

The Ancillary Agreement otherwise contains provisions considered standard for an agreement of its nature (including representations and warranties and confidentiality provisions).

9.6 Agreements with Directors and management

9.6.1 David Spring, Scott Brown, James Canning-Ure and Karl Schlobohm – minor services agreements

Messrs David Spring, Scott Brown, James Canning-Ure and Karl Schlobohm have each entered a service agreement with the Company for the provision of services as CEO, Director, Chair and CFO of the Company respectively, and otherwise in connection with the IPO.

The remuneration payable to each party under the agreements is set out in the table below:

Party	Remuneration
David Spring	\$10,000 per month (plus GST) from 1 July 2025 prior to the Company's listing on ASX and \$25,000 per month (plus GST) upon the Company's successful listing on ASX.
Scott Brown	\$4,000 per month (plus GST), subject to the Company's successful listing on ASX.
James Canning-Ure	\$4,000 per month (plus GST), subject to the Company's successful listing on ASX.
Karl Schlobohm	\$1,700 (plus GST) per day.

The Company may terminate each agreement by giving 30 days written notice. Either party may immediately terminate an agreement by giving notice upon insolvency or if either party defaults under the agreement and fails to remedy the default within 10 Business Days.

The agreements otherwise contains provisions considered standard for agreements of their nature (including representations and warranties and confidentiality provisions).

9.6.2 Non-executive director appointments

The Company has entered into a letter of appointment with each of the Directors with respect to their appointment as directors of the Company. These Directors will receive the remuneration set out in their respective minor services agreements, the material terms of which are set out in Section 9.6.1.

9.6.3 Deeds of indemnity, insurance and access

The Company has entered into a deed of indemnity, insurance and access with each of its Directors. Under these deeds, the Company will agree to indemnify each officer to the extent permitted by the Corporations Act against any liability arising as a result of the officer acting as an officer of the Company. The Company will also be required to maintain insurance policies for the benefit of the relevant officer and allow the officers to inspect board papers in certain circumstances.

10. ADDITIONAL INFORMATION

10.1 Litigation

As at the date of this Prospectus, the Company and its any subsidiaries are not involved in any legal proceedings and the Directors are not aware of any legal proceedings pending or threatened against the Company or its subsidiaries.

10.2 Rights and liabilities attaching to shares

The following is a summary of the more significant rights and liabilities attaching to the Shares being offered pursuant to this Prospectus. This summary is not exhaustive and does not constitute a definitive statement of the rights and liabilities of Shareholders. To obtain such a statement, persons should seek independent legal advice.

Full details of the rights and liabilities attaching to Shares are set out in the Constitution, a copy of which is available for inspection at the Company's registered office during normal business hours.

(a) General meetings

Shareholders are entitled to be present in person, or by proxy, attorney or representative to attend and vote at general meetings of the Company. The Company's constitution permits the use of technology at general meetings of shareholders (including wholly virtual meetings). to the extent permitted under the Corporations Act, Listing Rules and applicable law.

Shareholders may requisition meetings in accordance with Section 249D of the Corporations Act and the Constitution of the Company.

(b) Voting rights

Subject to any rights or restrictions for the time being attached to any class or classes of shares, at general meetings of shareholders or classes of shareholders:

- (i) each Shareholder entitled to vote may vote in person or by proxy, attorney or representative;
- (ii) on a show of hands, every person present who is a Shareholder or a proxy, attorney or representative of a Shareholder has one vote; and
- (iii) on a poll, every person present who is a Shareholder or a proxy, attorney or representative of a Shareholder shall, in respect of each fully paid Share held by him, or in respect of which he is appointed a proxy, attorney or representative, have one vote for each Share held, but in respect of partly paid shares shall have such number of votes as bears the same proportion to the total of such Shares registered in the Shareholder's name as the amount paid (not credited) bears to the total amounts paid and payable (excluding amounts credited).

(c) Dividend rights

Subject to the rights of any preference Shareholders and to the rights of the holders of any shares created or raised under any special arrangement as to dividend, the Directors may from time to time declare a dividend to be paid to the Shareholders entitled to the dividend which shall be payable on all Shares according to the proportion that the amount paid (not credited) is of the total amounts paid and payable (excluding amounts credited) in respect of such Shares.

The Directors may from time to time pay to the Shareholders any interim dividends as they may determine. No dividend shall carry interest as against the Company. The Directors may set aside out of the profits of the Company any amounts that they may determine as reserves, to be applied at the discretion of the Directors, for any purpose for which the profits of the Company may be properly applied.

Subject to the ASX Listing Rules and the Corporations Act, the Company may, by resolution of the Directors, implement a dividend reinvestment plan on such terms and conditions as the Directors think fit and which provides for any dividend which the Directors may declare from time to time payable on Shares which are participating Shares in the dividend reinvestment plan, less any amount which the Company shall either pursuant to the Constitution or any law be entitled or obliged to retain, be applied by the Company to the payment of the subscription price of Shares.

(d) **Winding-up**

If the Company is wound up, the liquidator may, with the authority of a special resolution, divide among the Shareholders in kind the whole or any part of the property of the Company, and may for that purpose set such value as he considers fair upon any property to be so divided, and may determine how the division is to be carried out as between the Shareholders or different classes of Shareholders.

The liquidator may, with the authority of a special resolution, vest the whole or any part of any such property in trustees upon such trusts for the benefit of the contributories as the liquidator thinks fit, but so that no Shareholder is compelled to accept any shares or other securities in respect of which there is any liability.

(e) **Shareholder liability**

As the Shares issued will be fully paid shares, they will not be subject to any calls for money by the Directors and will therefore not become liable for forfeiture.

(f) **Transfer of shares**

Generally, shares in the Company are freely transferable, subject to formal requirements, the registration of the transfer not resulting in a contravention of or failure to observe the provisions of a law of Australia and the transfer not being in breach of the Corporations Act and the ASX Listing Rules.

(g) **Future increase in capital**

The issue of any new Shares is under the control of the Directors of the Company. Subject to restrictions on the issue or grant of securities contained in the ASX Listing Rules, the Constitution and the Corporations Act (and without affecting any special right previously conferred on the holder of an existing share or class of shares), the Directors may issue Shares as they shall, in their absolute discretion, determine.

(h) **Variation of rights**

Under Section 246B of the Corporations Act, the Company may, with the sanction of a special resolution passed at a meeting of Shareholders vary or abrogate the rights attaching to Shares.

If at any time the share capital is divided into different classes of shares, the rights attached to any class (unless otherwise provided by the terms of issue of the shares of that class), whether or not the Company is being wound up, may be varied or abrogated with the consent in writing of the holders of three quarters of the issued shares of that class, or if authorised by a special resolution passed at a separate meeting of the holders of the shares of that class.

(i) **Alteration of constitution**

In accordance with the Corporations Act, the Constitution can only be amended by a special resolution passed by at least three quarters of Shareholders present and voting at the general meeting. In addition, at least 28 days written notice specifying the intention to propose the resolution as a special resolution must be given.

10.3 Terms of the Options offered under the Option Offers

(a) **Exercise price**

The exercise price of each Option is \$0.30 (**Exercise Price**).

(b) **Expiry**

The Options will expire on 5:00 pm (AEST) 3 years after the date the Options are issued (**Expiry Date**).

After this time, any unexercised Option will automatically lapse.

(c) **Entitlement**

Each Option entitles the holder to subscribe for 1 fully paid Share upon exercise of the Option and payment of the Exercise Price prior to the Expiry Date.

(d) **Terms of Exercise**

The Options may be exercised at any time wholly or in part by delivering a duly completed form of notice of exercise together with payment for the Exercise Price per Option to the Company, at any time on or after the date of issue and allotment of the Options, and before the Expiry Date. Any cheques must be drawn in Australian currency on an Australian bank and made payable to 'Eastern Gas Corporation Limited' and crossed 'Not Negotiable'.

On the valid exercise of the Options and payment of the Exercise Price, the Company will issue Shares ranking equally in all respects with all other fully paid ordinary shares on issue. Applications will be made for quotation of the Shares issued upon exercise of the Options within 5 Business Days of the date on which any Options are exercised.

(e) **Rights to participate**

Holders of Options do not have any right to participate in new issues of securities in the Company made to Shareholders generally during the currency of the Options without exercising the Option. However, Eastern Gas will ensure that for the purposes of determining entitlements to any such issue, the record date will be at least 3 Business Days after the issue is announced, giving the holders of Options the opportunity to exercise the Options prior to the date for determining entitlements to participate in any such issue.

(f) **Winding up**

Options may be exercised within a period of 30 days after the occurrence of the Company passing a resolution for voluntary winding up or a compulsory winding up order is made.

(g) **Quotation**

Eastern Gas will not be applying for the Options to be quoted on ASX. These are unlisted Options.

(h) **Capital reorganisation**

If, at any time, the issued capital of Eastern Gas is reconstructed (including consolidation, sub-division, reduction or return), all rights of holders of Options will be changed in a manner consistent with the Corporations Act and the Listing Rules at the time of the reconstruction.

(i) **Bonus Issues**

A holder of Options does not have the right to participate in bonus issues or new issues of securities offered to Shareholders until Shares are allotted to the holder of the Options pursuant to the exercise of the Options. If Eastern Gas makes a bonus issue to existing shareholders and no Share has been issued in respect of that Option before the record date for determining entitlements to the issue, then

the number of Shares over which that Option is exercisable will be increased in the manner permitted by the Listing Rules applying at the time of the bonus issue.

(j) **Pro rata issues**

If Eastern Gas makes a pro rata issue (other than a bonus issue) to existing Shareholders and no Share has been issued in respect of the Option before the record date for determining entitlements to the issue, then the Exercise Price will be changed in the manner permitted by the Listing Rules applying at the time of the pro rata issue.

(k) **Registered holders**

Eastern Gas is entitled to treat the holder of an Option as the absolute holder of that Option and is not bound to recognise any equitable or other claim to, or interest in, that Option on the part of any person other than the holder, except as ordered by a court of competent jurisdiction or as required by statute.

10.4 Terms of the Performance Rights

(a) **Entitlement**

Each Performance Right entitles the holder to subscribe for 1 Share upon conversion of the Performance Right.

(b) **Consideration**

The Performance Rights will be issued for nil consideration and no consideration will be payable upon the conversion of the Performance Rights into Shares.

(c) **Milestones**

The Performance Rights shall vest upon the earlier to occur of:

- (i) the Company's closing share price being above \$0.30 for 22 consecutive trading days; or
- (ii) the Company receiving an independent certification of 50PJ of 2P reserves from a suitably qualified Independent Expert pursuant to the ASX Listing Rules reported in accordance with the definitions of Reserves, Contingent Resources and Prospective Resources and guidelines set out in the Petroleum Resources Management System (**PRMS**) with respect to ATP 2051 (Project Venus) and/or ATP 927 (Project Windorah) and any form of tenure covering the same or similar area as the original ATPs,

each, a **Milestone**.

(d) **Expiry Date**

The Performance Rights, whether vested or unvested, will otherwise expire at 5:00pm (AEST) on the date 5 years from their date of issue (**Expiry Date**).

If the relevant Milestone attached to the Performance Right has not been achieved by the Expiry Date, all unconverted Performance Rights of the relevant tranche will automatically lapse at that time.

(e) **Notification to holder**

The Company shall notify the holder in writing when the relevant Milestone has been satisfied.

(f) **Quotation of Performance Rights**

The Performance Rights will not be quoted on ASX.

(g) **Conversion**

Subject to paragraph (p), upon vesting, each Performance Right will, at the election of the holder, convert into one Share.

(h) **Timing of issue of Shares on conversion**

Within 5 Business Days of conversion of the Performance Rights, the Company will:

- (i) issue the number of Shares required under these terms and conditions in respect of the number of Performance Rights converted;
- (ii) if required, give ASX a notice that complies with section 708A(5)(e) of the Corporations Act, or, if the Company is unable to issue such a notice, lodge with ASIC a prospectus prepared in accordance with the Corporations Act and do all such things necessary to satisfy section 708A(11) of the Corporations Act to ensure that an offer for sale of the Shares does not require disclosure to investors; and
- (iii) if admitted to the Official List of ASX at the time, apply for official quotation on ASX of Shares issued pursuant to the conversion of the Performance Rights.

If a notice delivered under (h)(ii) for any reason is not effective to ensure that an offer for sale of the Shares does not require disclosure to investors, the Company must, no later than 20 Business Days after becoming aware of such notice being ineffective, lodge with ASIC a prospectus prepared in accordance with the Corporations Act and do all such things necessary to satisfy section 708A(11) of the Corporations Act to ensure that an offer for sale of the Shares does not require disclosure to investors.

(i) **Share ranking**

All Shares issued upon the conversion of Performance Rights will rank equally with the then issued Shares of the Company.

