



**KINETIKO**  
ENERGY LTD

ASX : KKO

[www.kinetiko.com.au](http://www.kinetiko.com.au)

November 2018

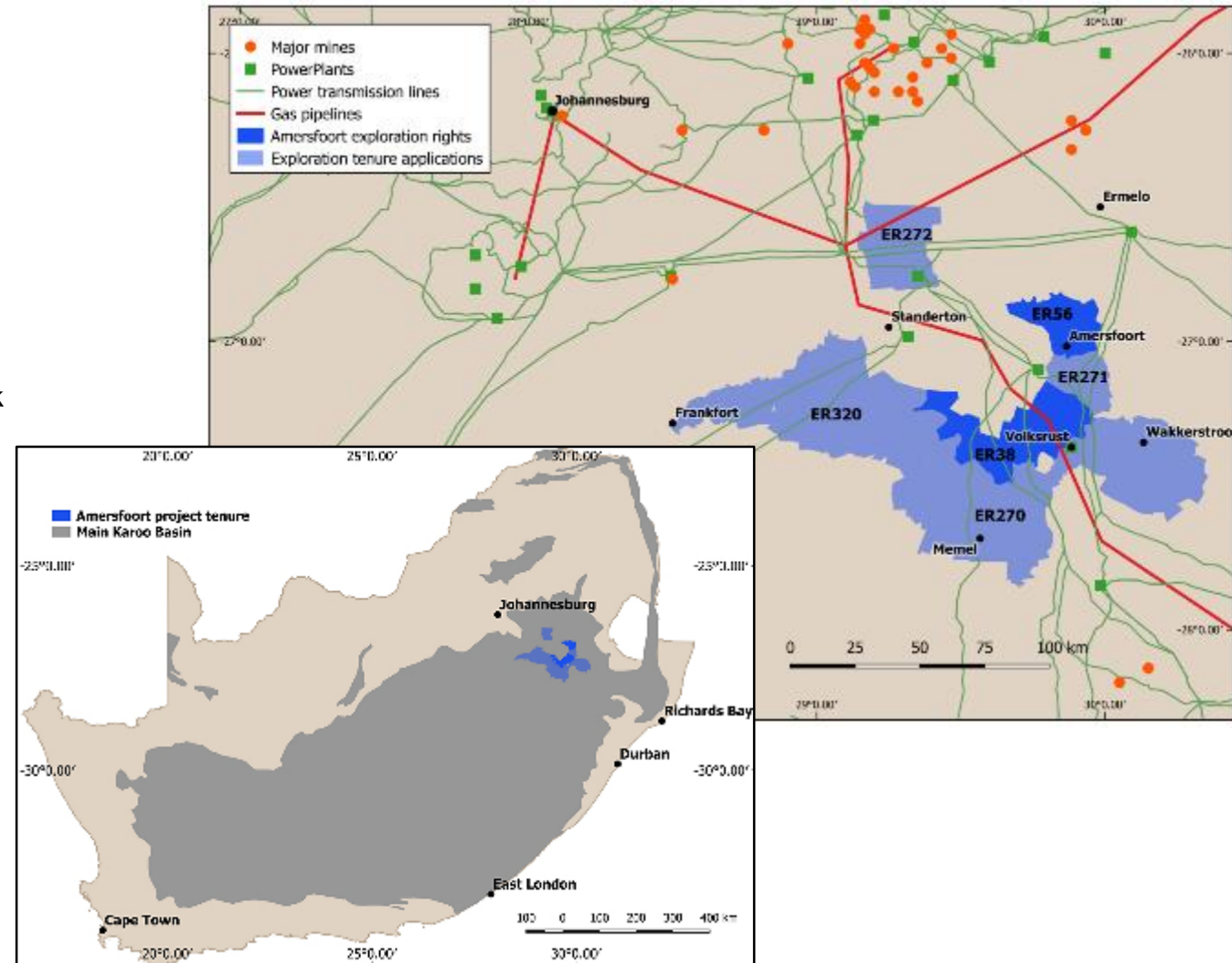


**UNLOCKING CLEAN ENERGY**  
**SOUTH AFRICAN ONSHORE GAS**

# South African onshore gas project

## Amersfoort Gas Project - Strategic strengths

- Project location is 200km south east of Johannesburg
- 1,486km<sup>2</sup> Government granted Exploration Rights – Amersfoort Project
- 6,682km<sup>2</sup> Exploration tenure under application
- Large scale potential ~ 8,168km<sup>2</sup> with consistent geology
- Existing infrastructure – gas pipeline, power station and electricity network
- Major domestic gas sector partners available
- Low costs production from shallow wells
- High purity gas 99.5%
- Gas Initially In Place (GIIP) 1.5 Tcf (Trillion cubic feet) Tcf 2C resource
- Gas potential - Coal Bed Methane (CBM) and conventional sandstone
- No hydraulic fracturing required



