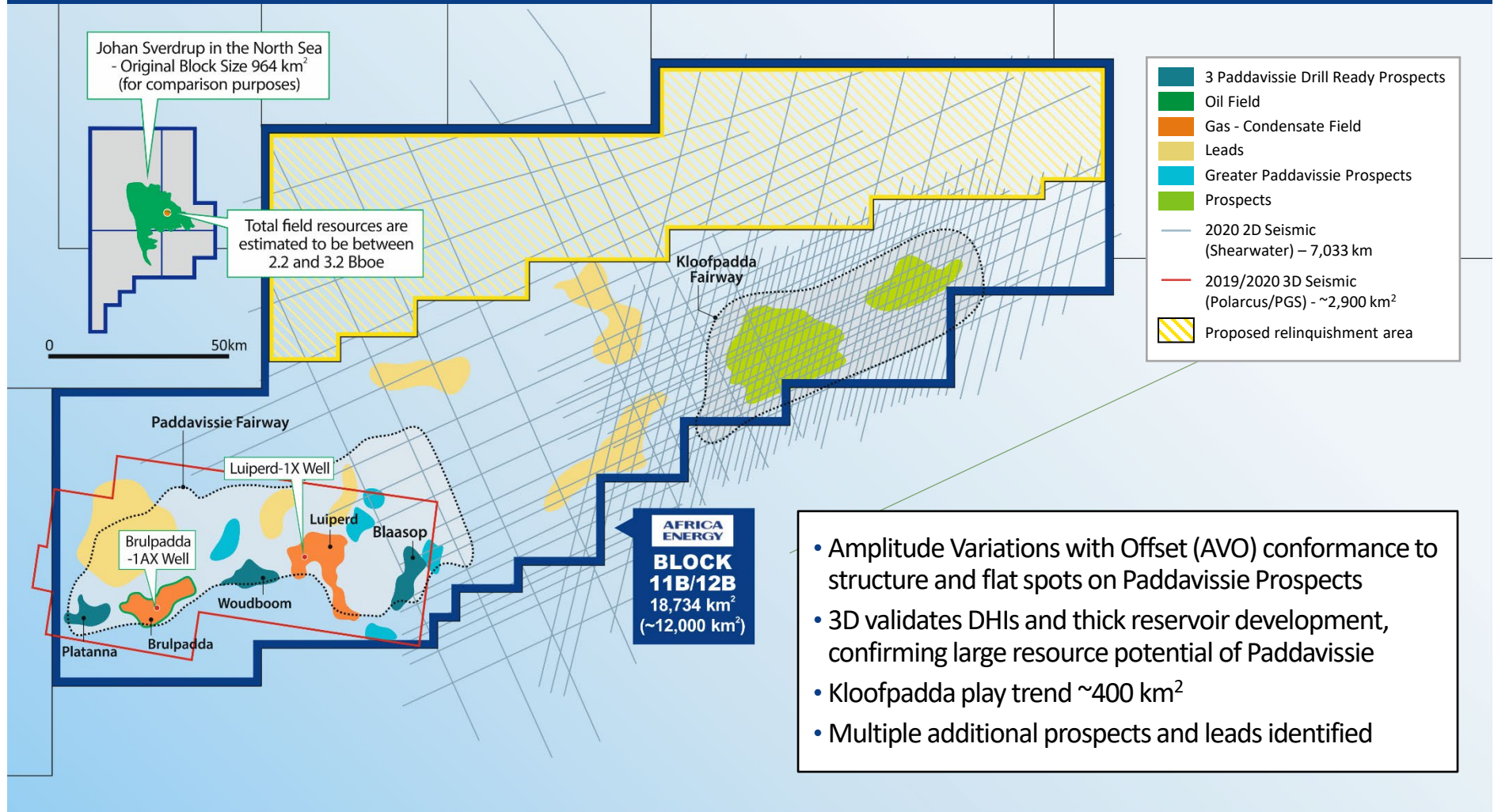
Note: Future gas market potential includes Company estimates.