(j) **Change in control**

Subject to paragraph (p), upon:

- (i) a bona fide takeover bid under Chapter 6 of the Corporations Act having been made in respect of the Company and:
 - (A) having received acceptances for not less than 50.1% of the Company's Shares on issue; and
 - (B) having been declared unconditional by the bidder; or
- (ii) a Court granting orders approving a compromise or arrangement for the purposes of or in connection with a scheme for the reconstruction of the Company or its amalgamation with any other company or companies; or
- (iii) in any other case, a person acquiring voting power (as defined in section 610 of the Corporations Act) in over 50% of the Shares on issue in the Company, in circumstances where such person's voting power was lower than the 50% threshold prior to the date the Performance Rights were issued,

then, to the extent Performance Rights have not converted into Shares due to satisfaction of the relevant Milestone, the Performance Rights will automatically convert into Shares on a one-for-one basis.

(k) **Participation in new issues**

There are no participation rights or entitlements inherent in the Performance Rights and holders will not be entitled to participate in new issues of capital offered to shareholders during the currency of the Performance Rights without converting the Performance Rights.

(l) **Adjustment for bonus issues of Shares**

If the Company makes a bonus issue of Shares or other securities to the Company's existing shareholders (other than an issue in lieu or in satisfaction of dividends or by way of dividend reinvestment), the number of Shares or other securities which must be issued on the conversion of a Performance Right will be increased by the number of Shares or other securities which the holder would have received if the holder had converted the Performance Right before the record date for the bonus issue.

(m) **Reorganisation of capital**

If at any time the issued capital of the Company is reorganised (including consolidation, subdivision, reduction or return), all rights of a holder will be changed in a manner consistent with the applicable ASX Listing Rules and the Corporations Act at the time of reorganisation.

(n) **Dividend and voting rights**

The Performance Rights do not confer on the holder an entitlement to vote (except as otherwise required by law) or receive dividends.

(o) **Transferability**

The Performance Rights are not transferable.

(p) **Deferral of conversion if resulting in a prohibited acquisition of Shares**

If the conversion of a Performance Right would result in any person being in contravention of section 606(1) of the Corporations Act 2001 (Cth) (**General Prohibition**) then the conversion of that Performance Right shall be deferred until such later time or times that the conversion would not result in a contravention of the General Prohibition. In assessing whether a conversion of a Performance Right would result in a contravention of the General Prohibition:

- (i) holders may give written notification to the Company if they consider that the conversion of a Performance Right may result in the contravention of the General Prohibition. The absence of such written notification from the holder will entitle the Company to assume the conversion of a Performance Right will not result in any person being in contravention of the General Prohibition; and
- (ii) the Company may (but is not obliged to) by written notice to a holder request a holder to provide the written notice referred to in paragraph (p)(i) within 7 days if the Company considers that the conversion of a Performance Right may result in a contravention of the General Prohibition. The absence of such written notification from the holder will entitle the Company to assume the conversion of a Performance Right will not result in any person being in contravention of the General Prohibition.

(q) **No rights to return of capital**

A Performance Right does not entitle the holder to a return of capital, whether in a winding up, upon a reduction of capital or otherwise.

(r) **Rights on winding up**

A Performance Right does not entitle the holder to participate in the surplus profits or assets of the Company upon winding up.

(s) **Tax Deferral**

For the avoidance of doubt, Subdivision 83A-C of the Income Tax Assessment Act 1997, which enables tax deferral on performance rights, applies (subject to the conditions in that Act) to the Performance Rights.

(f) **ASX Listing Rule compliance**

The Board reserves the right to amend any term of the Performance Rights to ensure compliance with the ASX Listing Rules.

(u) **No other rights**

A Performance Right gives the holder no rights other than those expressly provided by these terms and conditions and those provided at law where such rights at law cannot be excluded by these terms.

10.5 Guidance Note 19 disclosure

Pursuant to and in accordance with the requirements of Guidance Note 19, the following information is provided in relation to the issue of the Performance Rights:

- (a) the Performance Rights were issued to Pure in connection with the Company's application for admission to the Official List and form the consideration for the Acquisition;
- (b) details of the securities held by Pure as at the date of this Prospectus and following completion of the IPO is set out in Section 5.7;
- (c) the Company issued the Performance Rights to ensure that the consideration payable for the Acquisition was directly linked to the performance of the Projects being acquired. This is standard practice for acquisitions of oil and gas projects and is designed to protect the Company and its shareholders against the inherent risk associated with such acquisitions.

One of the milestones relate to the receipt of a 50PJs 2P certification, a certification relating to the reliability and probability of the reserves, which is clearly intended to manage the abovementioned risk. The alternative milestone relates to the performance of the Company's share price, which is also intended to protect shareholders against the inherent risks in acquiring the Projects the subject of the Acquisition.

- (d) the Company chose to grant the Performance Rights to Pure for the following reasons:
 - (i) the issue of Performance Rights to Pure will align the interests of Pure, as a major shareholder of the Company upon admission to the Official List, with those of shareholders by linking value realisation to future performance outcomes;
 - (ii) the grant of the Performance Rights has no immediate dilutionary impact on shareholders;
 - (iii) the issue of the Performance Rights is a reasonable and appropriate method to provide cost effective consideration as the non-cash form of this benefit will allow the Company to spend a greater proportion of its cash reserves on its operations than it would if alternative cash forms of consideration were given to the Pure; and
 - (iv) it is not considered that there are any significant opportunity costs to the Company or benefits foregone by the Company in granting the Performance Rights on the terms proposed;
- (e) the Board considers that the quantum of the consideration payable for the Acquisition reflected reasonable fair value of the Projects, and the Company having conducted arm's length negotiations with representatives of Pure to arrive at the commercial terms of the Acquisition.

The consideration payable was determined by the Board, following arm's length negotiations with representatives of Pure, and having regard to:

- (i) the Board's assessment of the future prospects of the Projects, based on its geological review of the Projects;

- (ii) recent market examples of comparable transactions, particularly in the oil and gas industry; and
- (iii) the fact the consideration payable will be deferred (i.e. the Performance Rights) and only realised in the event that either milestone is satisfied, which would be a significant value accretive event for the Company.

As to the precise number of Performance Rights, as well as the abovementioned factors, the Board was also cognisant of the principles and guidance articulated in ASX Guidance Note 19 with respect to the issue of performance linked securities in the context of an acquisition.

The Board also considers the number of Performance Rights to be appropriate and equitable, for the reason set out in paragraphs (f) to (g) below.

- (f) the full terms of the Performance Rights are set out in Section 10.4. The terms of the Performance Rights are consistent with the base requirements for performance securities which are detailed in section 9 of Guidance Note 19 as the Performance Rights:
 - (i) are not transferrable and will not be quoted on ASX or any other exchange;
 - (ii) do not confer any right to vote, except as otherwise required by law;
 - (iii) do not confer any entitlement to a dividend, whether fixed or at the discretion of the directors;
 - (iv) do not confer any right to a return of capital (whether in a winding up, upon a reduction of capital or otherwise);
 - (v) do not confer any right to participate in surplus profits or assets of the entity upon a winding up; and
 - (vi) do not confer any right to participate in new issues of securities such as bonus issues or entitlement issues;
- (g) in accordance with sections 10 and 11 of Guidance Note 19, the Company confirms that:
 - (i) the number of Performance Rights issued if the relevant milestones are achieved is appropriate and equitable for the purposes of Listing Rule 6.1 as:
 - (A) the number of Shares into which the Performance Rights will convert if the milestones are achieved is fixed (one for one) which allows investors and analysts to readily understand and have reasonable certainty as to the impact on the Company's capital structure if the milestones are achieved;
 - (B) there is an appropriate link between the milestones and the purpose for which the Performance Rights are being issued;
 - (C) there is an appropriate link to the benefit of shareholders and the Company at large through the achievement of the milestones, which have been constructed so that satisfaction of the milestones will be consistent with increases in the value of Company's business; and
 - (D) the Performance Rights which are proposed to be issued represent a small proportion of the Company's issued capital upon completion of the Offers, representing approximately 8.72% in aggregate (on a diluted basis); and

- (ii) the milestones attaching to the Performance Rights are appropriate and equitable as:
 - (A) the Performance Rights are being issued to Pure in its capacity as sole shareholder of Strata X and Pure Energy, and as the ultimate holding company of Real Energy, in consideration for the acquisition of the entire issued capital in these entities, forming an indirect acquisition of the Projects. The milestones are linked to operational milestones and share-price milestones which appropriately align with the Company's growth strategy. Namely, one of the milestones is linked to receipt of a key certification relating to the exploration and drilling to be undertaken at the Projects, with the alternative milestone relating to the performance of the Company's Shares post IPO;
 - (B) the conversion milestones for the Performance Rights are clearly articulated by reference to objective criteria which allows investors and analysts to readily understand and have reasonable certainty as to the circumstances in which the conversion milestones will be taken to have been met;
 - (C) the Performance Rights have an expiry date by which the milestones are to be achieved and, if the milestones are not achieved by that date, the Performance Rights will lapse; and
 - (D) the Performance Rights will make up less than 10% of the Company's issued share capital upon ASX listing (on a fully diluted basis) and, as such, a report from an independent expert is not required under section 13 of ASX Guidance Note 19.

In addition, none of the examples listed in section 11 of Guidance Note 19 (where ASX would deem performance milestones to be inappropriate) applied with respect to the issue of the Performance Rights.

10.6 Interests of directors

Other than as set out in this Prospectus, no Director or proposed Director holds, or has held within the 2 years preceding lodgement of this Prospectus with the ASIC, any interest in:

- (a) the formation or promotion of the Company;
 - (b) any property acquired or proposed to be acquired by the Company in connection with:
 - (i) its formation or promotion; or
 - (ii) the Offers; or
 - (c) the Offers,
- and no amounts have been paid or agreed to be paid and no benefits have been given or agreed to be given to a Director or proposed Director:
- (d) as an inducement to become, or to qualify as, a Director; or
 - (e) for services provided in connection with:
 - (i) the formation or promotion of the Company; or
 - (i) the Offers.

10.7 Interests of experts and advisers

Other than as set out below or elsewhere in this Prospectus, no:

- (a) person named in this Prospectus as performing a function in a professional, advisory or other capacity in connection with the preparation or distribution of this Prospectus;
- (b) promoter of the Company; or
- (c) underwriter (but not a sub-underwriter) to the issue or a financial services licensee named in this Prospectus as a financial services licensee involved in the issue,

holds, or has held within the 2 years preceding lodgement of this Prospectus with the ASIC, any interest in:

- (d) the formation or promotion of the Company;
- (e) any property acquired or proposed to be acquired by the Company in connection with:
 - (i) its formation or promotion; or
 - (ii) the Offers; or
- (f) the Offers,

and no amounts have been paid or agreed to be paid and no benefits have been given or agreed to be given to any of these persons for services provided in connection with:

- (g) the formation or promotion of the Company; or
- (h) the Offers.

Molyneux Advisors Pty Ltd has acted as Independent Technical Specialist and has prepared the Independent Technical Report which is included in Annexure A. The Company has paid Molyneux Advisors Pty Ltd a total of \$40,000 (excluding GST) for these services. During the 24 months preceding lodgement of this Prospectus with the ASIC, Molyneux Advisors Pty Ltd has not received fees from the Company for any other services.

HopgoodGanim Lawyers has prepared the Solicitor's Report on Title which is included in Annexure B. The Company estimates it will pay HopgoodGanim Lawyers a total of \$27,522 (excluding GST) for these services. During the 24 months preceding lodgement of this Prospectus with the ASIC, HopgoodGanim Lawyers has not received fees from the Company for any other services.

A D Danieli Audit has acted as Investigating Accountant and has prepared the Investigating Accountant's Report which is included in Annexure C. The Company estimates it will pay A D Danieli Audit a total of \$15,000 (excluding GST) for these services. During the 24 months preceding lodgement of this Prospectus with the ASIC, A D Danieli Audit has not received any fees from the Company.

Securities Vault will receive those fees set out in Section 4.4 following the successful completion of the Offers for its services as Lead Manager to the Offers. Further details in respect to the Lead Manager Mandate with Securities Vault are summarised in Section 9.1. During the 24 months preceding lodgement of this Prospectus with the ASIC, Securities Vault has not received fees from the Company for any other services.

Steinepreis Paganin has acted as the Australian legal advisers to the Company in relation to the Offers. The Company estimates it will pay Steinepreis Paganin \$100,000 (excluding GST) for these services. Subsequently, fees will be charged in accordance with normal charge out rates. During the 24 months preceding lodgement of this Prospectus with the ASIC, Steinepreis Paganin has not received fees from the Company for any other services.

10.8 Consents

Chapter 6D of the Corporations Act imposes a liability regime on the Company (as the offeror of the Shares), the Directors, any underwriters, persons named in the Prospectus with their consent having made a statement in the Prospectus and persons involved in a contravention in relation to the Prospectus, with regard to misleading and deceptive statements made in the Prospectus. Although the Company bears primary responsibility for the Prospectus, the other parties involved in the preparation of the Prospectus can also be responsible for certain statements made in it.

Each of the parties referred to in this Section:

- (a) does not make, or purport to make, any statement in this Prospectus other than those referred to in this Section;
- (b) in light of the above, only to the maximum extent permitted by law, expressly disclaim and take no responsibility for any part of this Prospectus other than a reference to its name and a statement included in this Prospectus with the consent of that party as specified in this Section; and
- (c) has not withdrawn its consent prior to the lodgement of this Prospectus with the ASIC.