# Corporate

## Structure

| Capital structure                        | Existing           | Full Subscription* |
|--|--------------------|--------------------|
| Existing Shares                          | 284,958,168        | 284,958,168        |
| Shares under the Offer                   | -                  | 71,239,542         |
| <b>Total Shares</b>                      | <b>254,612,064</b> | <b>356,197,710</b> |
| Conversion of Director loan <sup>1</sup> | -                  | 13,114,898         |
| Conversion of Directors' amounts owed    | -                  | 37,228,701         |
| <b>Fully diluted share capital</b>       | <b>307,697,344</b> | <b>406,541,309</b> |

\*Assumes full rights issue announced 6 Nov 2018

| Use of funds from rights issue                  | Amount             |
|---|--------------------|
| Expenses of the Offer (excluding GST)           | \$70,000           |
| Exploration of the Company's Amersfoort project | \$350,000          |
| Working capital                                 | \$304,791          |
| Payment of creditors (majority to CEO)          | \$700,000          |
| <b>Total</b>                                    | <b>\$1,424,791</b> |

## Directors & Management

|                             |                        |
|-----------------------------|------------------------|
| Adam Sierakowski            | Non Executive Chairman |
| Dr. D. James Searle         | Non Executive Director |
| Agapitos M. (Geoff) Michael | Non Executive Director |
| Johan Visagie               | CEO                    |

## Developing Amersfoort Project

- KKO currently undertaking a \$1.42m rights issues @ \$0.02/share as part of the company's bid to be reinstated to trade and continue exploration and testing
- Activities at Amersfoort are carried out through Afro Energy Ltd, owned by KKO (49%) and its South African BEE shareholder Badimo Gas Ltd (51%)
- Current moratorium on granting / applying for Exploration Rights emphasises the strategic importance of KKO's tenure
- Major BEE compliant South African institutions continue to work with KKO to expedite the Amersfoort project development
- KKO intends to continue exploration regardless of impasse with Badimo Gas and work with other South African stakeholders and regulators to advance Amersfoort to the next stage of commercialisation
- Over the next 12 months, KKO working to attain:"
  - First Reserves
  - First production
  - First revenues





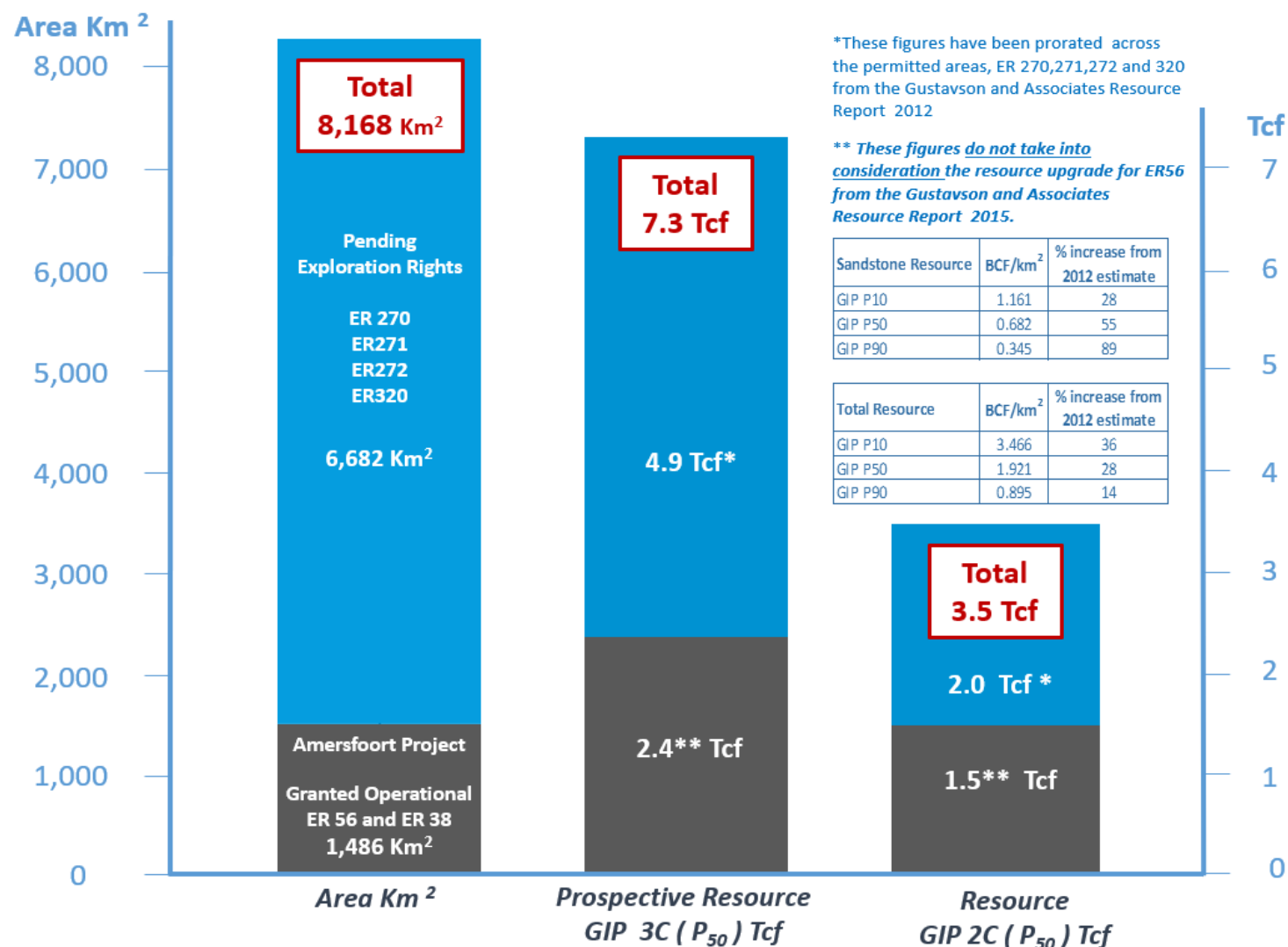
# Amersfoort – Independent Certified Resources

