

STATE GAS

**Accelerating
industrial
decarbonisation
using HDNG**

June 2024
ASX:GAS



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Value Through Diversification



“ Gas remains crucial to our economy and region to support the transition to net zero. To meet our future energy needs and decarbonise our economy we need continued gas supply. [Gas Future Strategy – 9 May 2024] ”

01

First Gas Production and Operating Cashflow

- Ramp up HDNG# volume and revenue over coming months
- Expanding market for HDNG, with no competition and significant interest in new gas supply arrangements
- Supports accreditation of maiden 2P reserve at Rolleston West

02

First Mover Advantage as Alternative Energy Provider

- Strong market fundamentals for HDNG, based on a superior emission profile and direct application to industrial decarbonisation initiatives
- HDNG technology provides multiple value streams for the Company, including licensing and development of HDNG technology, which can occur in parallel to development of the Company’s existing gas assets
- Application of technology to support emission reduction a large opportunity domestically and internationally, beyond simple diesel fuel substitution

03

Next Stage Exploration and Appraisal Funded

- \$5.5 million exploration grant funding secured
- 2 new appraisal/exploration wells to be drilled in August 2024
- Delineate enlarged resource position, provide additional HDNG feedstock and support recognition of a maiden 2P reserve for Rolleston West Project

04

Substantial Asset Base with a Flagship Project

- 534PJ^ of 2C resource within the highly prospective Denison Trough
- Targeting a maiden 2P reserve for Rolleston West Project (30-50PJ*), which will support infrastructure delivery and project finance
- A large portfolio of gas exploration and development assets located near other advanced projects and infrastructure

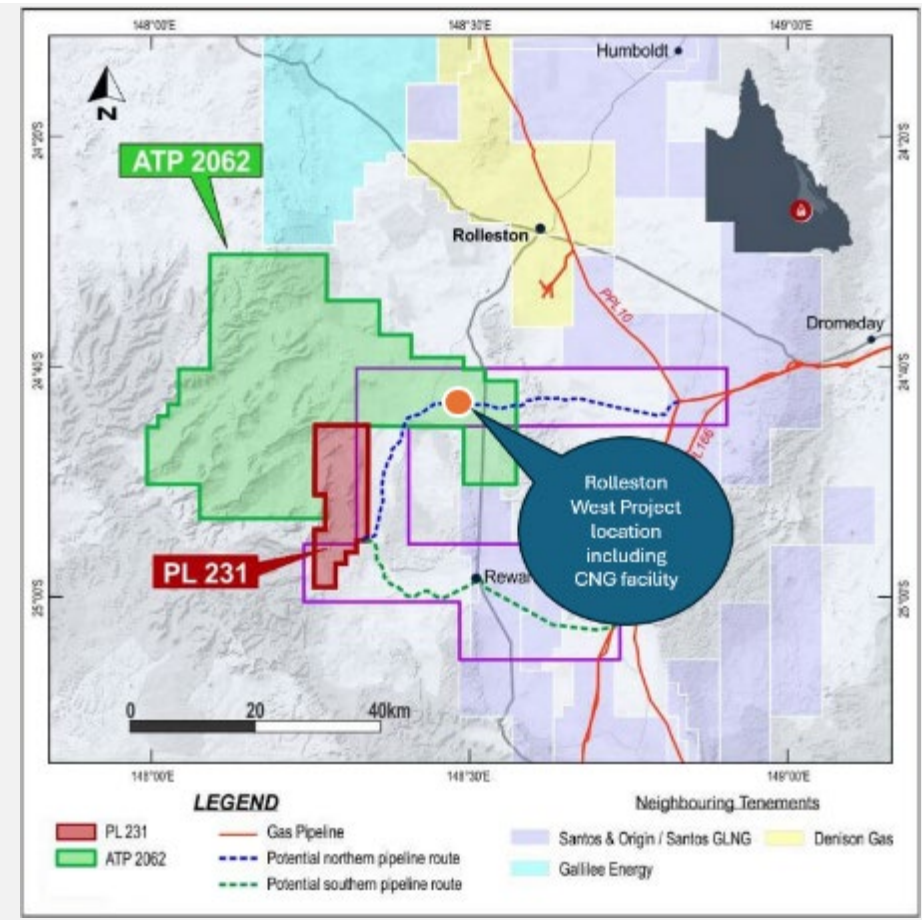
HDNG – High Density Natural Gas (pipeline quality natural gas highly compressed for transport)
 ^ No change since original resource estimates published on 12 September 2022
 * Management estimate based on internal geological model – not yet subject to third party verification

Investment Fundamentals



HDNG fuel supplier and developer of new CSG technology

- Increasing and substantial demand for lower emission alternatives to diesel
- Queensland coal sector is a substantial initial market, but broader use cases for high energy content fuel, with lower emission profile than diesel
- IP and process technology (particular the HDNG pilot plant) provides first mover advantage in decarbonisation opportunities



Substantial natural gas portfolio located in right area

- 2630 km² of combined acreage
- 534PJ[^] of 2C resource, targeting the highly prospective Bandanna coal sequence
- Seeking to establish a maiden 2P Reserve for Rolleston West Project (30-50PJ*)
- All assets close to significant existing projects targeting similar coal measures
- Potential long term synergistic development of the area in conjunction with larger players
- No domestic gas reservation

“ Natural gas has lower carbon content than diesel and produces around 25% less CO₂ per unit of energy during combustion. In addition, natural gas contains significantly lower levels of other harmful particulates when compared with diesel. [Cummins Inc., a global power solutions company] ”

[^] No change since original resource estimates published on 12 September 2022
^{*} Management estimate based on internal geological model – not yet subject to third party verification

Value created through the HDNG Pilot Plant



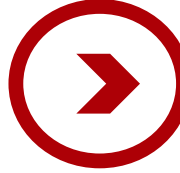
A growing cashflow stream

- Initial offtake for up to 300GJ/day to support diesel substitution/decarbonisation project at a local coal mine
- Has the potential to generate free operating cashflows > \$1M per annum, with HDNG supply price at a premium to spot gas
- HDNG pilot plant nameplate capacity of 1.7TJ/day
- Responding to inbound inquiry for HDNG supply (3 warm leads with the potential to utilise remaining plant capacity)



Supports the Company's flagship project - Rolleston West

- HDNG fast-tracks proof of commercial viability of the Rougemont 2/3 well system (essential for reserve accreditation)
- 2P reserve accreditation of 30-50PJ* in early calendar 2025, will accelerate discussions with third party infrastructure financiers
- Operating cashflows from HDNG sales will support further exploration, appraisal and development at Rolleston West
- Rolleston West's environmental credentials significantly enhanced, as production testing/appraisal gas no longer vented