Molyneux Advisors Pty Ltd has given its written consent to being named as Independent Technical Specialist in this Prospectus, the inclusion of the Independent Technical Report in Annexure A in the form and context in which the report is included.

HopgoodGanim Lawyers has given its written consent to the inclusion of the Solicitor's Report on Title in Annexure B in the form and context in which the report is included.

A D Danieli Audit has given its written consent to being named as Investigating Accountant in this Prospectus and to the inclusion of the Investigating Accountant's Report in Annexure C in the form and context in which the information and report is included.

Steinepreis Paganin has given its written consent to being named as the Australian legal advisers to the Company in relation to the Offers in this Prospectus.

Securities Vault has given its written consent to being named as the Lead Manager to the Company in this Prospectus.

Automic Group has given its written consent to being named as the share registry to the Company in this Prospectus.

10.9 Expenses of the Offers

The total expenses of the Offers (excluding GST) are estimated to be approximately \$490,000 and are expected to be applied towards the items set out in the table below:

ITEM OF EXPENDITURE	(\$)
ASIC fees	3,206
ASX fees ¹	105,513
Lead Manager Fees ²	190,000
Legal Fees	127,522
Independent Technical Specialist Fees	40,000
Investigating Accountant's Fees	15,000
Miscellaneous	8,759
Total	\$490,000

Notes:

1. The Company notes that Pure will provide the Company with an interest free loan to allow the Company to pay the ASX listing fee, with this loan repayable in cash post-listing.
2. Assuming that \$2,000,000 is raised under the Offers from parties introduced to the Offers by the Lead Manager.

11. DIRECTORS' AUTHORISATION

This Prospectus is issued by the Company and its issue has been authorised by a resolution of the Directors.

In accordance with Section 720 of the Corporations Act, each Director has consented to the lodgement of this Prospectus with the ASIC.

12. GLOSSARY

Where the following terms are used in this Prospectus they have the following meanings:

\$ means an Australian dollar.

Aboriginal Cultural Heritage has the meaning prescribed in the *Aboriginal Cultural Heritage Act 2003* (Cth).

Acquisition has the meaning given in section 5.1.

A D Danieli Audit or Investigating Accountant means A D Danieli Audit Pty Ltd (ABN 56 136 616 610).

Application Form means the General Offer Application Form and/or the Pure Offer Application Form (as the context requires) attached to or accompanying this Prospectus.

ASIC means Australian Securities & Investments Commission.

ASX means ASX Limited (ACN 008 624 691) or the financial market operated by it as the context requires.

ASX Listing Rules means the official listing rules of ASX.

Board means the board of Directors as constituted from time to time.

Boonthamurra People means Mark Wallace and Barabra Olsen, in their capacity as negotiation parties pursuant to section 30A of the Native Title Act 1993 (Cth) for the Boonthamurra People Native Title Party.

Broker Offer has the meaning given in Section 4.5.

Broker Options means Options issued under the Broker Offer.

Business Days means Monday to Friday inclusive, except New Year's Day, Good Friday, Easter Monday, Christmas Day, Boxing Day, and any other day that ASX declares is not a business day.

CHESS means the Clearing House Electronic Subregister System operated by ASX Settlement.

Cleansing Offer has the meaning given in Section 4.5.

Closing Date means the General Offer Closing Date and/or the Pure Offer Closing Date (as the context requires).

Company or **Eastern Gas** means Eastern Gas Corporation Limited (ACN 692 331 838).

Conditions has the meaning set out in Section 4.8.

Constitution means the constitution of the Company.

Corporations Act means the Corporations Act 2001 (Cth).

Directors means the directors of the Company at the date of this Prospectus.

EFT means electronic funds transfer.

Eligible Pure Shareholder means Pure Shareholders who are registered on the Pure Offer Record Date and who are resident in Australia.

EST means Eastern Standard Time as observed in Sydney, Australia.

Exposure Period means the period of 7 days after the date of lodgement of this Prospectus, which period may be extended by the ASIC by not more than 7 days pursuant to Section 727(3) of the Corporations Act.

General Offer means the offer of Shares pursuant to this Prospectus as set out in Section 4.1.

General Offer Application Form means the Application Form in respect of the General Offer.

General Offer Closing Date means the closing date of the General Offer as set out in the indicative timetable in Section 2.1.

Incentive Offer has the meaning given in Section 4.5.

Incentive Options means Options issued under the Incentive Offer.

Lead Manager means Securities Vault.

Lead Manager Mandate means the agreement with the Lead Manager summarised in Section 9.1.

Minimum Subscription means the minimum amount to be raised under the Offer, being \$5,500,000.

Offers means the General Offer and the Pure Offer as set out in Section 4.1.

Official List means the official list of ASX.

Official Quotation means official quotation by ASX in accordance with the ASX Listing Rules.

Option means an option to acquire a Share.

Original Prospectus means the prospectus lodged by the Company with the ASIC dated 5 December 2025.

Petroleum and Gas Regulations means Petroleum Gas (Production and Safety) Regulations 2004.

Projects has the meaning set out in Section 3.

Prospectus or **Replacement Prospectus** means this prospectus.

Pure means Pure One Corporation Limited (ACN 160 885 343).

Pure Offer Application Form means the Application Form in respect of the Pure Offer.

Pure Offer Closing Date means the closing date of the Pure Offer as set out in the indicative timetable in Section 2.1.

Pure Offer Record Date means the record date of the Pure Offer as set out in the indicative timetable in Section 2.1.

Pure Shareholder means a registered shareholder of Pure.

Recommendations has the meaning set out in Section 8.4.

Section means a Section of this Prospectus.

Securities means securities in the capital of the Company including Shares, Options and other convertible securities.

Securities Vault means Securities Vault Pty Ltd (ACN 632 362 568).

Share means a fully paid ordinary share in the capital of the Company.

Shareholder means a holder of Shares.

Spin-Out has the meaning given in Section 5.1.

US means United States of America.



MOLYNEUX
ADVISORS

Independent Technical Report
ATP 2051 and ATP 927
For: Eastern Gas

13 NOVEMBER 2025



molyneuxadvisors.com

Molyneux Advisors Pty Ltd
(ACN 624 938 049)
45 Ventnor Avenue
West Perth WA 6005

To: The Board of Directors
Eastern Gas Corporation Limited
Level 2, 61 Victoria Street
McMahons Point NSW 2060

13 November 2025

Independent Technical Expert Report – Eastern Gas Corporation Limited

Molyneux Advisors Pty Ltd (“MA”) was engaged by Eastern Gas Corporation Limited (“Eastern Gas”) to prepare an Independent Technical Expert Report (ITR) providing an independent evaluation of the petroleum resources contained within ATP 2051 (CSG, Surat Basin, Queensland) and ATP 927 (Cooper Basin, Queensland).

MA has completed an independent technical assessment of these assets, and our findings are presented in the accompanying ITR.

MA understands that this ITR will be included in a prospectus to be lodged with the Australian Securities and Investments Commission (ASIC) in connection with the initial public offering (IPO) of the securities of Eastern Gas Corporation Limited.

This ITR has been prepared in accordance with ASIC Regulatory Guides 111 and 112 and is consistent with relevant industry standards for reporting petroleum resources and reserves.

Assessment Basis and Limitations

The assessment of petroleum assets involves inherent uncertainty due to numerous variables that cannot be precisely determined. These include, but are not limited to, estimates of recoverable volumes, future production rates, development and operating costs, market access, commodity pricing, and potential fiscal or regulatory changes.

The statements, interpretations, and opinions expressed by MA are provided in good faith, based on information available at the time of preparation, and are believed to be accurate and not misleading. In forming our opinions, MA has relied upon information made available in a secure data room, supplemented by publicly available information and discussions with Eastern Gas representatives.

MA has not independently verified property titles, tenure encumbrances, or applicable regulations governing the assets. MA has also not audited historical cost data, including past recovered or unrecovered development and exploration costs, undepreciated capital balances, or accumulated tax losses as at the valuation date.

Independence

MA and its directors, officers, and employees have no pecuniary or other interest in Eastern Gas or the assets reviewed, other than professional fees for the preparation of this report. These fees are not contingent upon the outcome of the proposed transaction. MA is therefore independent of Eastern Gas within the meaning of ASIC Regulatory Guide 112 and provides this report on that basis.

Consent



MA consents to the inclusion of this ITR, in full and in the form and context in which it appears, within the prospectus for the proposed listing of Eastern Gas Corporation Limited, and to being named as the Independent Technical Expert in accordance with ASX Listing Rule 5.41.

Yours faithfully,

For and on behalf of Molyneux Advisors Pty Ltd

A handwritten signature in black ink that reads "Hongfeng Wu".

Hongfeng Wu

Director

Molyneux Advisors Pty Ltd



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1. BASIS OF ASSESSMENT

1.1. Qualifications

MA is an independent oil and gas advisory company. All MA staff and associates engaged in this assignment are professionally qualified engineers, geoscientists or analysts with more than twenty years' work experience in senior technical and managerial positions in the petroleum industry.

MA was founded in 2018 to provide independent advice to companies associated with the oil and gas industry. Today the company has approximately fifteen highly experienced staff and consultants at its offices in Perth and locations in Europe and the USA. Our services cover the entire range of the oil and gas business lifecycle and include:

1. Oil and gas asset valuations, expert advice to banks and other financial institutions for debt or equity finance.
2. Exploration/portfolio management.
3. Field development planning and field re-development in mature fields.
4. Reserves/resources assessment and certification, peer reviews.
5. Gas market advice.
6. Independent Expert/Expert Witness reviews.
7. Strategy and corporate planning.
8. Evaluation of sustainable energy options and developments in connection with the energy transition.

The estimates of contingent resources and prospective resources in this report are based upon, and fairly represent, information and supporting documentation used by, or under the supervision of Mr. Hongfeng Wu, the Director of Molyneux Advisors Pty Ltd, a (Full) member of Society of Petroleum Evaluation Engineers (SPEE #1021) and a member of Society of Petroleum Engineers (SPE # 5084882). Hongfeng Wu and the MA Technical/Review Team have provided their prior written consent as to the form and context in which the estimated reserves, contingent resources and prospective resources and the supporting information are presented in this report. Mr. Hongfeng Wu has 27 years of experience in the oil and gas exploration and development business working with some of the world's largest oil and gas producers.

Mr. Hongfeng Wu has adhered to ASX Guidance Note 32 and his qualifications and experience meet the requirements to act as a Competent Person to report hydrocarbon resources under PRMS and the Prospectus based on the information in the form and context in which it appears. Mr. Hongfeng Wu has sufficient experience which is relevant to the evaluation and estimation of contingent resources and prospective resources to qualify as a Qualified Reserves and Resources Evaluator as defined in the ASX Listing Rules

This ITR is an integrated product. The associates or consultants involved in preparing and reviewing this ITR are listed in Section 16, [Molyneux Advisors Technical/Review Team](#).

1.2. Limitations

The assessment of petroleum assets is subject to uncertainty because it involves judgments on many variables that cannot be precisely assessed, including reserves/resources, future oil and gas production rates, the costs associated with producing these volumes, access to product markets, product prices and the potential impact of fiscal/regulatory changes.

The statements and opinions attributable to MA are given in good faith and in the belief that such statements are neither false nor misleading.



Whilst this report has been prepared within the context of the effects of petroleum legislation, taxation, and other regulations, that currently apply to assets, MA has not independently verified property title, encumbrances, regulations that apply to these assets. MA has not audited the opening balances at the valuation date of past recovered and unrecovered development and exploration costs, undepreciated past development costs and tax losses.

Under its contract with MA, Eastern Gas Corporation Limited has agreed to release, discharge and indemnify MA from all or any claims, losses, costs, expenses, actions, demands, judgments, orders, liability at law or in equity however arising including but not limited to any claim or consequential damages or any other proceedings whatsoever incurred by MA in respect of any claim by a third party (including associates, agents or employees of the client) in connection with any liability that arises because MA relied on information provided by Eastern Gas Corporation Limited.

1.3. Independence

MA makes the following disclosures:

1. MA is independent with respect to Eastern Gas Corporation Limited and confirms that there is no conflict of interest with any party involved in this assignment.
2. Under the terms of engagement between MA and Eastern Gas Corporation Limited for the provision of this report, MA will receive a fee, payable by Eastern Gas Corporation Limited. The payment of this fee is not contingent on the intended purpose of this report.
3. Neither MA Directors nor any staff involved in the preparation of this report hold interests in Eastern Gas Corporation Limited or its affiliates.

1.4. Hydrocarbon Accounting Standard

Reserves and resources are reported in accordance with the definitions of Reserves, Contingent Resources and Prospective Resources and guidelines set out in the Petroleum Resources Management System (PRMS) approved by the Society of Petroleum Engineers in 2018. The following paragraphs briefly describe the definitions and categories of hydrocarbon volumes listed in this report:

Reserves: Commercially recoverable by application of development projects to known accumulations, from a given date forward under defined conditions (one or more exploratory wells should have established the existence of a significant quantity of recoverable hydrocarbons through testing, sampling, and/or logging). Reserves have three sub-categories: 1P (Low), Proved reserves, 2P (Best), Proved plus Probable reserves, and 3P (High), Proved plus Probable plus Possible reserves based on future economic conditions.