- P50 Contingent Resource of 1.5 Tcf\*
- Gas Initially In Place (GIIP) 2.4 Tcf\*
- Significant resource potential within conventional sandstone reservoirs adjacent to the coals
- Recent flow rate testing equipment (comprehensive review underway) shows:
  - 95% recovery of gas from produced groundwater, a significant increase on previously used equipment; and
  - 99.5% methane content, an improvement of 1%, which suggest that gas treatment could be eliminated.

| Contingent Resource (100% Gross) | 1C (Bcf)     | 2C (Bcf)       | 3C (Bcf)       |
|----------------------------------|--------------|----------------|----------------|
| CBM                              | 627.5        | 1,110.2        | 1,726.7        |
| Gas in Sandstone                 | 150.7        | 372.5          | 791.0          |
| <b>Total</b>                     | <b>778.1</b> | <b>1,482.7</b> | <b>2,517.7</b> |

| Gas in Place (100% Gross) | 1C (Bcf)       | 2C (Bcf)       | 3C (Bcf)       |
|---------------------------|----------------|----------------|----------------|
| CBM                       | 967.1          | 1,689.4        | 2,616.7        |
| Gas in Sandstone          | 292.6          | 706.3          | 1,450.6        |
| <b>Total</b>              | <b>1,259.7</b> | <b>2,395.8</b> | <b>4,067.3</b> |