# Block 11B/12B

## Huge Block with Running Room

### Block 11B/12B Prospect Map

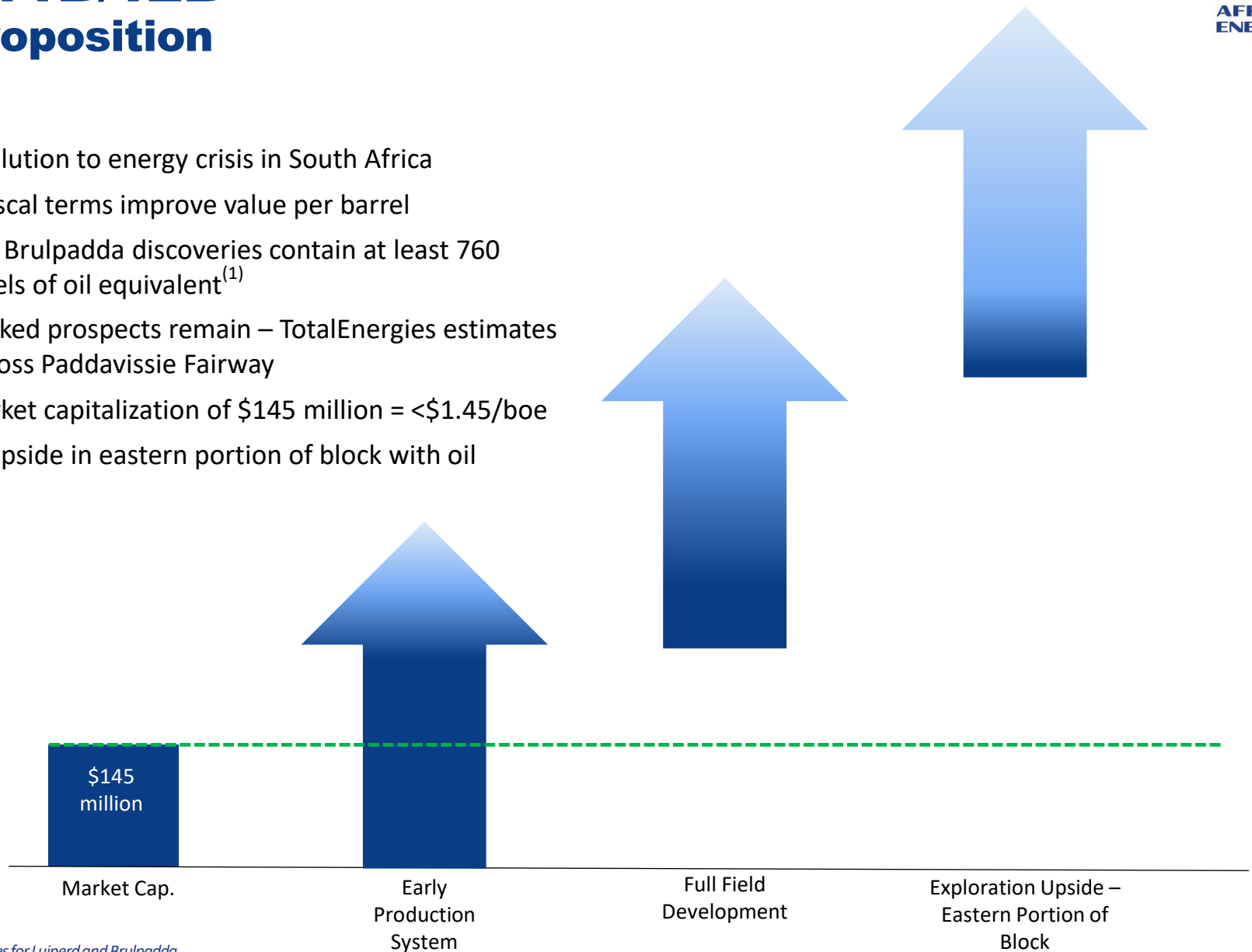




# Block 11B/12B Value Proposition



- Domestic solution to energy crisis in South Africa
- Attractive fiscal terms improve value per barrel
- Luiperd and Brulpadda discoveries contain at least 760 million barrels of oil equivalent<sup>(1)</sup>
- Three de-risked prospects remain – TotalEnergies estimates >1 Bboe across Paddavissie Fairway
- Current market capitalization of \$145 million = <\$1.45/boe
- Significant upside in eastern portion of block with oil potential



(1) PASA disclosure of resources for Luiperd and Brulpadda.