Domestic and international application of HDNG technology

- HDNG technology will be used to support growth of State Gas exploration and appraisal assets
- Technology can be developed for and/or licensed to others
- Wide potential application of HDNG as a diesel alternative
- Substantial environmental benefits – capture production testing gas
- Deep commercial relationship with Mine Energy Services (owners of the leading diesel/gas hybrid engine conversion technology)
- Thiess (initial HDNG customer) operate other minesites which are amenable to decarbonisation trials

* Management estimate based on internal geological model – not yet subject to third party verification

The HDNG Decarb Solution



Index:

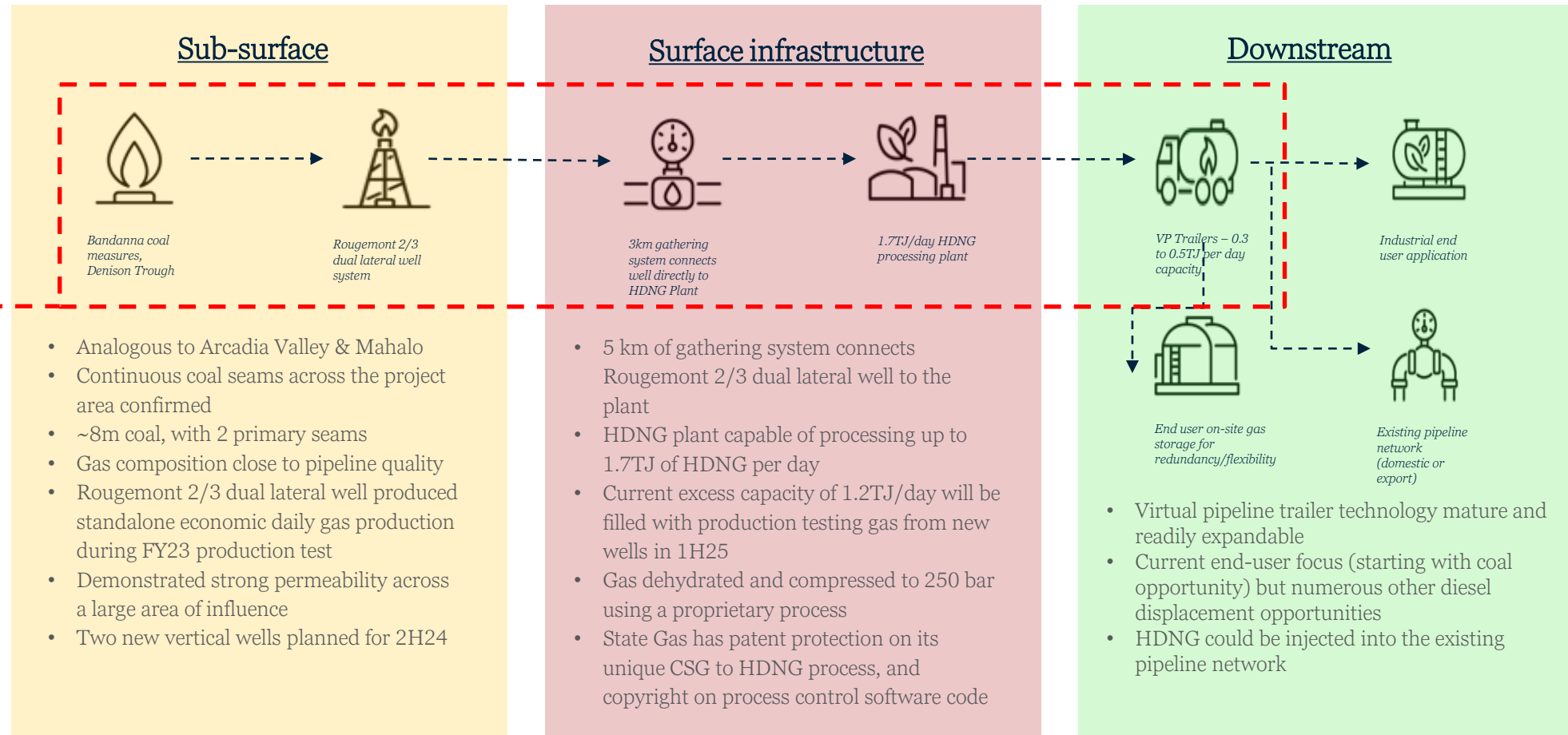
1. VP trailer at priority filling panel
2. Dehydrator
3. Compressor package
4. Rougemont 2/3 dual lateral well system

- The HDNG Pilot Plant is small modular plant, located approximately 20km south of Rolleston
- CSG is provided to the HDNG Facility by a gathering system connected to the Company's Rougemont 2/3 dual lateral exploration and appraisal well ("Rougemont 2/3"), located within the Rolleston West Project area (ATP 2062)
- Rougemont 2/3 produces high-energy content CSG with minimal impurities (methane >92%) which is dehydrated and compressed at the HDNG Pilot Plant
- VP technology sourced through State Gas' partnership with Mine Energy Solutions, allows delivery of HDNG by truck, in a range of up to 300km from the plant
- State Gas has an initial offtake agreement in place to support an ongoing hybrid engine truck trial at a local coal mine in the Southern Bowen Basin (increasing to 300GJ/day, but with opportunity to scale)
- State Gas has created substantial IP in the course of engineering, designing and constructing the HDNG Pilot Plant and in conjunction with its partners, is now evaluating how this technology might be more broadly applied (including design and construction of future HDNG plants that meet customer's specific fuel demand circumstances)
- HDNG Pilot Plant cost approximately \$8 million (excluding research and development costs, civil works and gas gathering system)
- 1.5 year pay-back period at full plant operating capacity (1.7TJ/day)
- Engineering progressed on next iteration of plant design - reduce fabrication costs and improve portability

The HDNG Decarb Solution (continued)

- State Gas is in the unique position to be the only producer of HDNG suitable for use in hybrid engine technology (such as coal mine trucks)
- The Company can deliver a turn-key solution for customers, including fuel supply and the ability to develop and operate HDNG facilities for others
- The Company’s existing gas assets (Rolleston West Project) are being developed in line with anticipated growth in the market for HDNG
- High quality partners in Mine Energy Solutions (provider of hybrid truck engine technology)
- Initial offtake customer - Thiess (contract miner and owner/operator of a substantial fleet of mining trucks in the Bowen Basin)