\* Completed by Gustavson Associates of Boulder, Colorado USA

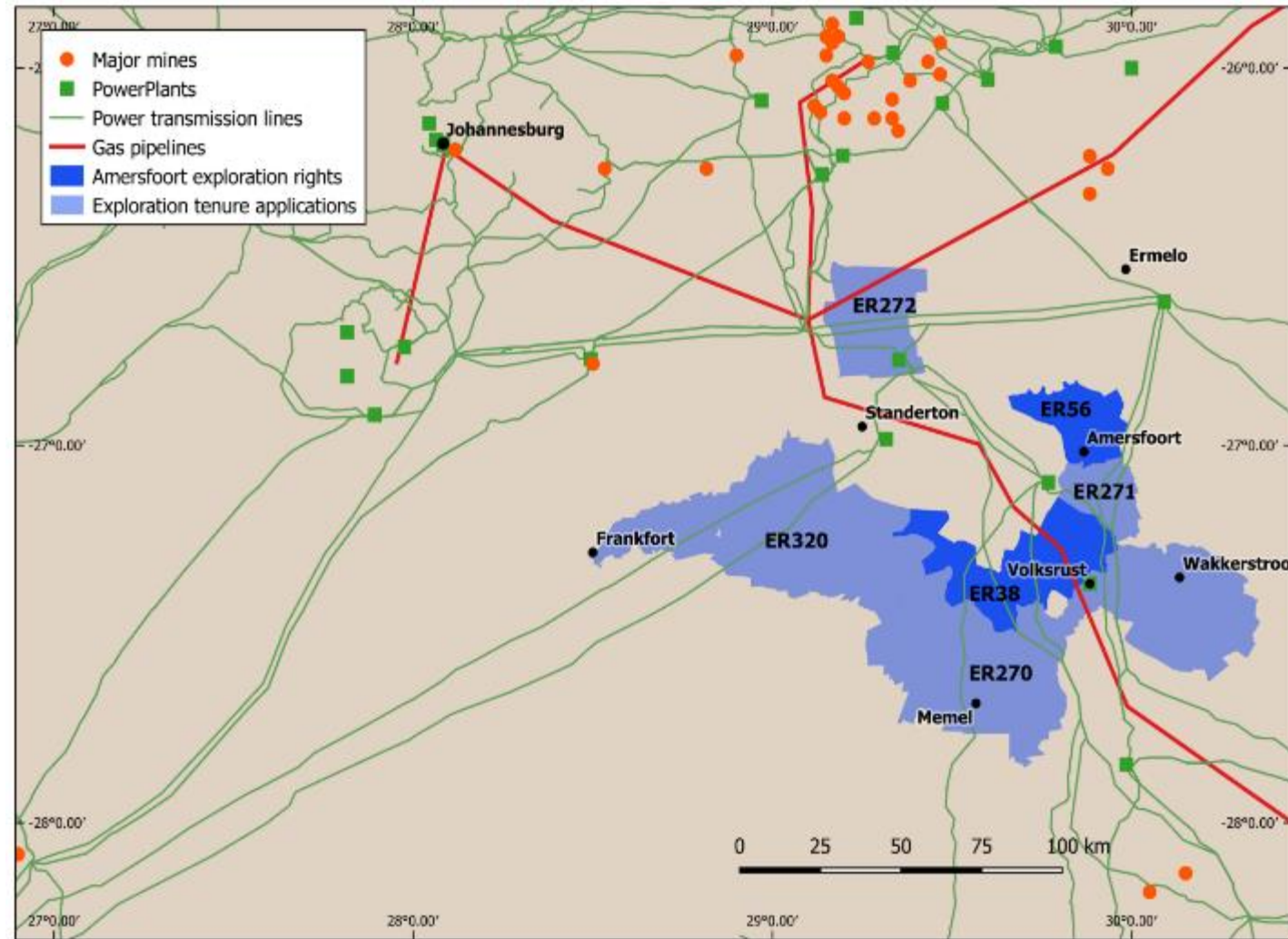


# Location and existing infrastructure

- Located at the center of South Africa's power generation, mining and transport infrastructure
- Close to major population centers of Johannesburg and Pretoria
- Over 10 power stations are located within a 300km radius of Amersfoort Project. Power stations can use the gas to generate electricity
- Major gas transmission pipeline from Secunda to Richards Bay and Durban – the Lilly pipeline.
- Also connects to Pretoria and Johannesburg to the north and north east. 18-inch pipeline over 600km.



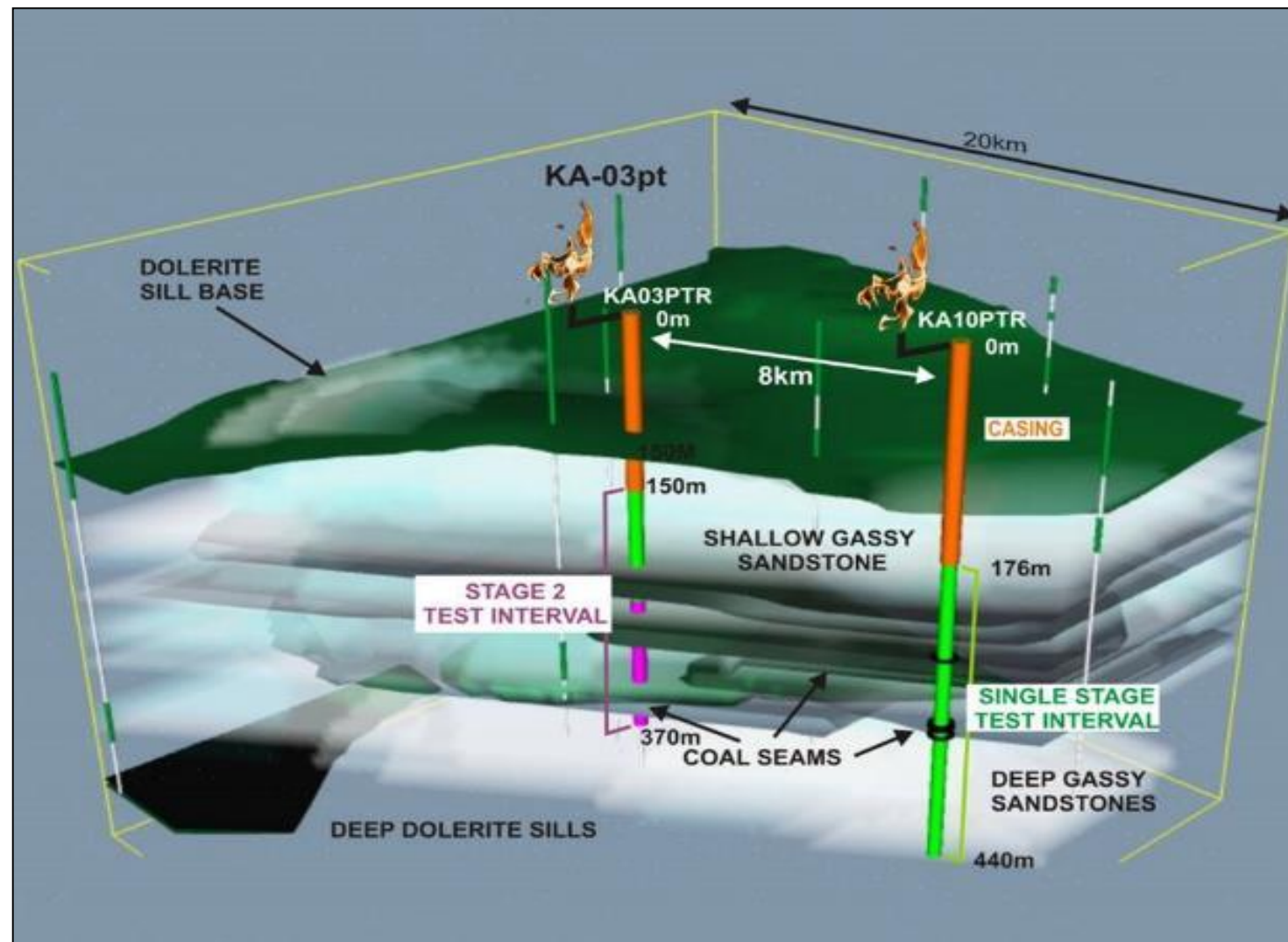
***Majuba power station Amersfoort > 4,000 Megawatts – Gas fired flame modulation***