# Summary

## World-Class Assets

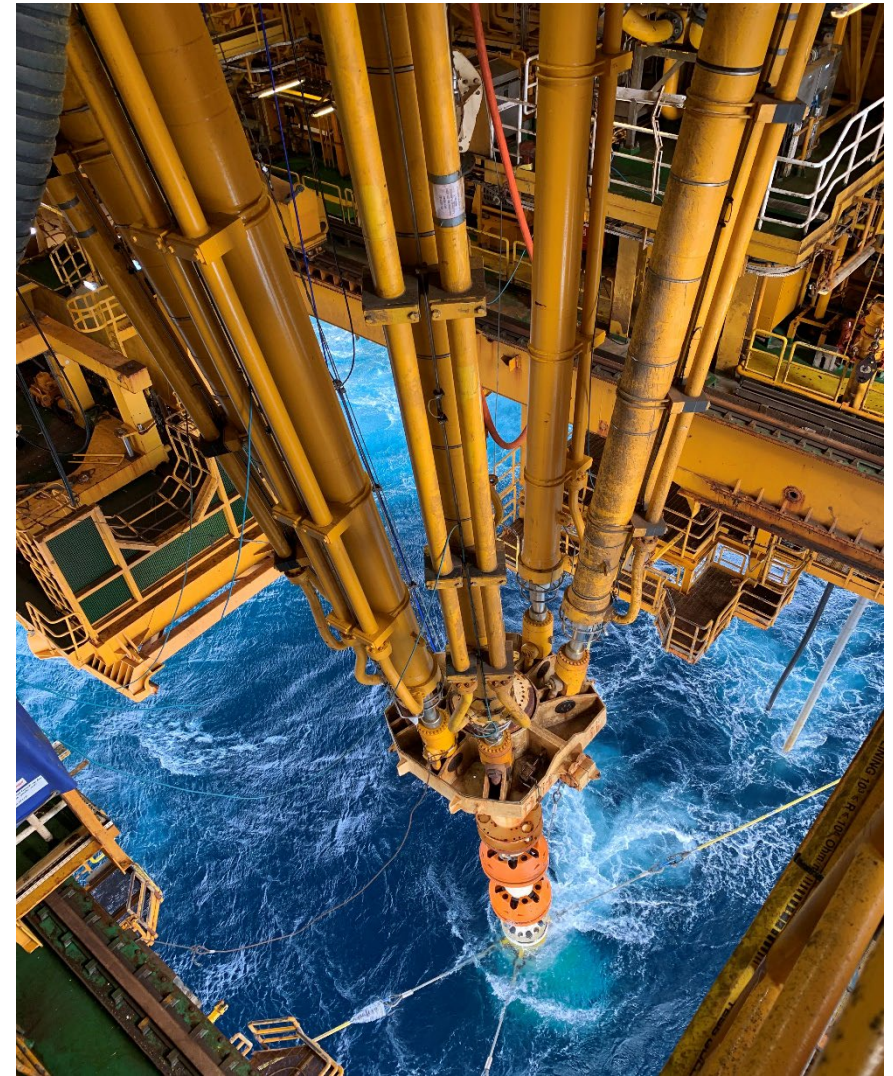
- Offshore gas condensate development with TotalEnergies
- Discovered resources, de-risked prospects and significant exploration upside

## Strong Fundamentals

- Nearby infrastructure with existing pipelines to shore
- Gas demand in Mossel Bay with existing gas-to-liquids refinery and power plant

## Solid Backing

- Supportive shareholders from Impact Oil & Gas, Africa Oil and the Lundin family