HDNG supply chain controlled by State Gas and its partners



Scale of Diesel Displacement Opportunities

+\$30 Bn[^] of diesel sales

Total Addressable Diesel Fuel Domestic Market

- Total diesel consumption conservatively 30 billion litres per annum, at \$1.40/L net of fuel tax credits

\$2 Bn of diesel sales

Specific Addressable Market Bowen Basin – Mine Truck Diesel Fuel Displacement

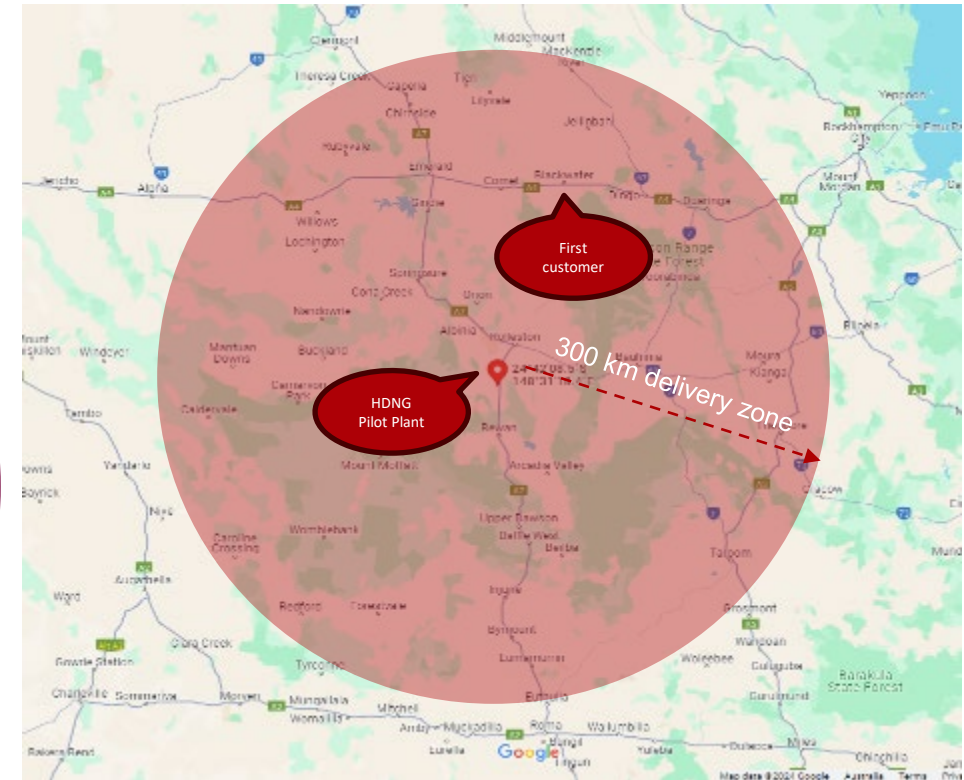
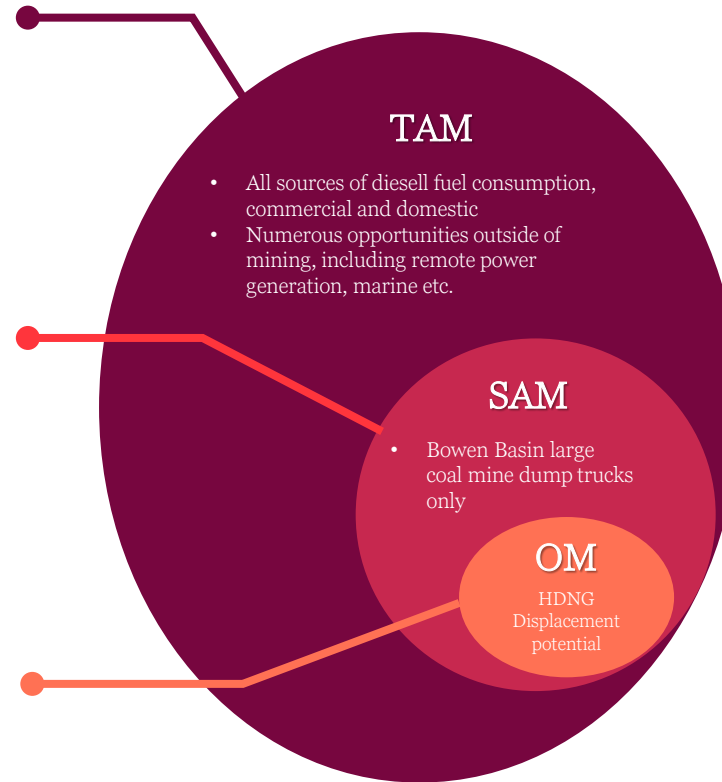
- 3,000 coal mine dump trucks, at 3,500 standard machine hours per annum

+\$500 Mn of HDNG sales

Obtainable market

- Conservatively assumes 60% diesel displacement, but could be >70%
- No current competition or alternative product
- Strong support for diesel replacement projects in the coal sector by the Qld Government
- The above opportunity analysis considers only the direct fuel supply opportunity and does not include the value associated with selling, licensing or operating State Gas' HDNG technology
- The Company's HDNG technology has application to support emission reduction targets domestically and internationally, much larger than just diesel displacement

[^] The Business Case for Displacing Diesel (Mainsheet)



- The HDNG pilot plant in conjunction with the virtual pipeline trailers allows State Gas to service potential customers in a 300km radius of Rolleston
- This incorporates a significant part of the southern Bowen Basin - approximately 10 operating coal mines (say 750 trucks)
- Fugitive gas associated with ongoing underground coal mine development can be captured, treated and converted into HDNG using State Gas' technology

Rolleston West – A New Generation Gas Project

- The Rolleston West Project (ATP 2062) is 100% owned by State Gas Limited, The tenement is located in the Southern Bowen Basin
- The project is the Denison Trough, which is characterised by conventional and coal seam gas (CSG) potential from Bandanna Formation coals, and are extensive across large areas of this and adjoining permits
- The capability to produce CSG at commercial levels has already been established at the Arcadia Valley field to the south-east, and at Mahalo to the north-east
- Historical drilling undertaken in the eastern part of the tenement (Rougemont 1,2 and 3) has intersected approximately 8 metres of net coal, with the thickest seams laterally continuous over many kilometres. The gas content of the coals is between 5 and 6 m³/tonne dry ash free. Gas is at or near pipeline quality
- Production testing has established sustainable commercial gas flow rates and confirmed excellent permeability within the targeted coal seams
- The Company has located its HDNG facility within ATP 2062 to support further appraisal activities, but in particular to capture production testing gas which would otherwise be flared
- The commercialisation of production testing gas and demonstration of an available market and price for gas from that resource deposit, will accelerate establishing a 2P reserve for the Project, which will in turn support infrastructure and project finance