# Amersfoort – Proven Geology Yielding Gas

## Gas in both coal and adjacent sandstone

- 20 exploration core holes have established gassy zones and consistent geology
- Coal seams between 1m to 4m thick
- No hydraulic fracturing required
- Significant gas potential at shallow depth range between ~150m to ~500m below the base of the dolerite sills that trap the gas
- Successful pilot production test well and future superior completion designs
- Deeper basin to the south has exploration and discovery potential for shale gas and oil
- Strong landowner relationship





# Amersfoort Exploration Success

## Expanding gas field through exploration and technical knowledge - Exploration Rights ER 38 and ER 56

- Comprised of 2 Exploration Rights fully approved and issued by the South African regulators
- 1,401km<sup>2</sup> with consistent geology
- 20 exploration core holes drilled
- Average drill depth of 500m
- Gas identified in every exploration hole drilled

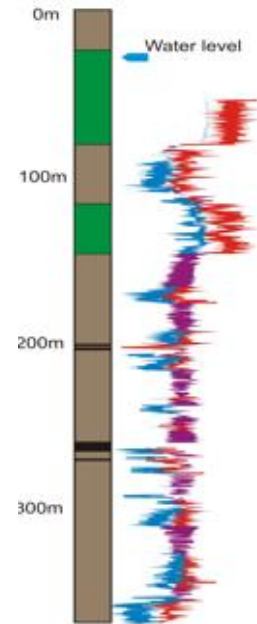
### Exploration Right ER 56

- 7 pilot production test wells drilled on ER 56
- Wells have flowed gas spontaneously to surface
- Well PT-KA03 achieved initial stabilized flow of 332,000 Scf/day\*

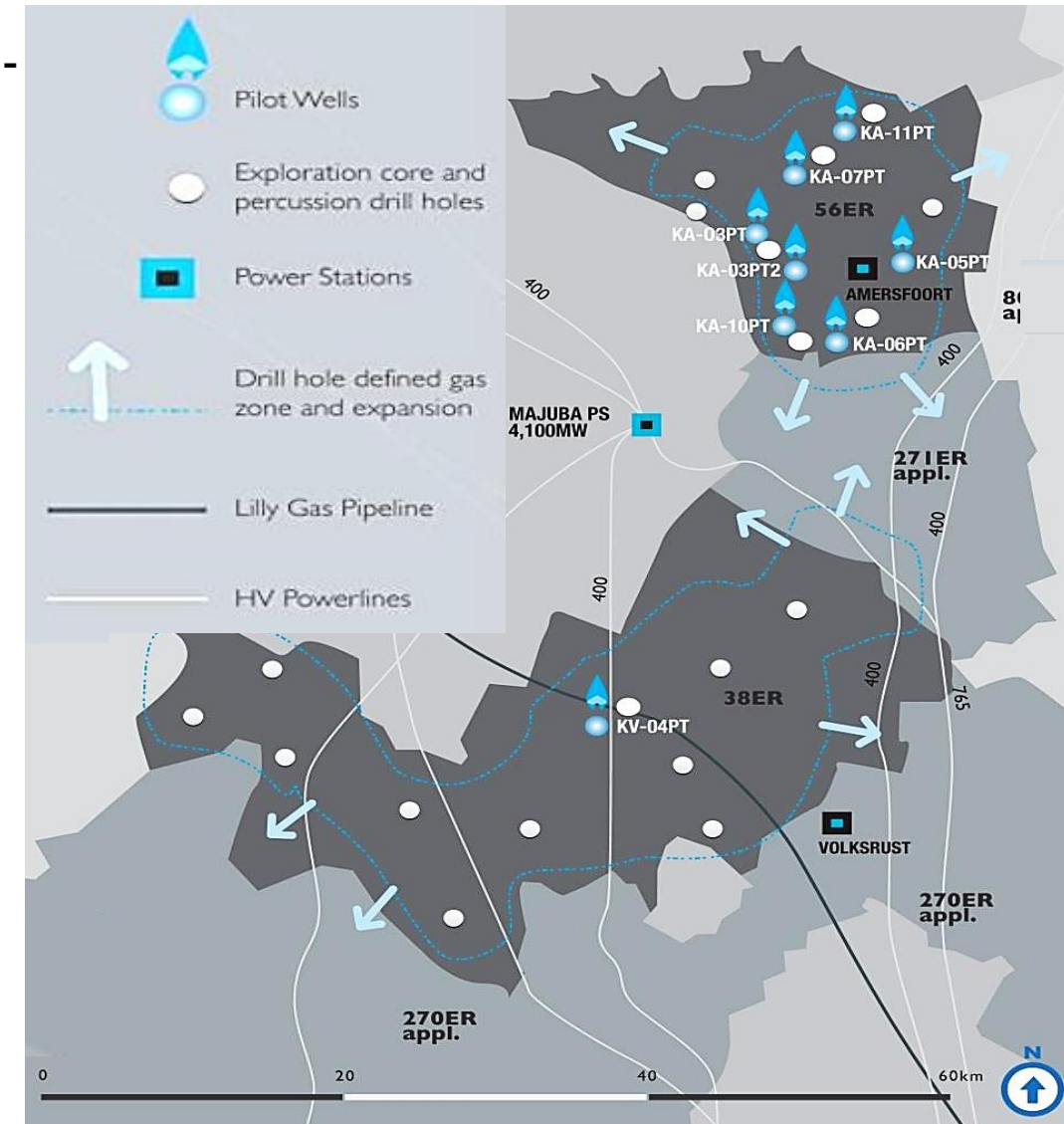
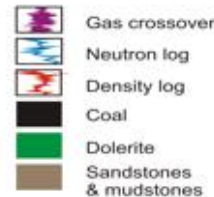
### Exploration Right ER 38