*The Odjfell Deepsea Stavanger rig on Block 11B/12B offshore South Africa.*

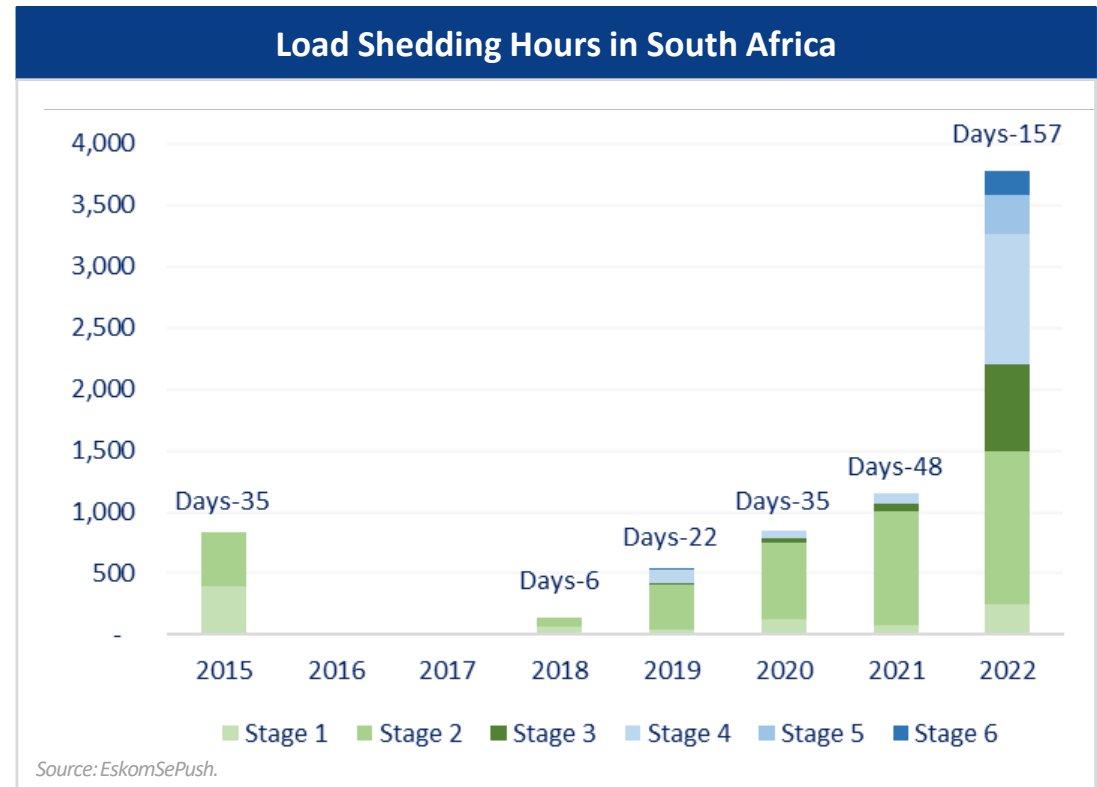
# Appendix



# South Africa Energy Crisis

*On February 9, 2023, South African President Ramaphosa declared a national "state of disaster" due to crippling power shortages.*

- Economic cost of load shedding was \$1.3 billion in 2022
- At least 250 days of load shedding expected in 2023
- Load shedding expected to wipe 2% off economic growth in 2023
- Gas seen as transitional fuel towards net-zero carbon emissions



# South Africa Energy Crisis Solution

Technology	Capital cost	LCOE <sup>1</sup>	Build time	Build	Own	Operate	CO <sub>2</sub> Emissions
 Gas	925-1300 \$/kW	7.1 – 10 US\$/kWh for SA @US\$7/mmBTU <sup>2</sup> LNG spot @ ~US\$57	24-60 months	✓	✓	✓	0.32-0.52 Mt/MWh
 BES	1947 <sup>3</sup> \$/kW	25.23 US\$ c/kWh	12-24 months	✓	✓	✓	None
 Hydro PS	1727 <sup>4</sup> \$/kW	14.35 <sup>4</sup> US\$ c/kWh	8+ years	✓	✓	✓	None
 Nuclear	12 800 \$/kW	20,4 US\$ c/kWh	12-15 years	✗	✗	✓	None
 New coal	6 225 \$/kW	15,2 US\$ c/kWh	10-12 years	✗	✗	✗	0.83-1.14 Mt/MWh

Viability ↑

1. Capital cost includes EPC cost, capital cost during construction, LCOE – levelized cost of energy; 2. CCGT – peaking is higher at 19.6c/kWh; 3. Calculated from JT35 energy cost assumptions for 100MW 4 hour plants 4. Calculated using JT35 energy modelling assumptions as a base; Higher limits of various sources illustrated where appropriate; Costs converted using R16/USD where appropriate Source: Lazard 2021 costs; Eskom Journey to 2035 assumptions