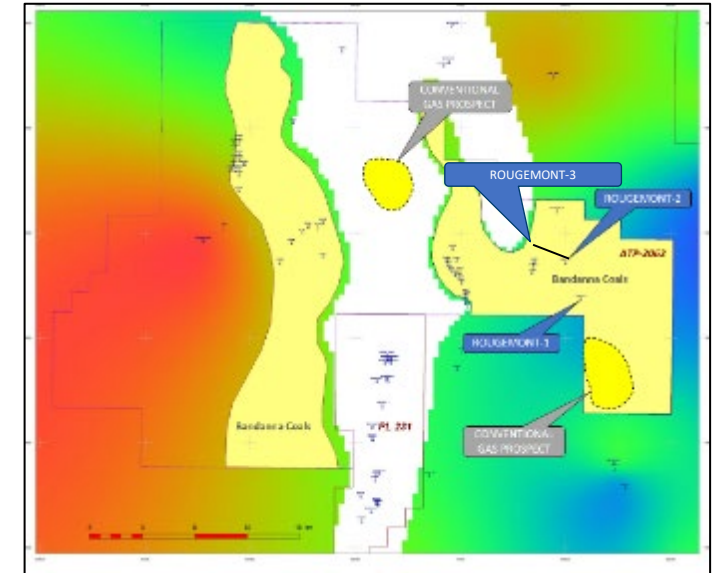


Image: Target areas within ATP 2062

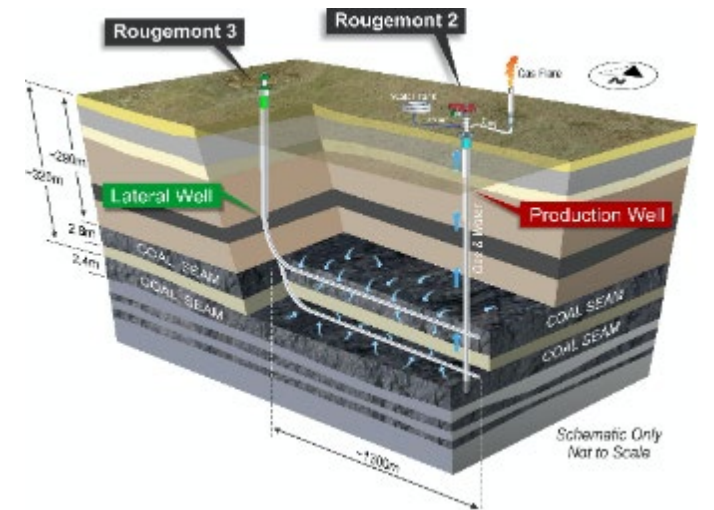


Image: Design of Rougemont 2/3 dual lateral well pair

Rolleston West – Next Stage of Exploration Funded

- State Gas has been awarded a Queensland Government exploration grant of \$5.5M to support drilling to two new vertical step-out exploration and appraisal wells near the existing Rougemont 2/3 dual lateral well system
- The program will commence in July 2024, with wells spudded in August 2024 (rigs have been secured) and targeted completion by end of October 2024
- Funding milestones under the Grant are aligned with the monthly milestones for drilling and completion
- Appraisal gas from these wells will be fed directly into the HDNG plant to support the Company’s fuel supply strategy
- The Grant and the HDNG supply strategy supports ongoing development of the Rolleston West Project, in particular establishing an initial 2P reserve
- Once 2P reserve (30-50PJs* out of existing 279PJ[^] of 2C resource), it will support accelerated discussions with infrastructure partners around financing and development of dedicated pipeline to the site
- Supports a 10TJ-a-day traditional gas project, which could be developed in conjunction with continued HDNG production

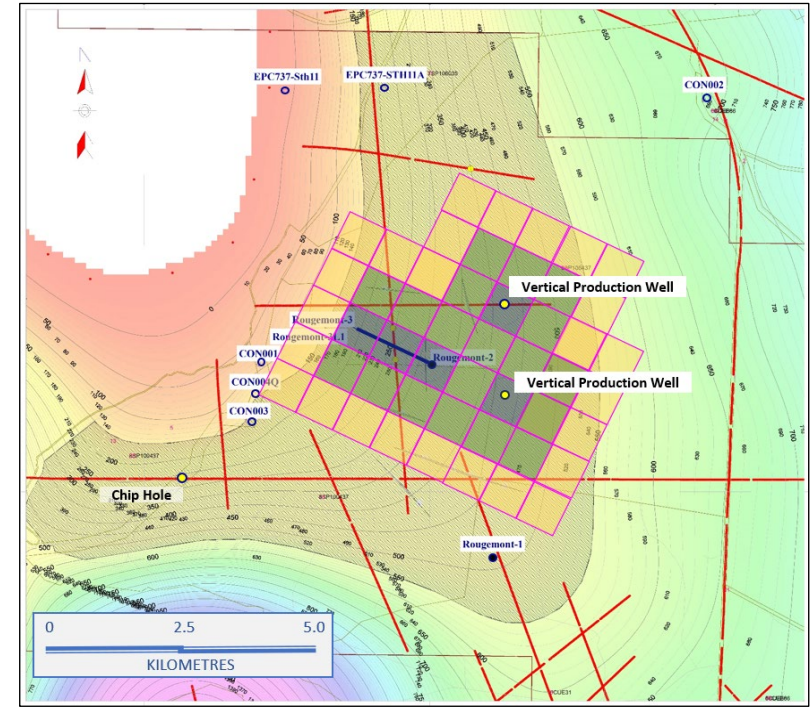


Image: New Vertical Well locations and potential reserve designation zones

The company considers that the delivery of additional exploration and appraisal wells stepped out from its existing dual lateral well system will serve multiple purposes:

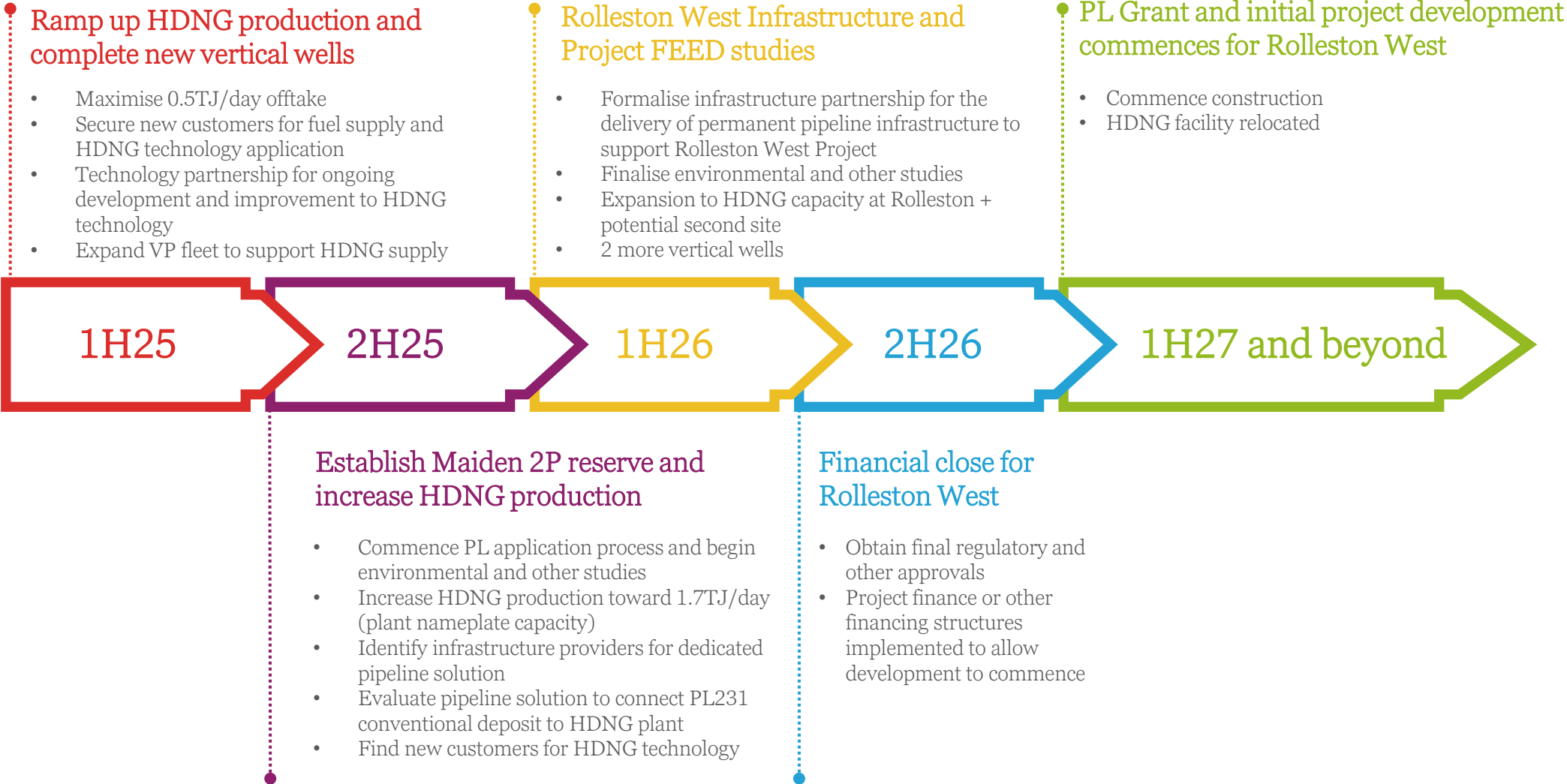
1. further delineate gas resources for the purpose of supporting recognition of initial Proved and Probable 2P reserves;
2. demonstrate the commercial viability of a larger scale gas project, potentially capable of attracting third party funding for pipeline infrastructure; and
3. bring to market new gas supply which can be immediately processed into HDNG and sold using the Company’s existing HDNG production facility and Virtual Pipeline (VP) technology.

“In the near term, there is concern around the potential for demand to outstrip supply over coming years. This annual supply gap is forecast to emerge in 2028 on the east coast and by 2030 on the west coast if there is insufficient new supply developed”

[^] No change since original resource estimates published on 12 September 2022

* Management estimate based on internal geological model – not yet subject to third party verification

3 Year Plan Milestones



“ The spot price for natural gas on the east coast of Australia remains consistently higher than the gas price cap (\$12/GJ). The energy agencies continue to forecast risk to supply in the short to medium term but see strong ongoing demand for gas as a key fuel source particularly for industry as the economy continues to decarbonise. Improved policy setting at the federal government level around the criticality of gas to support the energy transition is encouraging. [Richard Cottee, State Gas Executive Chairman] ”

Next steps

Action	Support
Learn about State Gas:	www.stategas.com www.asx.com.au/markets/company/gas www.linkedin.com/company/state-gas-ltd
Contact the Company:	Doug McAlpine Chief Executive Officer +61439557400

About State Gas

Supplementary
information






Governance and capability

Corporate information

ASX Code	GAS
Share price (at 4 June 2024)	\$0.13
Shares on issue	274.2 million
Top 20 Holders	48.8%
Market capitalisation	\$35.7 million
Net debt	Nil
Enterprise value	\$35.7 million
52 week price range	10.5 cents – 23.0 cents



12 month price and volume trade analysis – source ASX

	Position	Experience
	Richard Cottee (Executive Chairman)	Significant international energy experience, and commercial strategy and acumen within the energy and utilities sector. Former Managing Director Queensland Gas Company Ltd, Central Petroleum Ltd and Nexus Energy Ltd, former CEO CS Energy & NRG Europe. Chairman of Elixir Petroleum Ltd.
	Greg Baynton (Non-Executive Director and Major Shareholder)	Director and founder of Orbit Capital. Former Director of NOVONIX Limited, SUPERLOOP Limited, intelliHR, PIPE NETWORKS Limited, NEXTDC Limited, Asia Pacific Data Centre Limited, and COALBANK Limited.
	Philip St Baker (Non-Executive Director and Major Shareholder)	Extensive experience in the energy sector, resources and governance. 2014 Ernst & Young Queensland Entrepreneur for Listed Companies. Former Managing Director of NOVONIX Limited, and ERM Power Limited. Current Director of Delta Electricity Pty Ltd and Healthcare Logic Group Limited.
	Tony Bellas (Non-Executive Deputy Chairman)	Extensive energy sector and governance experience. Former Chairman ERM Power Ltd, former CEO of Ergon Energy and CS Energy. Deputy Chairman NOVONIX Ltd, Non-Executive Director intelliHR.
	Jon Stretch (Non-Executive Director)	Broad international experience and success in the information technology (IT), telecommunications and energy sectors. Former Managing Director of ERM Power Limited, Executive Vice President EMEA Landis + Gyr, CEO AAPT. Former Director Telecom NZ, and AT&T Global Services Japan.
	Doug McAlpine (Chief Executive Officer)	20+ years experience in strategic, operational and financial leadership. Extensive capital markets experience. Served previously as the CEO of Collection House Limited, the Executive General Manager of Silver Chef Limited and CFO of Stanmore Coal Limited.
	Mike Herrington (Chief Operating Officer)	40+ years experience in petroleum operations in Australia, US, Europe, and Asia. Former COO & Executive Director Central Petroleum Ltd, President Upstream QGC, & MD Enron Exploration Australia.
	Suzanne Yeates (CFO and Company Secretary)	Chartered Accountant working with clients for over 20 years as CFO and Company Secretary for public and private companies.