Resources: All quantities of petroleum that exist originally in discovered and undiscovered natural accumulations, including recoverable (commercial) and unrecoverable (sub-commercial) by the currently defined project(s), in addition to previously produced hydrocarbons.

Contingent Resources: Potentially recoverable by application of development projects from known discovered accumulations that are not currently commercial, owing to one or more contingencies. Contingent Resources can be broken into three sub-categories: 1C (Low), 2C (Best), and 3C (High).

A portion of these quantities may become recoverable in the future when commerciality can be assessed, or as commercial circumstances change, technology is developed (dependent on technology under development), or additional data are acquired. Additionally, contingent Resources include uneconomic volumes and the remaining accumulations that may never be recovered.



Prospective Resources: Potentially recoverable by application of development projects from undiscovered accumulations (such as adjacent reservoirs isolated and separated from a known accumulation by major or potentially sealing faults, or a structurally low reservoir separated by a non-productive reservoir). Prospective Resources can be broken into three sub-categories: 1U (Low), 2U (Best) and 3U (High).

Prospective resources have an associated Chance of Discovery and a Chance of Development that determine the Chance of Commerciality. These estimates have not been risked based on an estimate of the “Geological Chance of Success”.

For convenience, the resources classification framework and sub-classes based upon project maturity from (SPE, 2018)(Page 7/57, Page13/57) are shown as [Figure 1-1](#) and [Figure 1-2](#) in this ITR.

1.5. Classification of Gas Resources in ATP 2051 and ATP 927

According to the above PRMS definitions, the gas resources contained in both ATP 2051 and ATP 927 can be classified as **Contingent Resources, Development on Hold (CR-DH)** as outlined in red in [Figure 1-2](#).

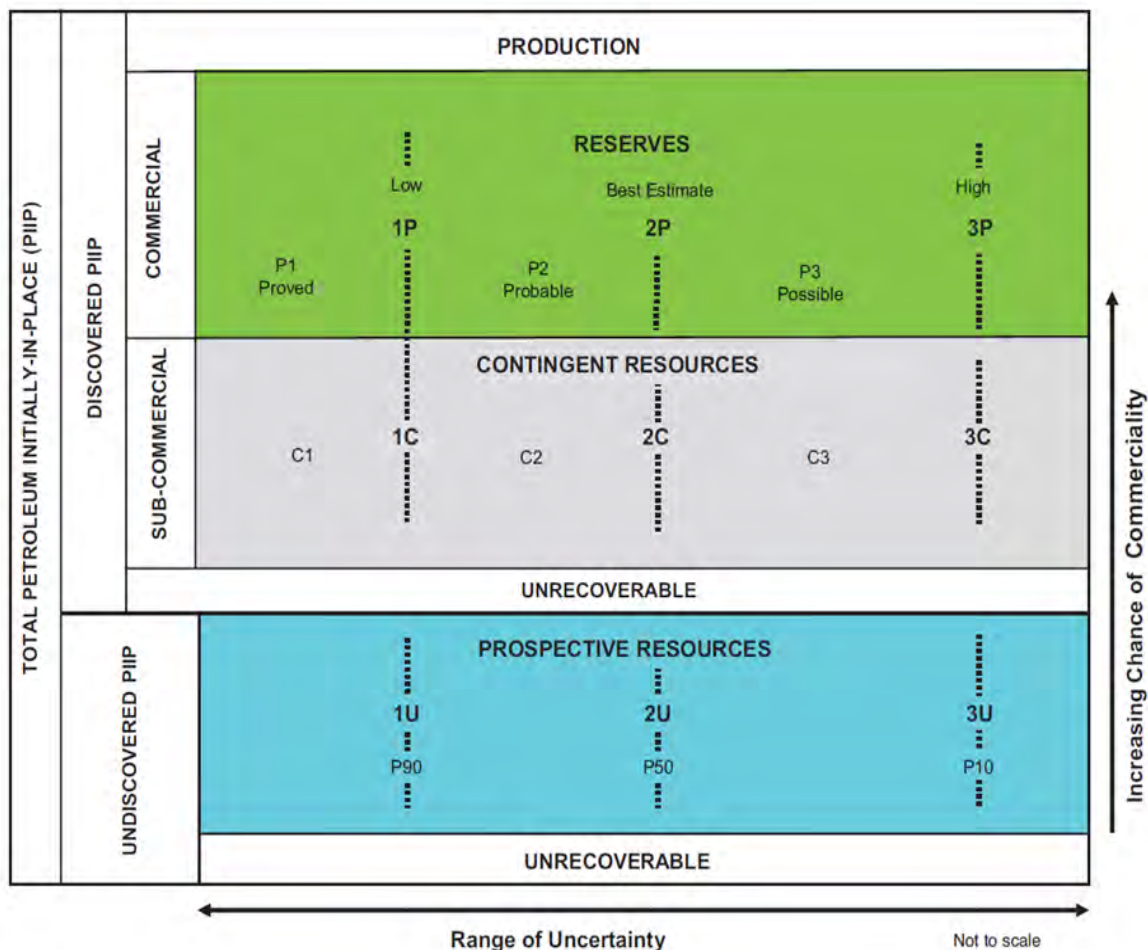


Figure 1-1: Resource classification framework (SPE, 2018)



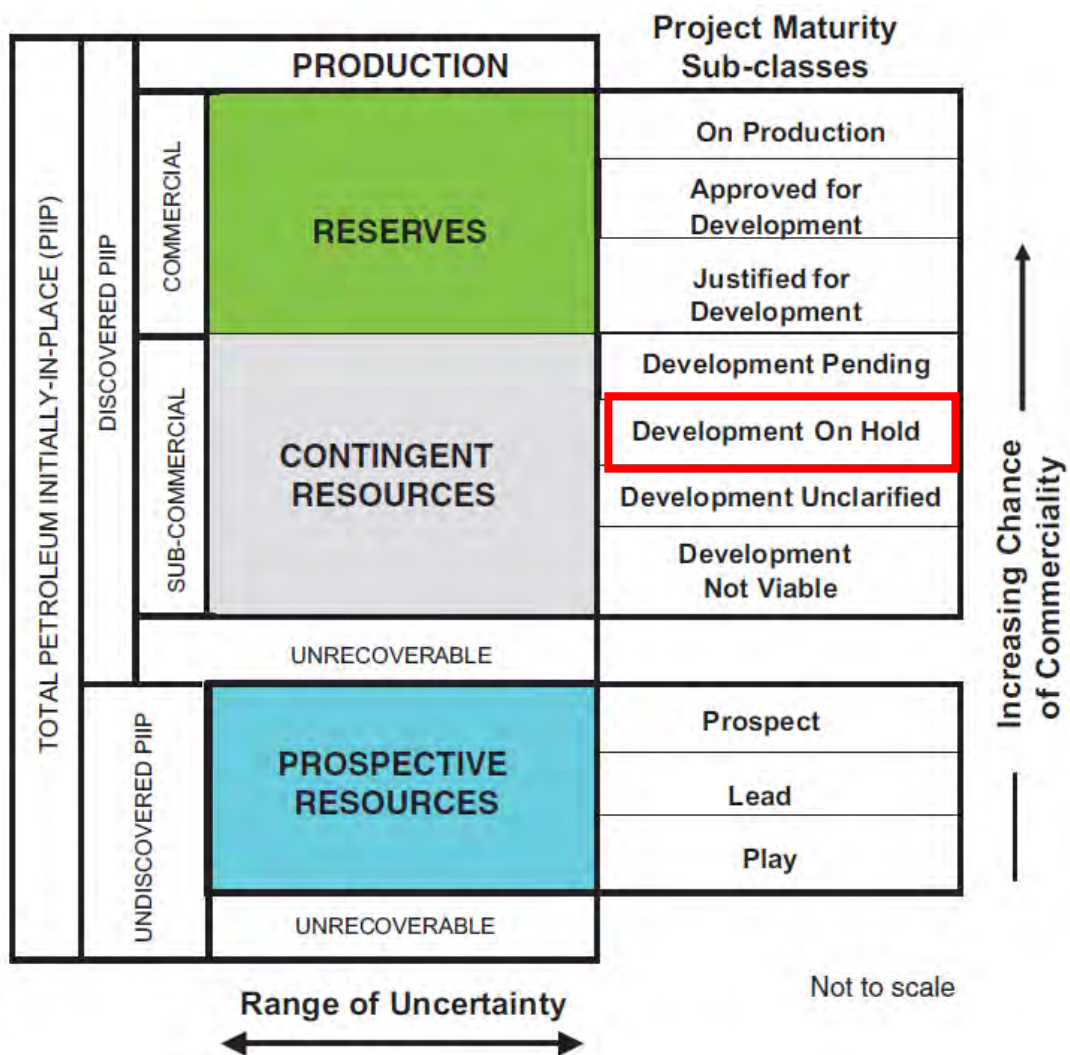


Figure 1-2: Sub-classes based upon project maturity (SPE, 2018)



2. ATP 2051 EXECUTIVE SUMMARY

Eastern Gas holds 100% interest in Authority to Prospect (ATP) 2051, covering an area of 78 km² on the northeastern flank of the Surat Basin. The permit for Coal Seam Gas (CSG) exploration and evaluation is close to existing infrastructure, notably key pipelines that supply gas to the east coast market (PPL 123 and PPL 74), and the Wallumbilla and Bellevue Central Processing Plant (CPP) facilities. The area is considered highly prospective since CSG has been successfully produced from acreage directly to the east and south-east of ATP 2051 via the Australia Pacific LNG, Gladstone LNG and other developments since 2004.

ATP 2051 was granted on 23 March 2020 for an initial term of six years. The permit originally comprised two sub-blocks: BRIS2161 and BRIS2233. On 22 March 2024, sub-block BRIS2233 was relinquished, and ATP 2051 now consists solely of BRIS2161. From this point forward, reference to ATP 2051 should be understood to refer exclusively to sub-block BRIS 2161.

Some 600 km of 2D seismic were acquired across ATP 2051 between 1978 and 2012 and 5 vertical wells were drilled to evaluate CSG potential between 2006 and 2020. The latest well, Venus 1, was drilled in 2020, and used coiled-tubing abrasive jetting as a stimulation method to improve gas productivity. Whilst flow-tests from these wells produced gas to surface, no sustainable commercial flow rates were achieved.

The main target for CSG in ATP 2051 is the Jurassic-age Walloon Coal Measures (WCM), which is the main productive section in the Surat Basin. The WCM was deposited in a fluvial environment where coal seams formed in low-lying swamps between sinuous sand-filled river channels. The WCM contains three major sequences: Upper Juandah Coal Measures (UJCM) at the top, the Lower Juandah Coal Measures in the middle (LJCM) and the Taroom Coal Measures (TCM) at the Base.

The coals are generally thin, low rank and sub-bituminous with an average vitrinite reflectance of 0.45%. Gas content ranges from 1 to 15 m³/tonne (dry ash-free). WCM reservoir properties such as permeability, gas content and saturation, vary with depth, coal seam composition and structural position. Gas content increases while permeability generally decreases with depth.

The WCM in ATP 2051 are 400 - 600 m deep, with a high net coal thickness (30 - 40 m), high gas content (4 - 6 m³/tonne) and saturation. ATP 2051 has higher original-gas-in-place (OGIP) density than other, nearby, acreage with established production. However, the WCM in this area is characterised by much lower permeability as determined from well tests (generally less than 5 mD) resulting in lower productivity.

Sproule Incorporated was contracted by Real Energy (previous ATP 2051 tenement holders) in 2021 to undertake an independent CSG resource certification of ATP 2051 following the drilling of the Venus-1 well. In support of this work, Adavale Energy completed a study of all wells within the two graticule blocks of ATP 2051, providing maps and data to underpin the resource assessment. Contingent resources estimated by Sproule for the UJCM are listed in [Table 2-1](#).

As an Independent Technical Specialist, MA validated the original-gas-in-place (OGIP) estimation by Adavale Energy as a likely Mid-Case outcome. The contingent resources certified by Sproule are classified as **Technology Under Development** in reference to the novel use of coiled-tubing abrasive jetting used to stimulate production, noting that this is not a recognised subclassification within the PRMS.

Following the disappointing flow test of Venus-1, Eastern Gas has now abandoned abrasive jetting technology as an approach to CSG development in APT 2051. Instead, it is now proposed to drill horizontal wells in the UJCM unit of the WCM and obtain long term production test data that can be used to de-risk the project and optimise CSG recovery. This will be done as part of a clearly defined work program following the IPO.



Table 2-1: Summary of contingent resources in ATP 2051 UJCM certified by Sproule^{1,2}

ATP 2051	Contingent Resources (PJ)		
UJCM ^{3,4}	1C	2C	3C
	87.7	130.3	157.9

MA endorses the work program proposed by Eastern Gas. Learnings gained from this initial program should aim to reduce the risk associated with the development of CSG in ATP 2051, particularly with respect to wellbore stability, optimum well trajectory and length, enhancing permeability and maximising coal seam exposure.