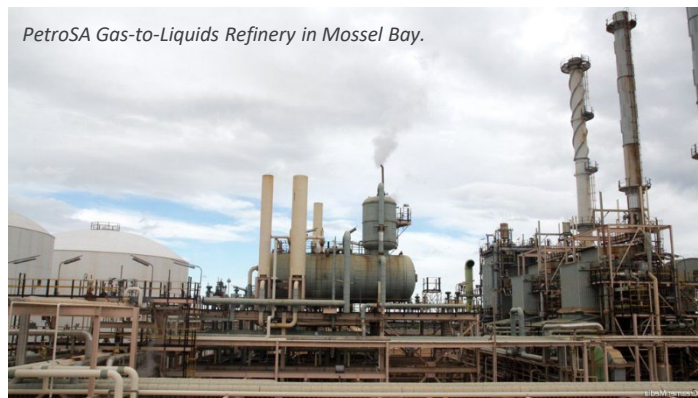
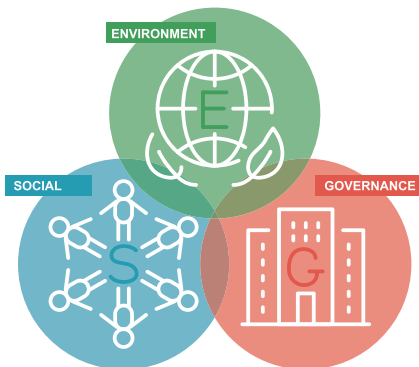
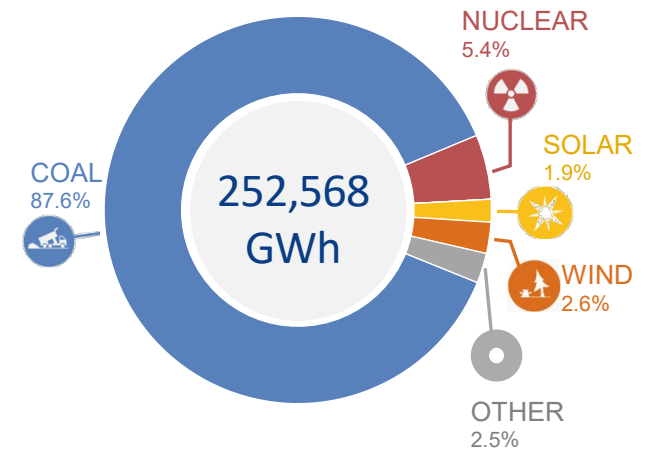
Eskom: Gas is the optimal solution from a technical, economic and environmental perspective

# Block 11B/12B

## Key to the Energy Transition

- South Africa is a carbon-intensive economy and contributes approximately 1% of annual global greenhouse gas (GHG) emissions
- Eskom currently relies on coal-fired power stations to produce approximately 90% of its electricity
  - infrastructure insufficient to meet demand, rolling blackouts
- Block 11B/12B gas could replace more than 2,300 MW of diesel-fired electricity generation (Gourikwa, Dedisa and Ankerlig)
  - reducing plant carbon emissions more than 50% while also eliminating sulphur oxide and nitrogen oxide emissions
- Restarting the gas-to-liquids (GTL) refinery in Mossel Bay with feedstock from Block 11B/12B could save approximately 1,200 direct jobs

### South Africa Power Generation Mix



Sources: Eskom, IEA 2019 data (pie chart) and "South Africa's road to net zero emissions will be via gas," by Dr. Masangane, CEO of the Petroleum Agency of South Africa (PASA).