Substantial Natural Gas Acreage

A highly prospective gas region in the Southern Bowen Basin



Substantial acreage

- 2630 km² of combined acreage
- ATP 2062 – 1414 km² - 100%
- ATP 2068 & 2069 (Santos JV) – 1035 km² - 35%
- PL 231 – 181 km² - 100%



Significant resource potential

- Highly prospective Bandanna coal sequence
- Multiple conventional and unconventional targets
- No domestic gas reservation



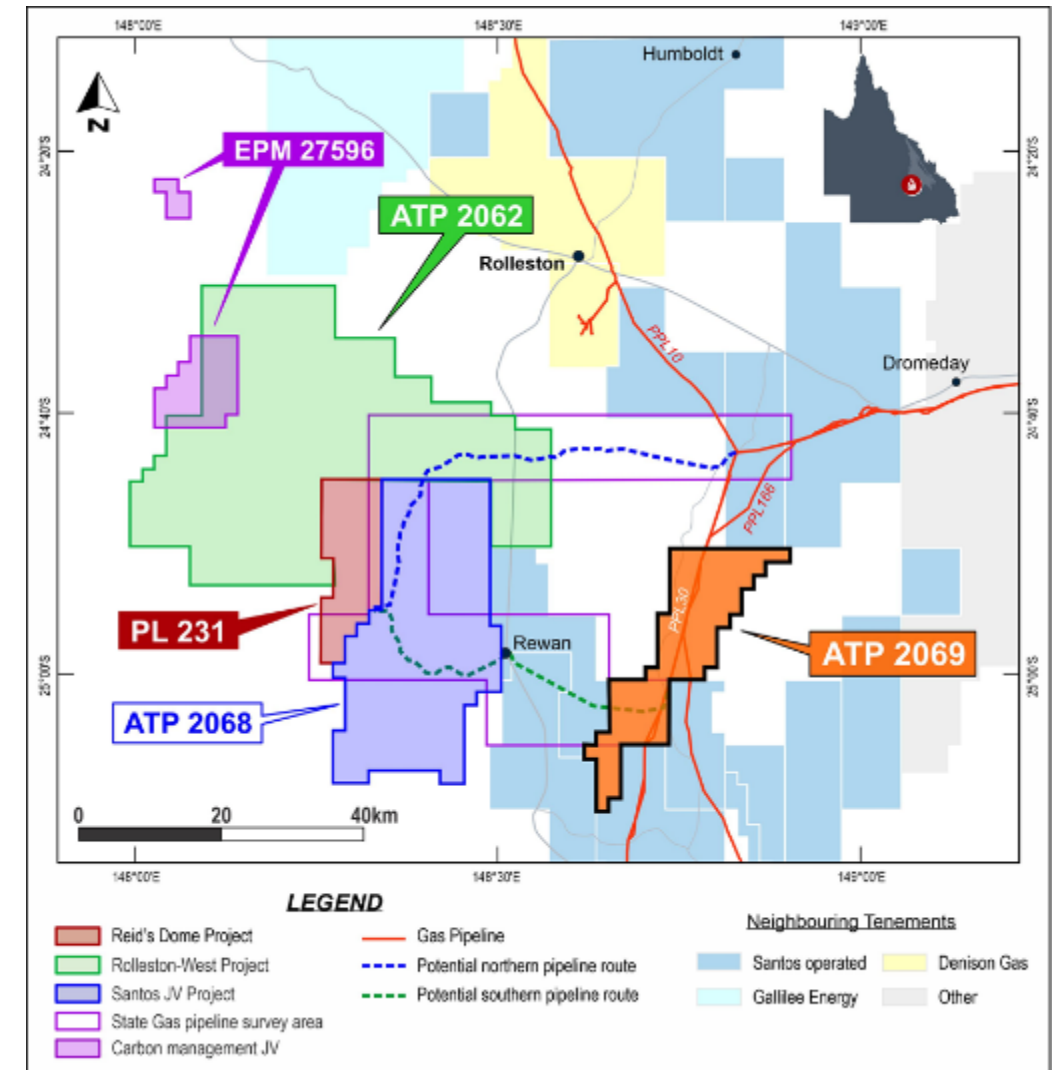
Alignment of interests across region

- Close to significant existing projects targeting similar coal measures
- Potential long-term synergistic development of the area
- Close to existing pipeline infrastructure



Innovation through experience

- Deliver low-cost, pipeline-quality gas to meet growing demand
- Opportunistically exploit gas supply opportunities
- History of innovation within the energy sector



Contingent Resource Estimates

Year	Asset	Net Acreage (km ²)	Estimated Contingent Resources* (PJ's Net to State Gas)		
			1C	2C	3C
2017	PL231 Reid's Dome (unconventional)	181	84	192	660
	PL231 Reid's Dome (conventional)		1.7	3.6	7.9
2020	ATP 2062 Rolleston-West (unconventional)	1,414	145	261	454
	ATP 2062 Rolleston-West (conventional)		6	18	52
2022	ATP 2068 (unconventional)	254	25	43	68
2022-23	ATP 2069 (unconventional)	108	12	17	24
Total		1,957	274	534	1,266

Additional information about Contingent Resource Estimate

The Contingent Resource estimates for the Reid's Dome and Rougemont Gas Projects (State Gas 100%) and State Gas' 35% interest in ATP 2068 and ATP 2069 are as at 12 September 2022. They were estimated utilising the probabilistic method with totals summed arithmetically and have not been adjusted for commercial risk.