- Deeper license with higher gas pressures than 56ER
- Excellent gas levels from exploration core holes drilled already
- Basin to the south has potential for deeper gas and possible shale gas

\*(Standard cubic feet per day)



KA06 – Down hole Gas Logs



# Recent Exploration ER56 - Independent Testing Confirmation

- World leaders in the design and provision of process control and pumping systems Endress & Hauser AG and Franklin Electric Co. Inc have teamed up to provide an innovative pumping, separation and control package that has been trialled on the previously flow-tested well KA-03PT.
- Joint estimated cost of tests amounts to approximately US\$675,000 (AUD\$950,000)
- The initial phase of equipment testing was carried out between the 3<sup>rd</sup> and 7<sup>th</sup> of September and was intended to provide important data on equipment performance.
- The equipment achieved to enhance a new high level of water gas separation efficiency.
- An absolute open flow rate of 300Nm<sup>3</sup>/hr was achieved at a 2.15bar wellhead pressure without any well clean up or other optimised parameters.
- Gas quality at the exceptional level of 99.5% methane was over 1% above previous levels and could eliminate the need for treatment before commercial trading.
- Initial indications from the equipment testing are a 95% recovery of gas from produce groundwater, a significant increase from previously used separation equipment.
- The efficiency of the tested well head separator and control systems suggests there could be major commercial advantages for field development with one separator and control system package serving multiple wells.