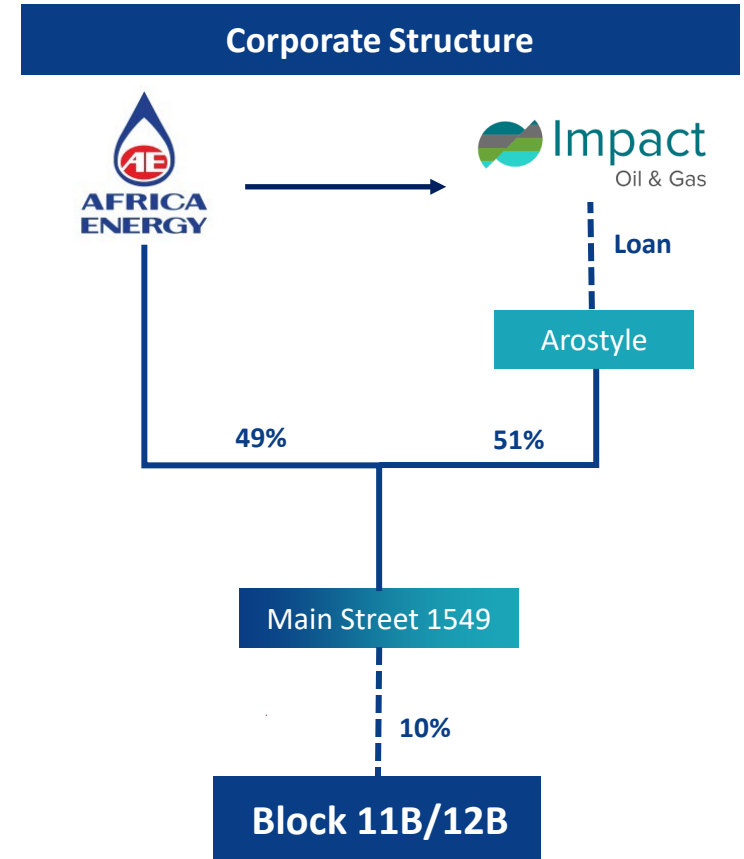


# Block 11B/12B

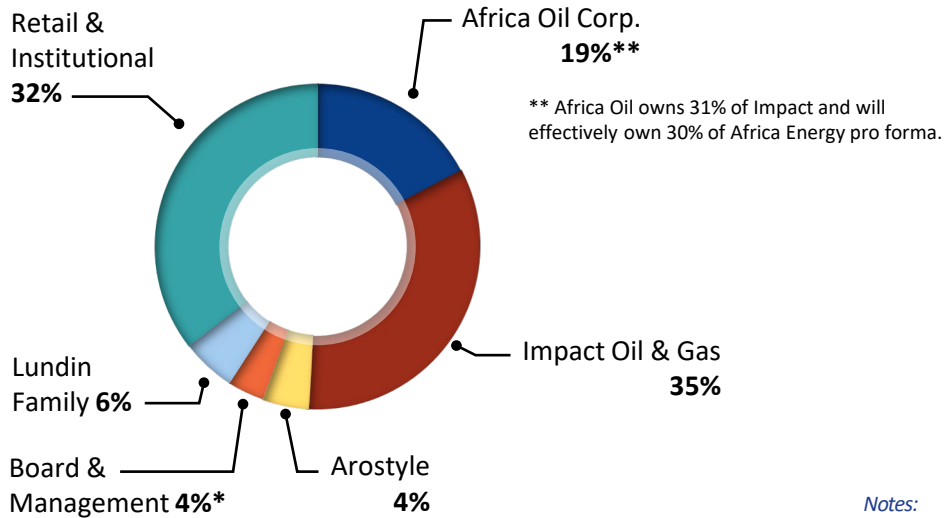
## Transactions More Than Double Effective Interest

1. Impact Transaction – Acquisition of Impact’s financial interest in Block 11B/12B for 509.1 million shares completed in November 2020
2. Arostyle Transaction – Mutual put/call option to transfer Main Street’s 10% interest in Block 11B/12B to Africa Energy and issue 64.5 million shares