The Contingent Resource estimates are based on technical data for the permits, regional geologic and production interpretations, and in the case of the Reid's Dome and Rolleston-West Projects, data derived by State Gas from exploration activities on the permits, including reprocessing of seismic, drilling, core analyses, production testing and analyses of produced gas and water. Additional exploration and appraisal is required to address the contingencies associated with these resources to confirm commercial viability and areal extent. If the contingencies are successfully addressed, some part of the Contingent Gas Resources may be reclassified as reserves. The estimates of Contingent Resources have not been risked to account for the possibility that the contingencies are not successfully addressed.

The estimates reported relate to unconventional petroleum reserves. The details of the project area, the method of extraction and number of wells that may be required are not yet finalised. The Contingent Resources estimated have been prepared in accordance with the definitions and guidelines set forth in the SPE-PRMS 2018.

The estimates reported are not contingent on technology that remains under development

Competent Persons Statement


The estimate of Contingent Resources for the Reid's Dome and Rolleston-West Gas Projects (of which State Gas holds 100%), and State Gas' 35% interest in ATP 2068 and ATP 2069, provided in this document, is based on, and fairly represents, information and supporting documentation prepared by Mr James Crowley in accordance with Petroleum Resource Management System guidelines.


Mr Crowley is a qualified person as defined under the ASX Listing Rule 5.42. Mr Crowley holds a Bachelor of Science (Honours) from Macquarie University, Sydney and has over 36 years' experience in the industry. He is a member of The Petroleum Exploration Society of Australia and The Society of Petroleum Engineers. Mr Crowley has consented to the publication of the Contingent Resource estimates for the Reid's Dome and Rolleston-West Gas Projects, and ATP 2068 and ATP 2069, in the form and context in which they appear in this Presentation.


No Changes to Previously Reported Resource Estimates


State Gas confirms that it is not aware of any new information or data that materially affects previously disclosed resources estimates summarised in the above table. All material assumptions and technical parameters underpinning the estimates in the original market announcement on 12 September 2022 continue to apply.


PL231 Reid's Dome – Conventional Gas Deposit

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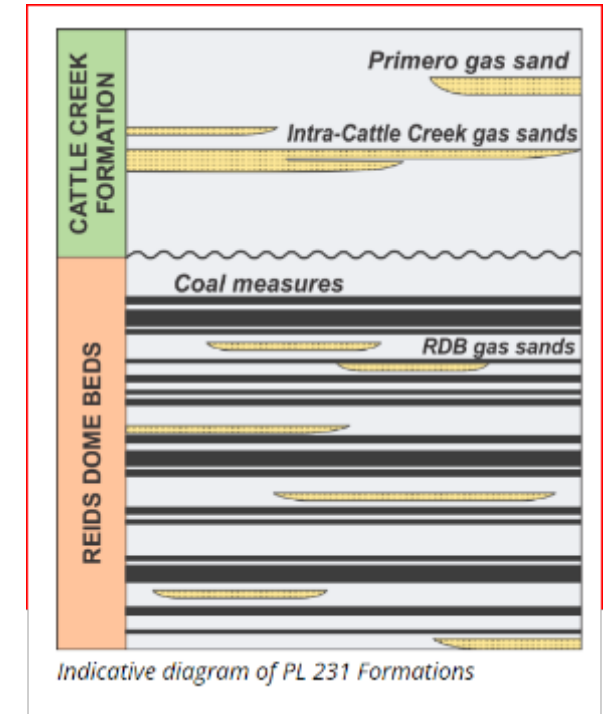
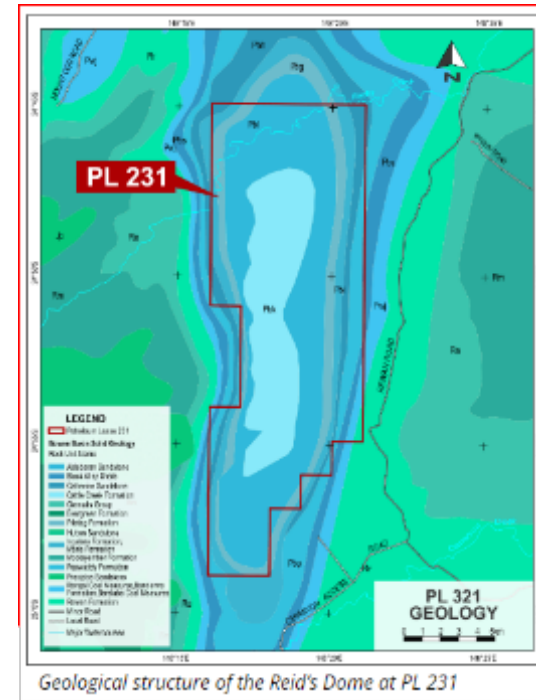
The Reid's Dome Gas Project (PL 231) is within the Bowen Basin on the apex of the Springsure-Serocold Anticline
- 

Identified more than 30 m of net coal, with gas contents averaging a very high 13.75m³/tonne dry ash free
- 

Commercial levels of sustainable production of conventional gas have been established at the Nyanda-4 well and the Company continues to evaluate a range of techniques to successfully liberate gas from the deeper formations
- 

Evaluating how to best develop Reid's Dome in conjunction with Rolleston West to most efficiently leverage infrastructure and reduce operating costs
- 

Connect PL231 conventional gas to HDNG pilot plant at Rougemont by a direct pipeline



PL231 Estimated Contingent Resources [^]		
1C	2C	3C
85 PJ	195 PJ	668 PJ

[^] No change since original resource estimates published on 12 September 2022

ATP 2068 & 2069 – Regional JV with Santos



State Gas 35%, Santos 65% & Operator



Large area 727 km²



Bandanna Formation CSG

- Net coal demonstrated by Consuelo stratigraphic holes, Rougemont and Rewan-1
- Gas content proven by Rewan-1 and Rougemont wells
- Southwest extension of Rougemont