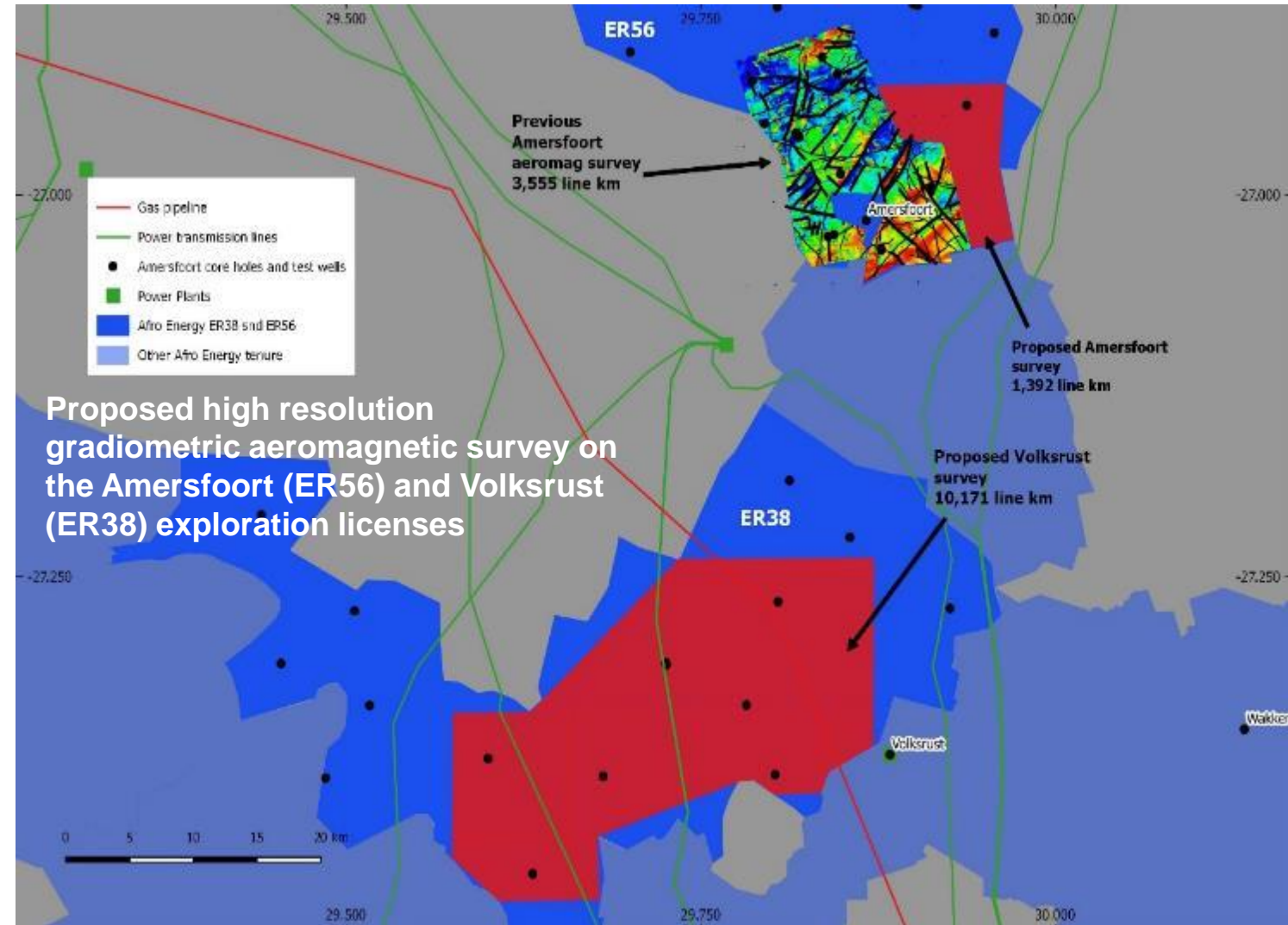




# Amersfoort – Next stage exploration

## High resolution aeromagnetic survey

- Proposed for ER 38 and ER 56 of the Amersfoort Project - Approximately 11,500 line Km
- The previous aeromagnetic survey of 3,555 line kilometres on ER56 provided critical and detailed geological information outlining gas reservoir geology and compartmentalisation.
- The proposed surveys will provide the geological basis for the first effective test wells on the Volksrust license (ER38) and further appraisal /production wells on the Amersfoort (ER56) license.
- High resolution radiometric aeromagnetic surveys have been shown to be an effective means of imaging the location and extent of the dolerite sills, dolerite dykes and faults that define gas reservoir compartments and boundaries in the Amersfoort project area.
- Strong magnetic contrasts between the Karoo sandstones and shales and the dolerite sills and dykes means that with appropriate data processing and modelling reservoir geology can be modelled down to basement depths