At completion, Africa Energy will hold a direct 10% interest in Block 11B/12B



### Pro Forma Share Ownership



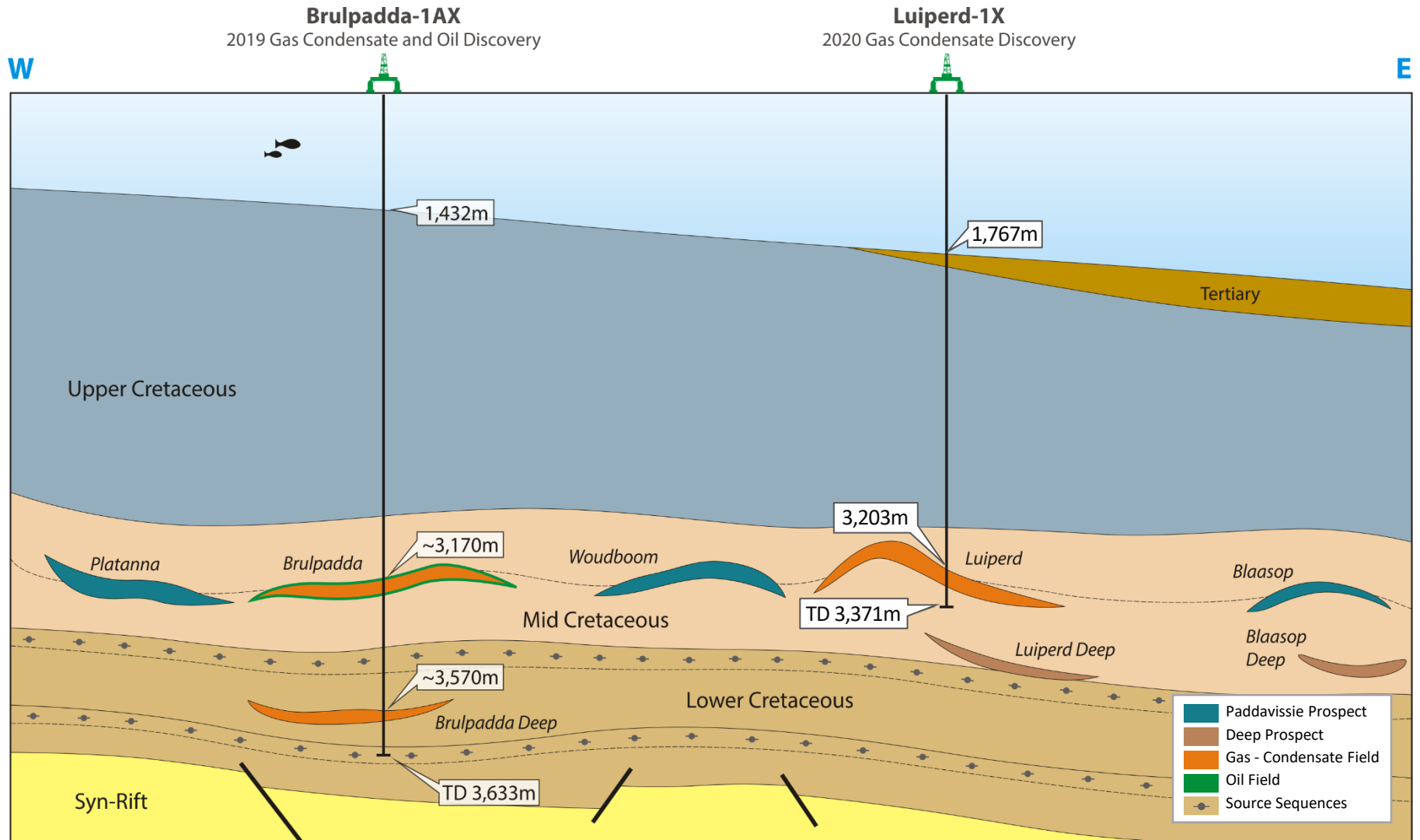
\* Includes shares held directly and indirectly by Ashley Heppenstall, an advisor to the Board of Directors.

**Notes:**

- (1) Impact Transaction closed October 22, 2020, and shares were issued on November 12, 2020.
- (2) Arostyle Transaction is subject to South African government approval and Block 11B/12B partner consents and waivers.
- (3) Corporate structure chart is simplified for illustrative purposes.