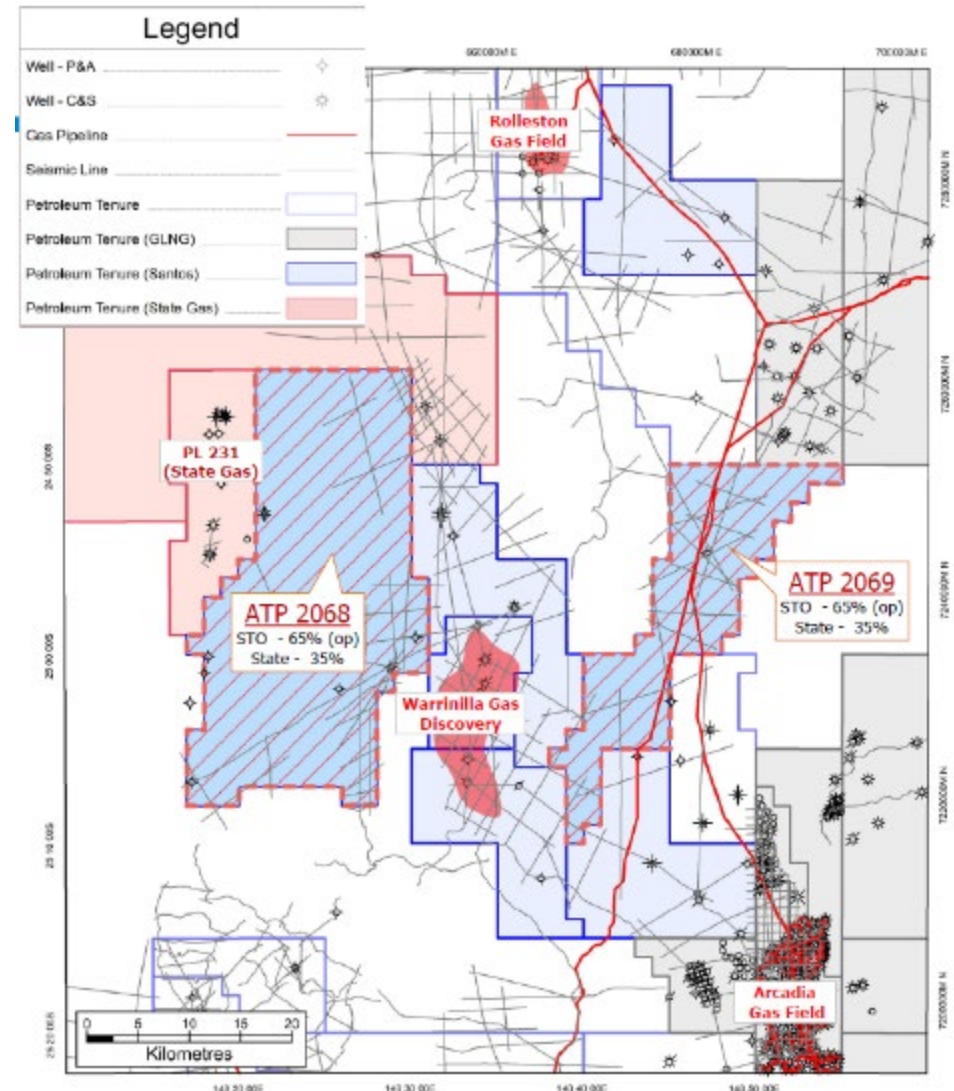


Exploration program planned for calendar 2025

State Gas' Share of Joint Venture Estimated Contingent Resources* [^]			
ATP	1C	2C	3C
2068	25 PJ	43 PJ	68 PJ
2069	12 PJ	17 PJ	24 PJ
Total	37 PJ	60 PJ	92 PJ

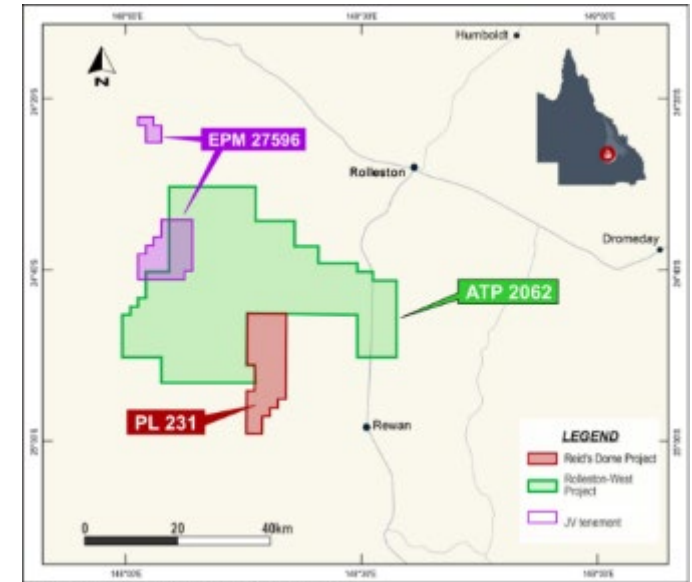
* State Gas estimate

[^] No change since original resource estimates published on 12 September 2022



Carbon Capture and Storage Opportunity

- JV with minerals explorer Rockminolutions Pty Ltd to evaluate the suitability of the Buckland Basaltic Formation for a large scale carbon capture project
 - 70 km² area
 - Ignimbrite (basalt) 200 – 330 m thick
- Permanent storage of CO₂ by conversion to mineral calcite, successfully trialed in Iceland (Carbfix) and not near aquifers
- A range of potential decarbonisation applications:
 - Enhanced weathering
 - Low carbon cementitious material
 - In-situ carbon mineralisation (Carbfix process)
- Option for further expansion into at-grade Basalt quarrying opportunity with immediate agricultural application
- Planning small drilling campaign to support further laboratory testing and accelerate government approvals
- Recent Queensland Government announcements regarding the preferred location for CCS projects, improves project prospects (outside of Great Artesian Basin)



Map showing location of Joint Venture Project

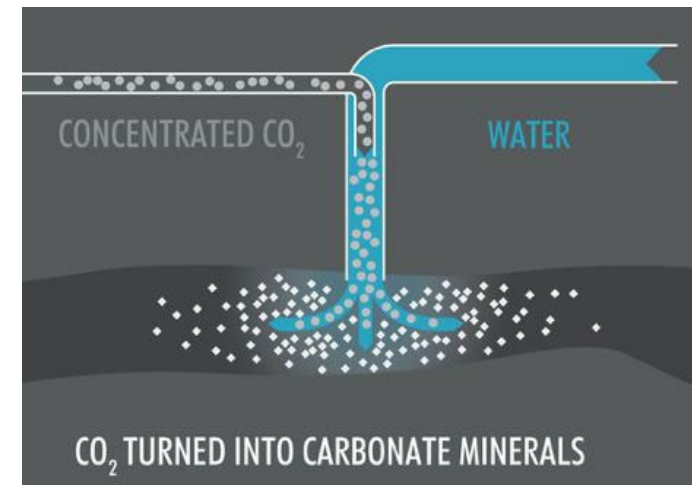


Illustration depicting the process of carbon mineralisation into underground basaltic rock formations (Carbfix process)