MA undertook an independent analysis of the contingent resources using horizontal well technology, as summarised in Table 2-2 below and detailed in Section 5 ATP 2051 RESOURCE ASSESSMENT of this report. Our conclusion is that the range of contingent resource estimates is greater than that provided by Sproule, particularly with respect to the 3C (High case) recoverable volume. This reflects the greater uncertainty associated with horizontal well performance and OGIP.

Table 2-2: Summary of recoverable volume in ATP 2051 UJCM By MA^{1,2}

ATP 2051	Contingent Resources (PJ)		
UJCM ^{3,4}	1C	2C	3C
	72.6	137.4	217.5

MA has classified ATP 2051 gas resources as **Contingent Resources, Development on Hold**. This has been done in accordance with the PRMS 2018 guidelines and taking particular note of the following:

1. The commercial development of discovered resources in ATP 2051 is currently subject to delay because the horizontal well technology planned to establish commercial flow rates for a CSG development in the UJCM has yet to be demonstrated. While commercial development of CSG fields using horizontal wells has been successfully achieved in the Bowen basin and elsewhere, this drilling technique is not well-established in the Surat Basin for analogous CSG fields.
2. No economic evaluation of this project has yet been completed. This will be done following the results of an initial appraisal phase which will aim to de-risk the project and establish flow rates which can underpin a commercial development of the area as a whole.

In summary, ATP 2051 provides an opportunity to develop CSG in an area and basin where commercial CSG is already in production. The range of OGIP is estimated to be wider than previously assessed and there is potential for greater upside. However, ATP 2051 lies on the margin of acreage with established production. The key risk to productivity and ultimate recovery

¹ Eastern Gas holds a 100% net equity interest in ATP 2051; therefore, the company's net share of resources is equal to the project's gross (100%) volumes. All reported resources are according to economic interest, net of royalties, and that no pure service contracts apply

² The recoverable volumes presented in this report are based on coal seams with an average permeability equal or greater than 2 millidarcies (mD).

³ Reported volumes have been adjusted downward by 2% to account for fuel use and shrinkage.

⁴ A gas conversion factor of **1.055 PJ per Bscf** has been applied throughout this report.



is low coal seam permeability and vertical well tests have yet to be able to demonstrate commercial flow rates, despite the application of novel stimulation technologies. Eastern Gas now identifies an alternative path to commercial development based on horizontal wells optimised to maximise productivity. This will be evaluated based on an initial 6 well program and associated studies to de-risk the project following the IPO.

MA classifies the hydrocarbon accumulation in ATP 2051 as **Contingent Resources** Subclass **Development on Hold (CR-OH)** on the basis that the use of horizontal wells to produce CSG at commercial flow rates from the Surat basin in general, and the ATP 2051 acreage in particular, has yet to be demonstrated.



3. ATP 2051 OVERVIEW

3.1. ATP 2051 Location and Permit History

Eastern Gas holds a 100% interest in ATP 2051, comprising 159 sub-blocks covering an area of 78 km² on the northeastern flank of the Surat Basin (Figure 3-1). The permit is close to existing infrastructure, located adjacent to the Berwyndale-Wallumbilla (PPL123) and Peat Lateral (PPL74) pipelines supplying the east coast market, and close to the Wallumbilla and Bellevue Central Processing Plant (CPP) facilities. The acreage to the east and south-east has been intensively developed for CSG to supply projects such as Australia Pacific LNG, Gladstone LNG and others since 2004.

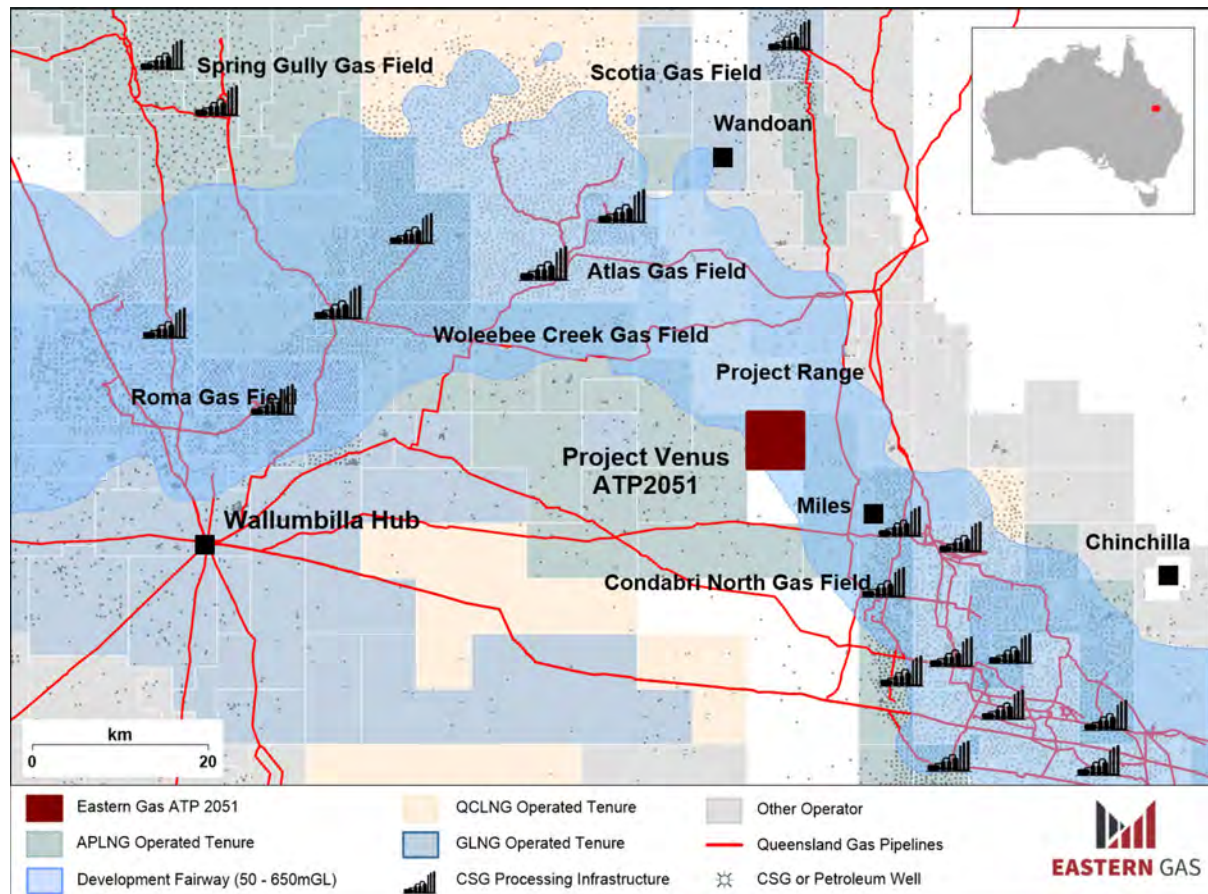


Figure 3-1: Location of ATP 2051 in the southern Surat Basin
Proximity to gas infrastructure, drilling density and competitor acreage are highlighted

ATP 2051, previously held as ATP 632P, was relinquished by QGC in 2017. It was then awarded to Real Energy Corporation Limited and Strata-X Energy Limited, a 50:50 joint venture that later merged to form Pure Hydrogen in early 2021.

The permit was granted on 23 March 2020 for a period of six years. ATP 2051 originally comprised two sub-blocks, BRIS2161 and BRIS2233 (Figure 3-2). On 22 March 2024, BRIS2233 was relinquished, and the permit now consists solely of BRIS2161 (Figure 3-1, Figure 3-2).

3.2. ATP 2051 Exploration and Appraisal History

ATP 2051 is located on the western edge of the Walloon CSG Fairway where over 10,000 CSG wells have been drilled and connected to gas processing and transportation infrastructure (Figure 3-1). 2D seismic lines (600 km in total) have been acquired over this permit between 1978 and 2012 (Figure 3-2).



One oil exploration well targeting Early Jurassic sandstones was drilled in 1966, and four CSG wells were drilled between 2008 and 2014 by QGC Pty. Ltd. prior to Real Energy acquiring the acreage (Figure 3-2).

The wells drilled in ATP 2051 are summarised in Table 3-1.

Table 3-1: Wells drilled within ATP2051

Well Name	Year drilled	Top Walloon (m)	Thickness of WCM (m)	Total Depth (m)	Status
Auburn-1	1966	370	-	1864	Plugged & Abandoned Oil Exploration
Connor-1	2008/9	408	337.6	850	Cased & Suspended CSG
Connor-2	2009	400	344.8	779	Cased & Suspended CSG
Connor-3	2013	659	280.1	1055	Cased & Suspended CSG
Connor-4	2014	622	323.8	1063	Plugged & Abandoned CSG
Venus-1	2020	395	222.7	715	Cased & Suspended CSG

The Connor-1 to -4 wells established the presence of gas-saturated coal seams in the Walloon Sub-Group. However, no commercial gas flows have been established in ATP 2051.

Venus-1 was drilled in November 2020 by Real Energy as a vertical appraisal CSG well (Figure 3-2, Figure 3-3). The Walloon Coal Measures (WCM) section encountered 25m of net coal with elevated gas shows over the Juandah Coal Measures and upper Taroom Coal Measures. Two target coal seam gas packages (Macalister and Nangram) in the Upper Juandah Coal Measures were stimulated using coiled tubing abrasive jetting to improve production rates.

The target coal seams encountered by Venus-1 were stimulated using abrasive jetting in March 2021. The well was subsequently completed in April 2021 with 2 7/8-inch tubing and equipped with a progressive cavity (PCP) pump. Following completion, the well was connected to a coal seam gas (CSG) surface production unit, which included a separator, flare stack, water and gas meters, pressure safety valves, a wellhead choke, and a separator pressure / Kimray valve. Venus-1 was brought online on 28 April 2021, and a gas flow test was conducted from 28 April to 25 August 2021.

Pressure drawdown was achieved by pumping water out of the well. Eastern Gas reported an instantaneous gas flow of over 80,000 scf/d after 50 barrels of water production was estimated, with limited flaring (Braimoh, 2023).

As a sustainable commercial gas rate⁵ is yet to be achieved in Venus-1, Eastern Gas has shifted its strategy from the under-reaming and abrasive jetting of coals to trialling horizontal drilling in the thickest coal seams, such as the 4-metre thick Lower Macalister seam.

⁵ At present what constitutes a commercial rate is yet to be determined. This will be a function of the coal seam properties, expenditure and speed at which the wells can be drilled, completed and de-watered. A full economic evaluation will be done following the planned appraisal work program (Section 5.6).



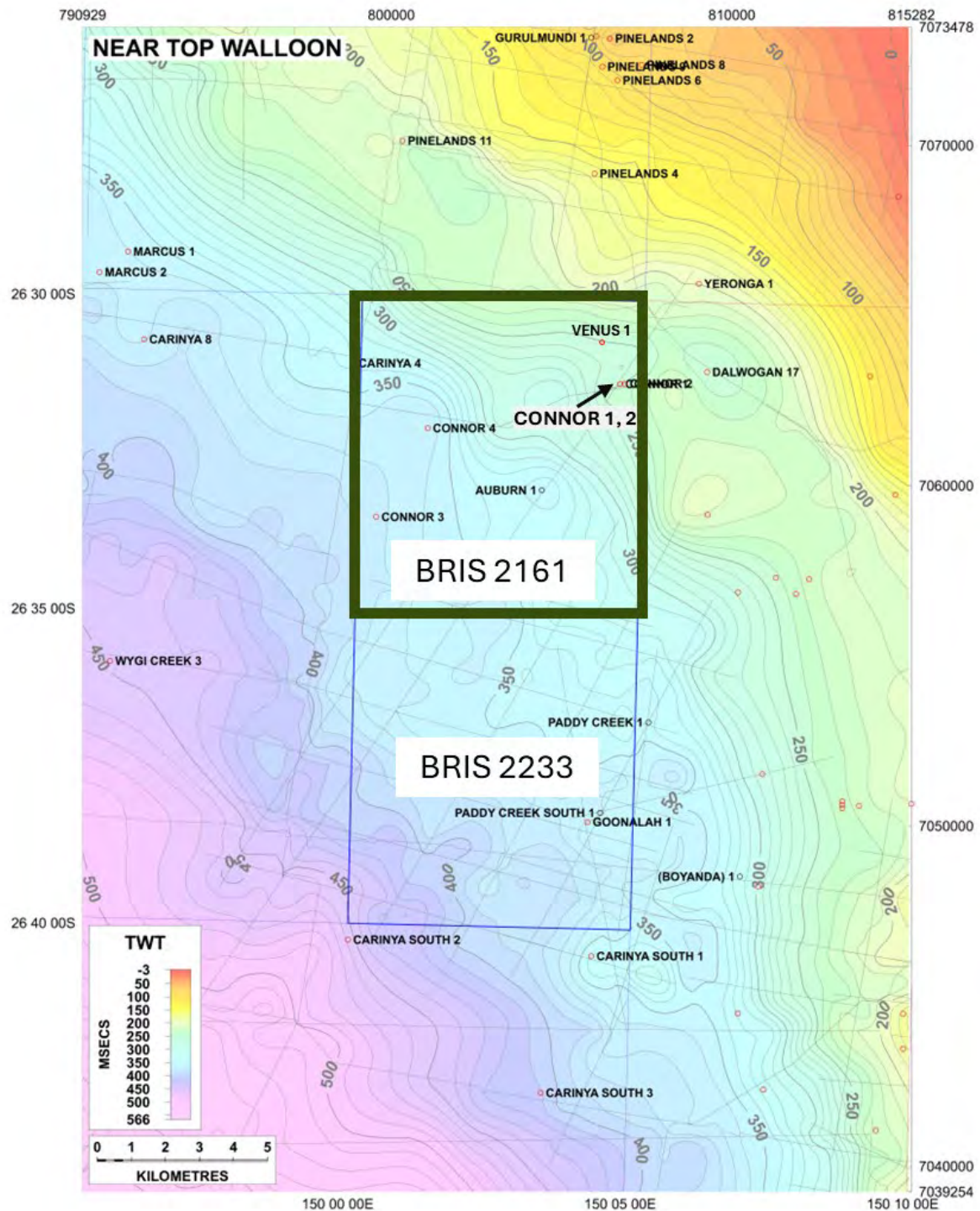


Figure 3-2: Near top Walloon seismic TWT (Two-Way-Time) map
 Seismic lines (grey) showing wells located in and adjacent to ATP2051. The dark green box is the outline of the current ATP 2051.