# South Africa Block 11B/12B

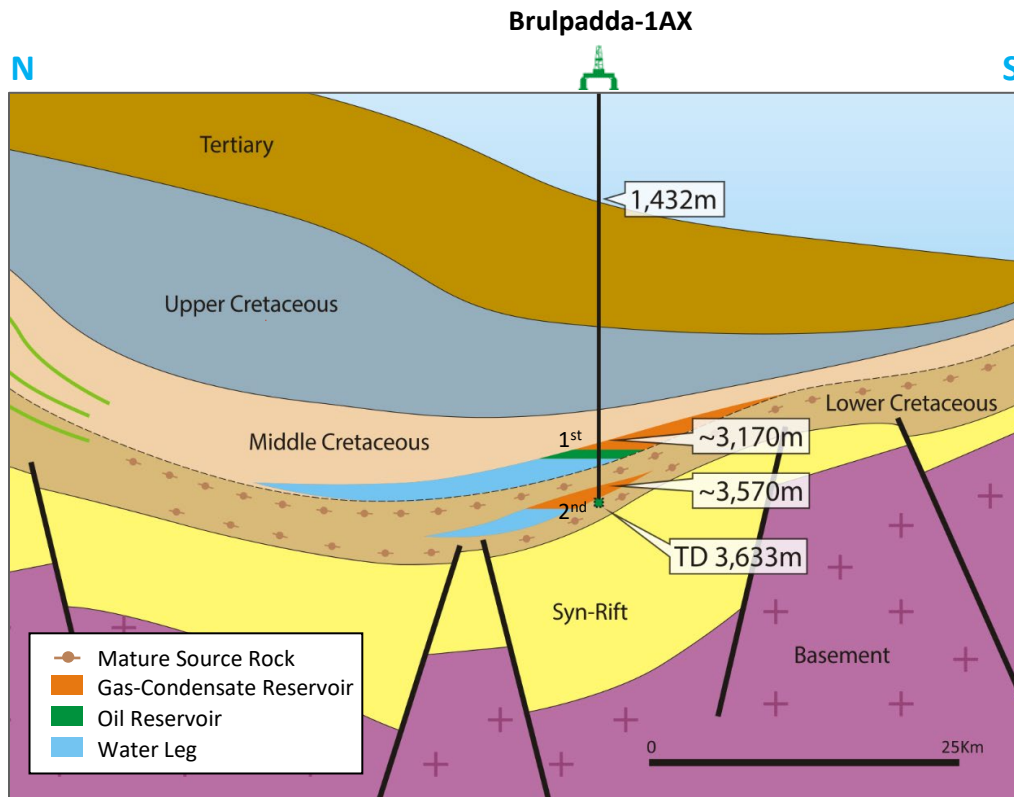
## Paddavissie Fairway



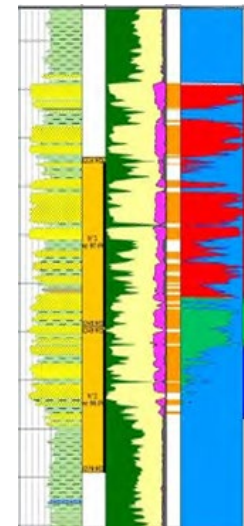
Not to scale

# South Africa Block 11B/12B

## Brulpadda Gas Condensate and Oil Discovery

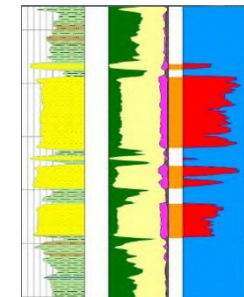


### Paddavissie Objective (Primary)



- 34 meters net gas condensate pay plus oil pay
- High productivity anticipated given high net-to-gross and good quality of reservoirs
- Significantly de-risks remaining three Paddavissie Prospects

### Deep Objective (Secondary)



- 23 meters net gas condensate pay
- High productivity anticipated given high net-to-gross and good quality of reservoirs
- De-risks other prospects and leads
- No oil-water contact encountered

*"...Total has opened a new world-class gas and oil play and is well positioned to test several follow-on prospects on the same block."*

*– Total press release, February 7, 2019.*



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## Uncertainty Ranges for Resources

Estimates of resource volumes can be categorized according to the range of uncertainty associated with the estimates. Uncertainty ranges are described in the COGE Handbook as low, best and high estimates as follows:

A "low estimate" (1C) is considered to be a conservative estimate of the quantity that will actually be recovered. It is likely that the actual remaining quantities recovered will exceed the low estimate. If probabilistic methods are used, there should be at least a 90% probability (P90) that the quantities actually recovered will equal or exceed the low estimate.

A "best estimate" (2C) is considered to be the best estimate of the quantity that will actually be recovered. It is equally likely that the actual remaining quantities recovered will be greater or less than the best estimate. If probabilistic methods are used, there should be at least a 50% probability (P50) that the quantities actually recovered will equal or exceed the best estimate.

A "high estimate" (3C) is considered to be an optimistic estimate of the quantity that will actually be recovered. It is unlikely that the actual remaining quantities recovered will exceed the high estimate. If probabilistic methods are used, there should be at least a 10% probability (P10) that the quantities actually recovered will equal or exceed the high estimate.

# Thank You

## CONTACT DETAILS

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