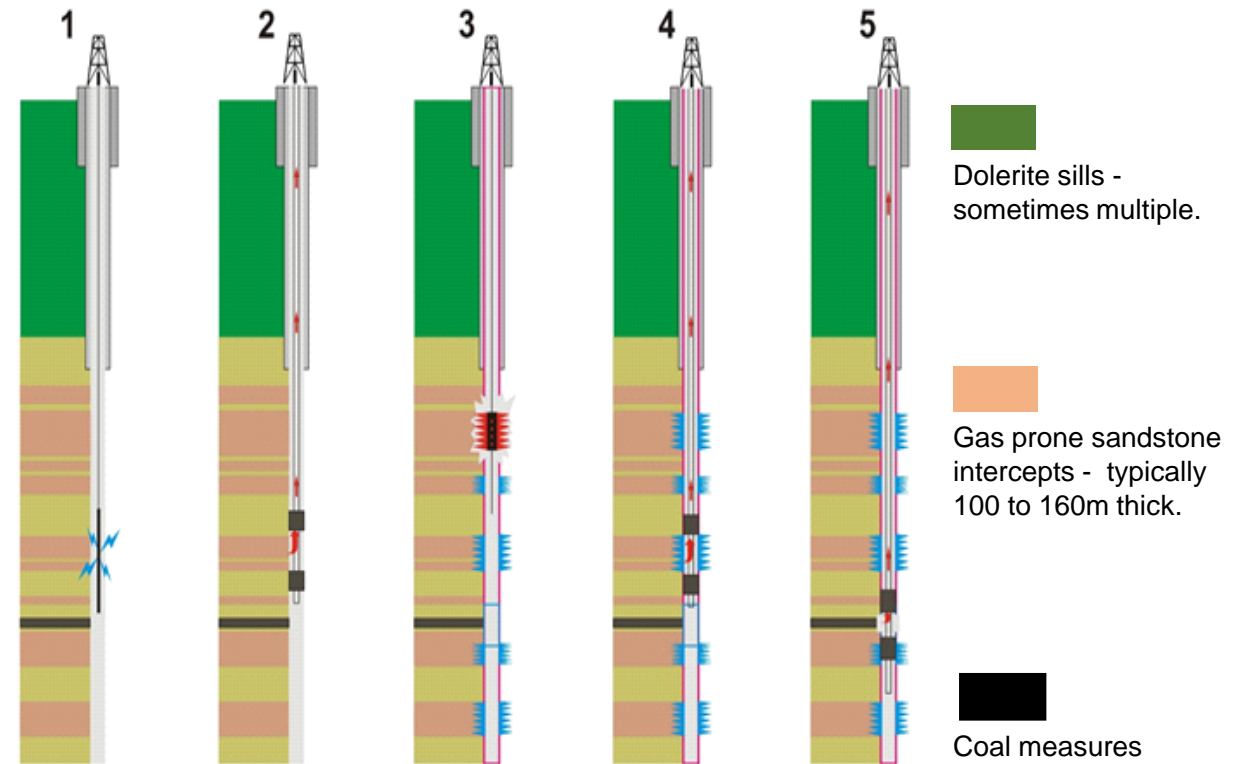


# Amersfoort project economics

## Shallow depth gas = low cost = strong economics

- Drilling and well construction are shallow and inexpensive
- Cost per gas production well approximately \$480,000 – fully engineered
- High quality gas with greater than 95% methane (up to 99.5%)
- Low water production - water produced is potentially usable and a resource

- Pilot test well KA-03PT has flared over 26 million Scf in 6 months . Sustained rate of 332mscf/d for first 6 weeks.
- Water production stabilised at 4,000 litres per day
- If the gas had been sold under prevailing RSA gas prices of \$7 - \$10USD /GJ\*, say \$10/GJ, payback would have easily been achieved in 9 – 10 months given well costs of ~\$300,000 un-engineered with revenues of \$260,000USD
- At \$10/GJ breakeven drill and complete is achieved from peak flow of 48 mscf/day and ultimate recovery of 0.08Bcf per well. Does not include field infrastructure, overhead and associated costs.



\*As per Industrial Development Corporation ( IDC) of South Africa independent Due Diligence program 2015 MOU on the development of initial Amersfoort Block 1



# South African gas market

Growing demand for gas and limited supply = high price

- South African gas from Mozambique pipeline ~ 212MGJ PA
- All this gas is used by the Sasol at the Secunda gas refinery - very little supply to domestic market
- Gas price is in the top global quartile at \$7-\$10\* USD per Gigajoule and upwards
- Supply of coal under pressure and unsustainable as it becomes dirtier, deeper and more distant from electricity infrastructure
- Strategic government energy plan 2030 (Integrated Resources Plan 2018) prioritizes gas sector
- Immediate potential customers for domestic gas close by from power generation and industry






\*As per Industrial Development Corporation (IDC) of South Africa independent Due Diligence program 2015 MOU on the development of initial Amersfoort Block 1



## Potential gas commercialization opportunities

- Gas sales into the existing coal powered generation plants
  - Flame control
  - Ultimately full co-generation
- Gas supply into the existing gas transmission
  - Transnet's Lilly pipeline which runs through ER38
  - Distribution network in Durban and east coast
- Independent Power Production (IPP)
  - Grid coupled or direct to a major customer such as a local colliery
- CNG production and distribution by road and rail to manufacturing customers and fleet transport depots

# ASX peer comparison

| Company                                      |  |  |  |
|--|---|--|---|
| Market Cap AUD \$M<br>7 <sup>th</sup> Nov 18 | \$8.1m*   | \$47.0m  | \$17.9m   |
| Gross Tenure km <sup>2</sup>                 | 8,168km   | ~8,300km   | 1,011km   |
| Location                                     | South Africa  | Botswana   | Zimbabwe  |
| Gross Prospective GIP (Tcf)                  | 3.5   | 8.6  | 3.8   |
| Gross 2C Resource (Tcf)                      | 1.5   | 0.2  | -   |
| Gross 2P Reserve (Tcf)                       | -   | 0.04   | -   |

Source: Company ASX announcements

\* Assuming full rights issue subscribed and price of \$0.02



# Summary

- Funding to continue immediate exploration
- Government supportive of gas
- High gas demand and pricing
- Gas flowing from all drilled wells
- Strong project economics
- Low impact on people, property and the environment
- Low well completion, production and operating costs
- Close to existing infrastructure and market – pipeline, end users and power generation
- Large exploration ground package – 8,168km<sup>2</sup>



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