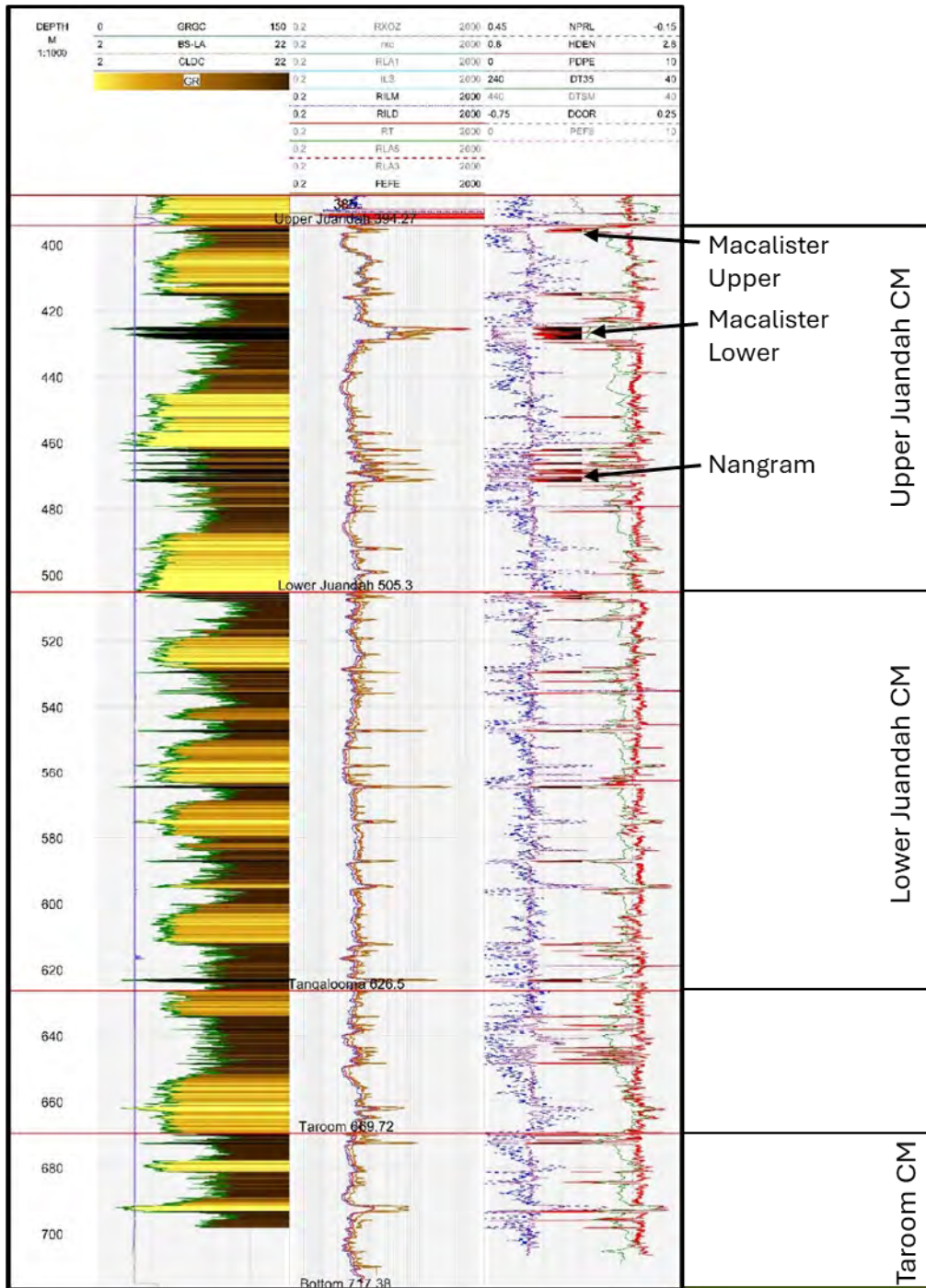


Figure 3-3: Venus-1 Walloon Coal Measures (WCM) wireline logs
(coal seams shown in black)

3.3. Work Program – Project Venus

Project Venus is designed to produce coal seam gas from the Upper Juanda Coal Measures (UJCM). A thicker Macalister seam (around 4 - 5.8 m thickness) intersected by Venus-1 (Figure 3-3), and Connor-1, -2, -3 and -4 wells, will be the target of horizontal drilling and planned extended production testing.

The initial 4-year work program (IWP) ended on 22 March 2024. Under this work program, the joint venture had expected to carry out the drilling of six wells including horizontal wells through the Macalister seam with an estimated expenditure of \$21.35 million. However, due to the COVID Pandemic, only one vertical well (Venus-1) was drilled at a cost of approx. \$4 million.

which flowed gas to surface at approximately 84,000 scf/d (breakout gas rate) after abrasive jetting stimulation in March 2021. After the Venus-1 well test, the remaining Initial Work Program has been suspended, and Eastern Gas is seeking a Special Amendment to the initial Work Program.

A Proposed Later Work Program (LWP) for the remaining 2 years of the 6-year permit term summarised in [Table 3-2](#) approved by the Department of Natural Resources (DoR). The permit will expire on 22 March 2026.

Table 3-2: ATP 2051 proposed later work program (LWP)

Permit Year	Proposed Work
1 & 2	Reservoir engineering, geological, geomechanical and geophysical studies, Well design and planning
	Drilling two pairs of vertical/horizontal wells
	Up to 180 days production testing of 1 well

Drilling of two pairs of vertical/horizontal wells is planned to commence after completion of the Initial Public Offering (IPO) of Eastern Gas.

The principal objective will be to test the horizontal well production potential of the UJCM, and in particular the thick Macalister coal section at the top of the WCM which is estimated to be between 4 to 6 m thick across the northern part of ATP 2051. The two wells are planned to be near Venus-1 aiming to prove productivity of horizontal wells, then to other areas of the permit to test its full commercial viability.

Following successful well outcomes and contingent on the implementation of cost effective and repeatable horizontal drilling and completion technology, Eastern Gas will carry out further appraisal and field development planning with the aim of moving towards full project execution.

MA notes that the proposed budget for ATP 2051, as presented in the IPO Prospectus, is generally consistent with the indicative costs typically associated with the activities outlined in the LWP. The types of activities and their relative weighting reflect Eastern Gas’s stated priorities for ATP 2051 at its current level of technical maturity. Eastern Gas has also described a staged work programme that aligns with the budget allocations included in the Prospectus. Based on the material provided to MA, the proposed programme and expenditure appear to be supported by the Company’s internal technical assessments. MA makes no comment on the appropriateness or sufficiency of the budget beyond noting this alignment.



4. ATP 2051 REGIONAL GEOLOGICAL SETTING

ATP 2051 covers sediments comprising the Bowen and Surat Basins in the Southeast Queensland/North NSW (Figure 4-1, Figure 4-2). The Jurassic- and Cretaceous-age sediments located in the Surat Basin overlie those in the Permian-Triassic-age Bowen Basin. There are many detailed descriptions and studies of these basins (e.g. Exon 1976, Cadman et. al., 1998, Draper, 2013). A summary relevant to the resource potential of the ATP 2051 is discussed here.

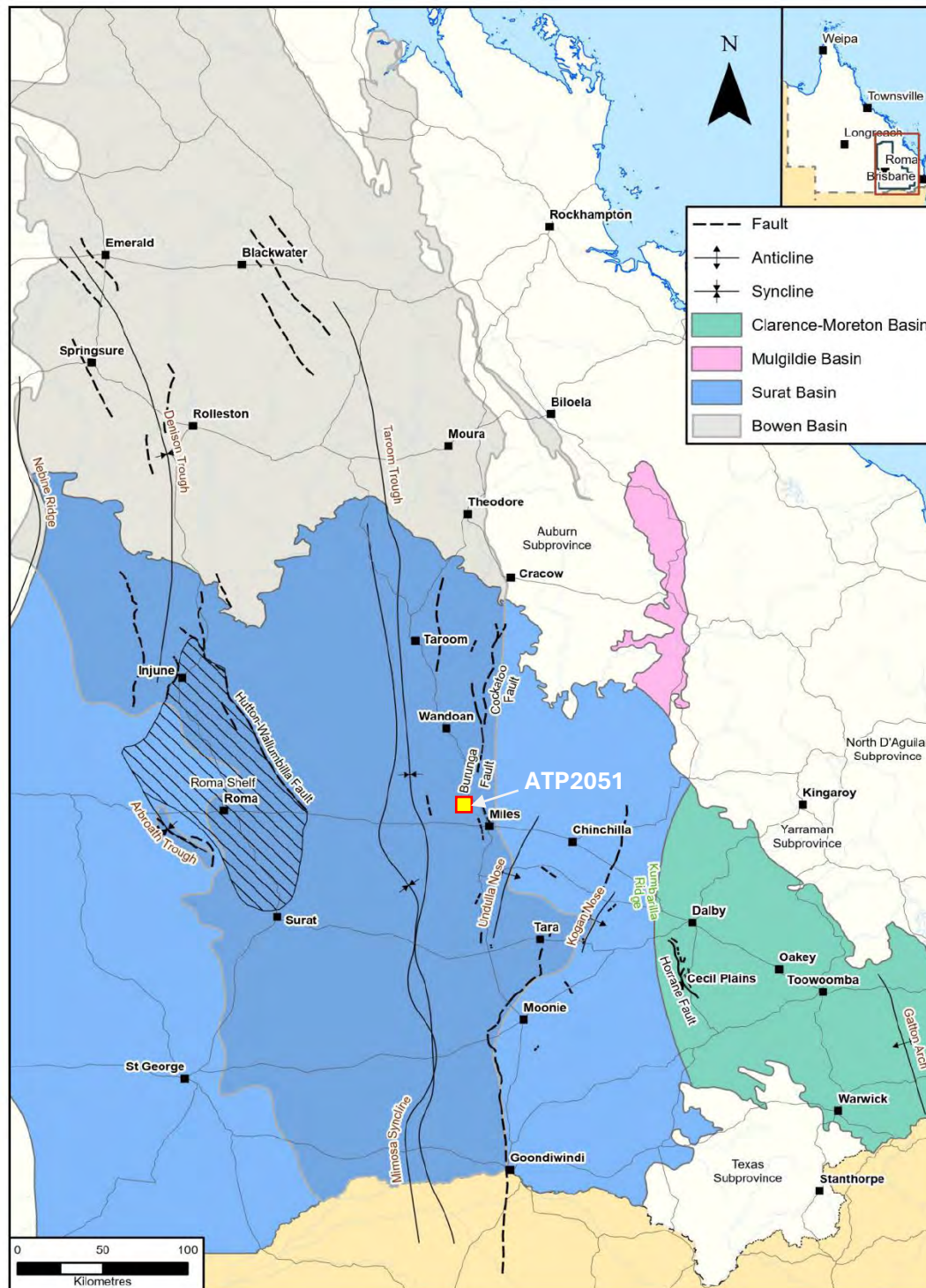


Figure 4-1: Bowen and Surat Basins: major structural elements (Hy and Foster, 2021)
Location of ATP 2051 also shown



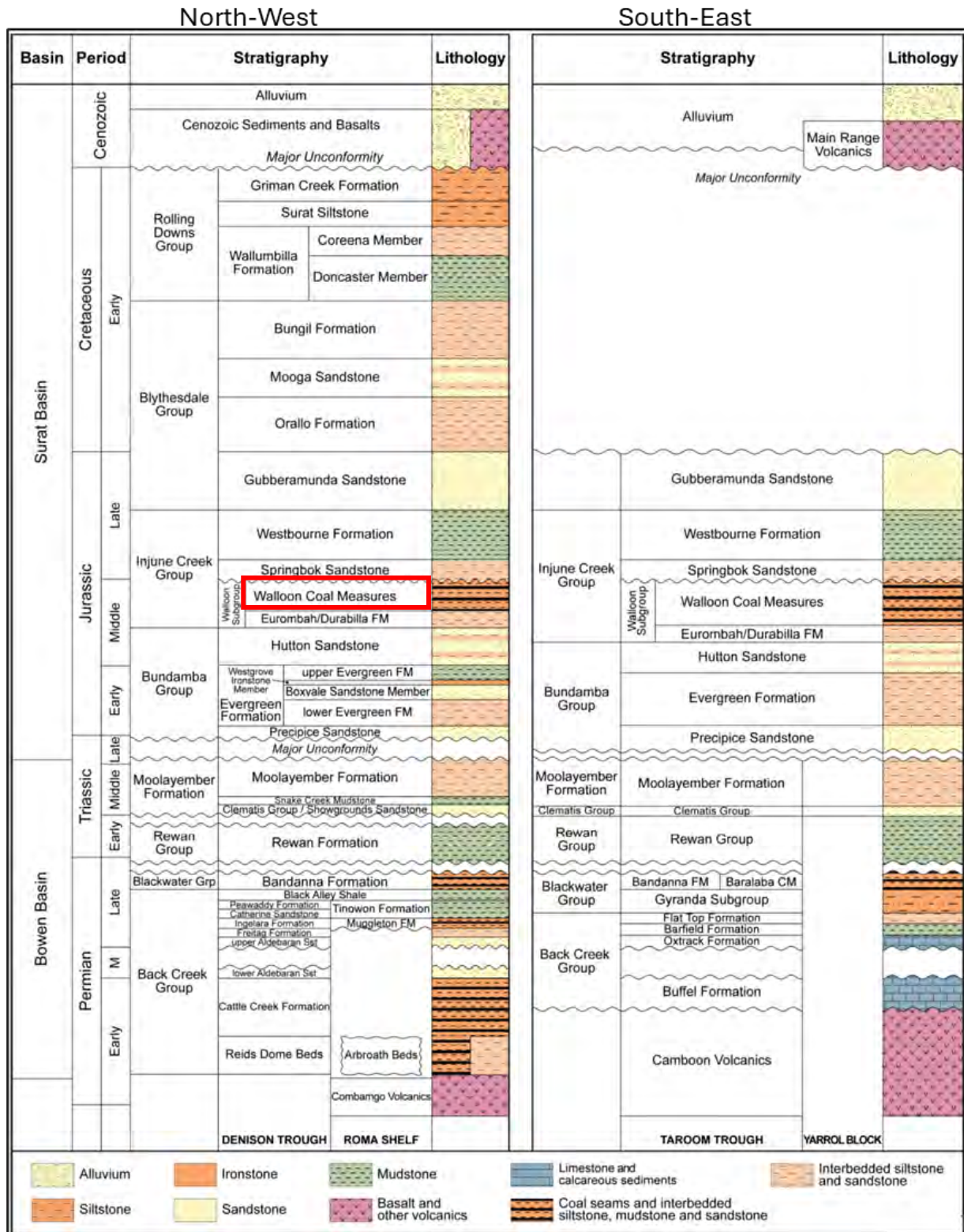


Figure 4-2: Stratigraphy of Bowen and Surat Basins (Hy and Foster, 2021)



4.1. The Bowen Basin

While none of the wells in ATP2051 have penetrated the deeper Permian-Triassic age Bowen Basin sediments that are situated below the Surat Basin (see Inserted A-A' cross section in [Figure 5-3](#)), there could be potential for the development of these deeper horizons. The Baralaba Coal Measures is a significant target for CSG exploration and development along the eastern margin of the Taroom Trough in the Bowen Basin, including the Santos-operated Scotia Field, the Origin-operated Peat Field and the Westside-operated Meridian Field (Gorton and Martin, 2022) to the north of ATP 2051. The deeper Back Creek Group is also an exploration and appraisal target for tight gas sands in a basin-centre gas play. Elixir Energy have tested gas in the Lower Lorelle Sandstone in the Late Permian-age Kiangra and Back Creek Group in the Taroom trough to the south-west of ATP2051 (Craig, 2024). QGC are also investigating this play in the Tinowan Sandstone of the Back Creek Group.

The Bowen Basin is an elongate Early Permian to Middle Triassic, north-south trending basin spanning approximately 160,000 km² (Cadman et al., 1998, Draper, 2013, [Figure 4-1](#), [Figure 4-3](#)). The Bowen Basin contains two primary depocenters: the Denison Trough in the west and the Taroom Trough in the east, separated by the Comet Ridge ([Figure 4-3](#)). The basin consists of a sedimentary sequence of Permian to Triassic clastic sediments that exceed 9,000m in thickness in the Taroom Trough.

It is bounded to the east by the Gogango Thrust Zone which is an area of heavy deformation of the Bowen Basin sediments and underlying volcanics with a series of north to south oriented faults (i.e. Chinchilla-Moonie-Goondiwindi and Leichhardt-Burunga fault zones, [Figure 4-3](#)). To the west, it is bounded by the Nebine Ridge, Springsure and Roma shelves. To the north of the Taroom Trough is a region of intensively deformed Permian-age sediments. To the south, the basin is overlain by the younger Surat Basin ([Figure 4-3](#)) and is connected to the Gunnedah and Sydney Basins in New South Wales (Cadman et al., 1998).

Deposition began during the Early Permian extensional phase, with fluvial and lacustrine sediments and volcanic rocks deposited in a series of half-grabens in the east, while a thick succession of coal (i.e. Cattle Creek Formation) and non-marine sediments accumulated in the west ([Figure 4-2](#)).

During the mid-Early to Late Permian, thermal relaxation and subsidence caused a basin-wide marine transgression. Deltaic and shallow marine sediments of the Back Creek Group were deposited over most of the basin east of the Roma Shelf and in the Denison Trough. Towards the end of the Late Permian, the basin entered a period of thrust loading. The resulting accelerated subsidence allowed the deposition of a thick succession of Late Permian marine and fluvial-deltaic sediments called the Blackwater Group (including Baralaba Coal Measures and Bandanna Coal Measures) and Early to Middle Triassic fluvial and lacustrine sediments. The thrusting of Chinchilla-Moonie-Goondiwindi and Leichhardt-Burunga faults started in Late Permian and continued in the Triassic.

Erosion during the middle to late Triassic contraction has largely restricted the Permian-Triassic clastic sediments to the adjacent Taroom Trough ([Figure 4-3](#)).



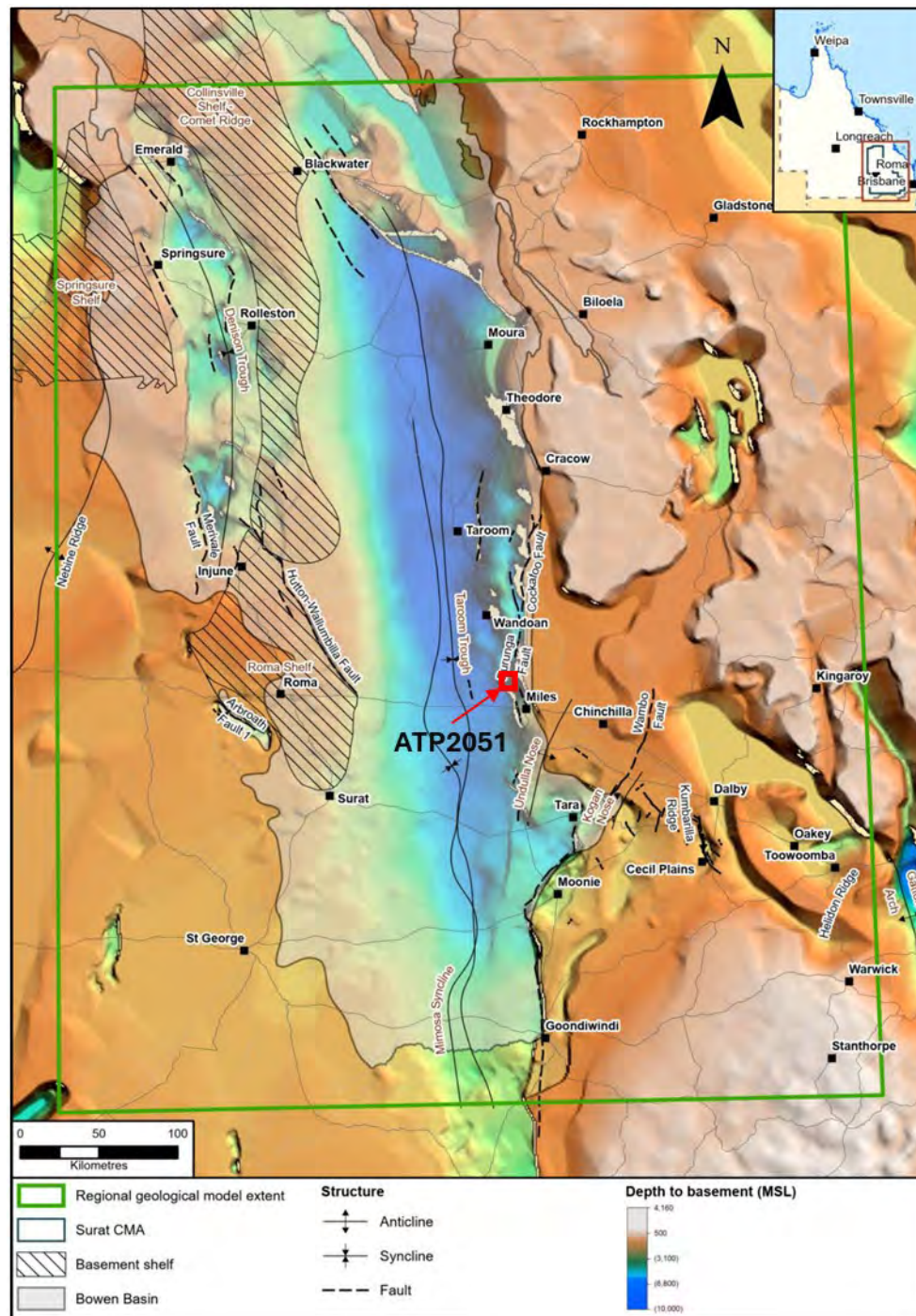


Figure 4-3: Bowen Basin basement depth map (based on Hy and Foster, 2021)
Major structural elements and the location of ATP 2051

4.2. The Surat Basin

The Surat Basin covers 300,000 km² of central southern Queensland and central northern New South Wales (Cadman et. al., 1998, [Figure 4-1](#), [Figure 4-4](#)). It is part of the large Great Artesian Basin, and inter-fingers westward with the Eromanga Basin across the Nebine Ridge and eastward with the Clarence-Moreton Basin across the Kumbarella Ridge. Structural blocks such as the Central West Fold Belt and New England Fold Belt limit the basin to the south, while the basin in the north has been eroded and unconformably overlies Triassic and Permian sediments of the Bowen Basin.



It contains up to 2,500 m of sedimentary rocks, deposited over the eroded surface of the Bowen Basin during the Early Jurassic to Early Cretaceous periods ([Figure 4-2](#)).

During the Early Jurassic, deposition was mostly fluvio-lacustrine ([Figure 4-2](#)). By the Middle Jurassic, coal swamp environments of the Walloon Sub-group (including the Walloon Coal Measures) predominated across much of the basin. Towards the end of the Middle Jurassic, fluvial deposition resumed and continued into the earliest Cretaceous. A marine transgression followed, depositing paralic and marine sediments. A subsequent regression caused a return to fluvial, lacustrine, and paludal environments, and sedimentation ceased in the Aptian.

In response to regional deformation affecting the area north and east of the basin, sedimentation gave way to erosion during the Late Cretaceous and Early Tertiary, and the Surat sediments were deeply eroded. In the Oligocene and Miocene, volcanism around the basin margins occurred alongside epeirogenic basin-ward tilting. Since then, the basin has remained geologically inactive.

Structurally, the Surat Basin is relatively simple, with the area of maximum deposition, the Mimosa Syncline, overlying the thickest Permian-Triassic strata (Bowen Basin) in the Taroom Trough ([Figure 4-4](#)). Major faulting within the Surat basin predominantly mirrors the basin-bounding faults of the underlying Bowen Basin. Surat Basin formations crop out along the northern erosional boundary and dip gently to the south and southwest at less than 5°.

The Walloon Coal Measures contains significant CSG reserves and resources and has been the major source of gas production for Queensland's LNG projects and its domestic supply.

Coals in the UJCM of the Walloon Coal Measures section are the primary target in ATP2051, (see [Section 5.1](#) and [Figure 5-1](#)).



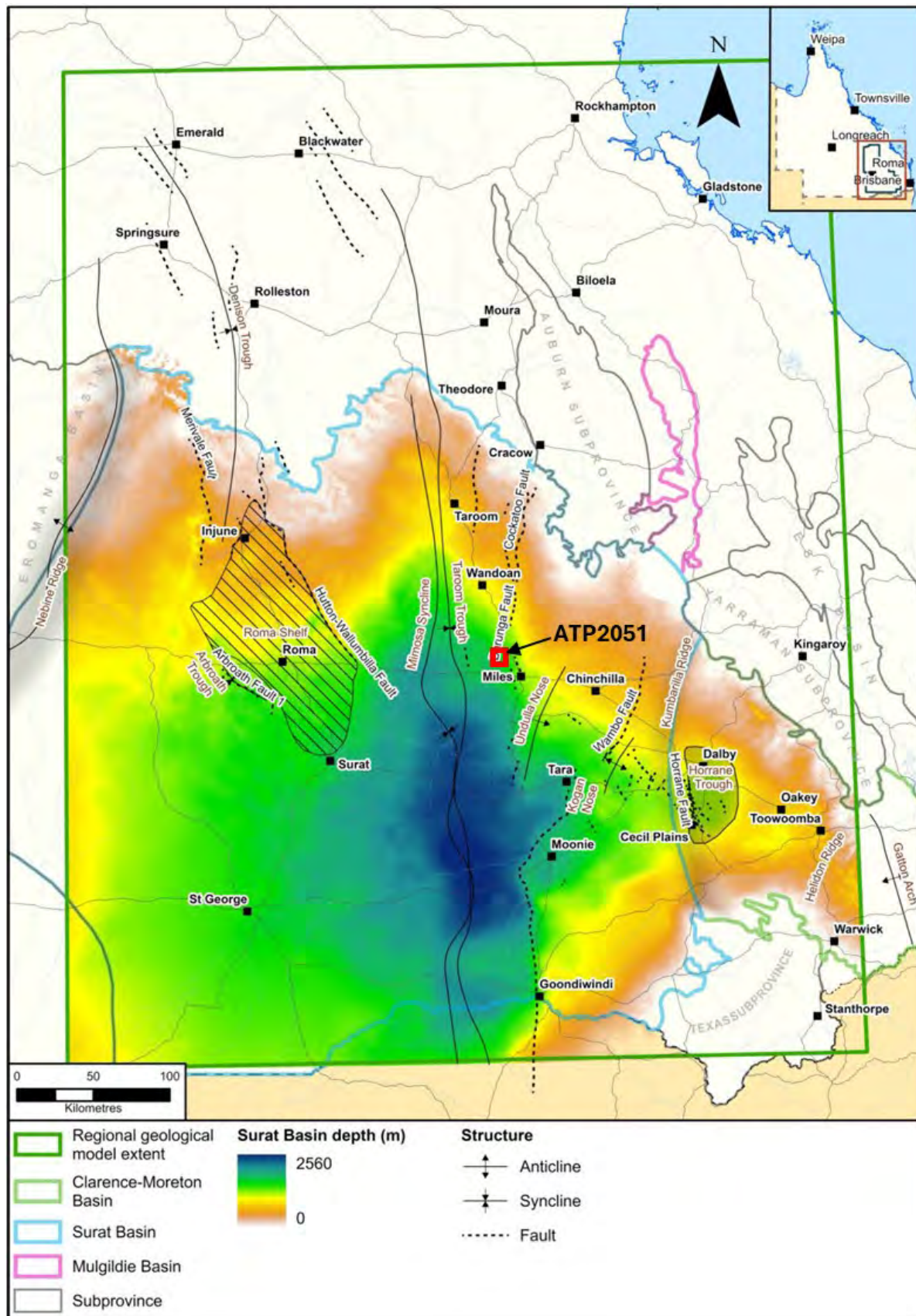


Figure 4-4: Surat Basin depth map (from Hy and Foster, 2021)
Including major structural elements and ATP 2051 location



5. ATP 2051 RESOURCE ASSESSMENT

5.1. Walloon Coal Measures Regional Overview

The detailed stratigraphy of the Walloon Coal Measures (WCM) is shown in [Figure 5-1](#), which were penetrated in ATP2051 wells (e.g. Venus-1: [Figure 3-3](#)). The WCM comprises the Durabilla Formation, Taroom Coal Measures (TCM), Tangalooma Sandstone and Juandah Coal Measures (JCM). The JCM is further divided into the Upper Juandah Coal Measures (UJCM) and the Lower Juandah Coal Measures (LJCM).

Commercial CSG production from the WCM started in early 2006 and reached annual peak gas production at over 1,600 PJ in 2018 (Glassborow *et al.*, 2023). To date, over 9000 CSG exploration, appraisal and production wells have been drilled and over 9,000 PJ has been produced. The WCM accounts for over 60% publicly reported 2P reserve (>23,600PJ) and over 60% annual gas production connected to the Australia east cost market (Glassborow *et al.*, 2023).

Because of the economic significance of the WCM, it has attracted numerous studies in the past decades (e.g. QGC, 2012; Ryan *et al.*, 2012; Zhou *et al.*, 2017; Mukherjee *et al.*, 2021; Glassborow *et al.*, 2023).

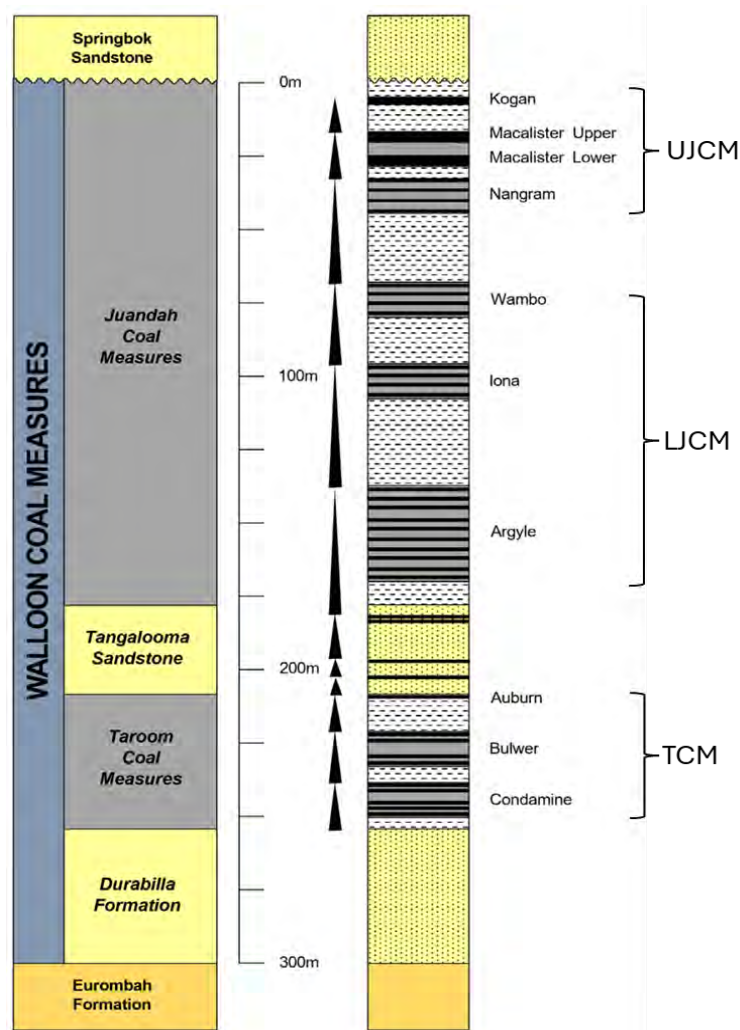


Figure 5-1: Stratigraphy of the Walloon Coal Measures (from Glassborow *et al.*, 2023)



The WCM was deposited in a fluvial environment where coal seams formed in oxygen-deficient swamps between sinuous river channels that deposited sand bodies. The clastic sediments are composed of very fine to medium-grained volcano-lithic sandstone, siltstone and mudstones.

The coals are low rank sub-bituminous with an average vitrinite reflectance of 0.45% (range 0.35 – 0.65%). Gas content ranges from 1 to 15 m³ / tonne (dry ash-free).

The top depth map of the WCM (Figure 5-2) resembles the overall Surat basin geometry (Figure 4-4), ranging from sub-cropping on the surface in the north and east to over -1600 m MSL in the basin centre. The most productive and prospective CSG area occurs downdip and adjacent to the Walloon sub-crop edge where thick net coal combines with high permeability (see discussions below).

WCM at ATP 2051 is between -200 to -400 m MSL in depth and is close to the top WCM sub-crop edge.

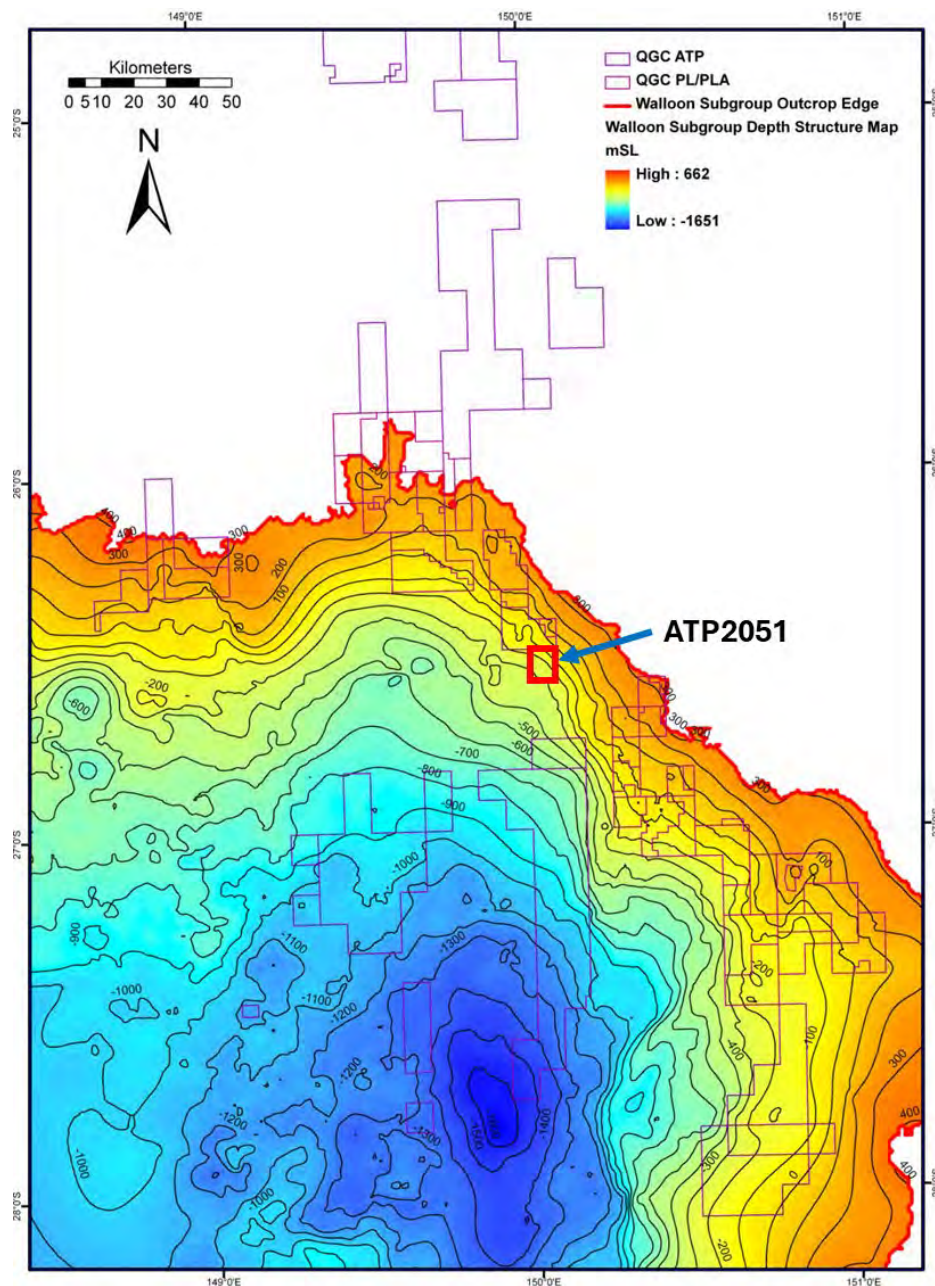


Figure 5-2: Walloon Subgroup depth map (m MSL, from Ryan *et al.*, 2012)



The WCM gross thickness map and regional well cross-section are shown in Figure 5-3 and Figure 5-4. The overall WCM thickness is largely controlled by Surat Basin deposition geometry and erosion by the Springbok Unconformity. The thicker WCM (over 400 m) is mostly in the northeast, and the thinner region (less than 100 m) in the south and southwest.

The majority of WCM coal seams are less than 1 m thick (Zhou *et al.*, 2017) (Figure 5-5), however, the target UJCM section contains more seams over 3 m in thickness. The cumulative coal thickness within the WCM has a similar distribution pattern to the WCM gross thickness (Figure 5-3), with thicker net coal (>30 m) in the north-eastern region and thinner seams in the western and southern regions.

The WCM at ATP 2051 has an overall high gross thickness of 370 to 400 m and a net coal thickness of 30 to 40 m.

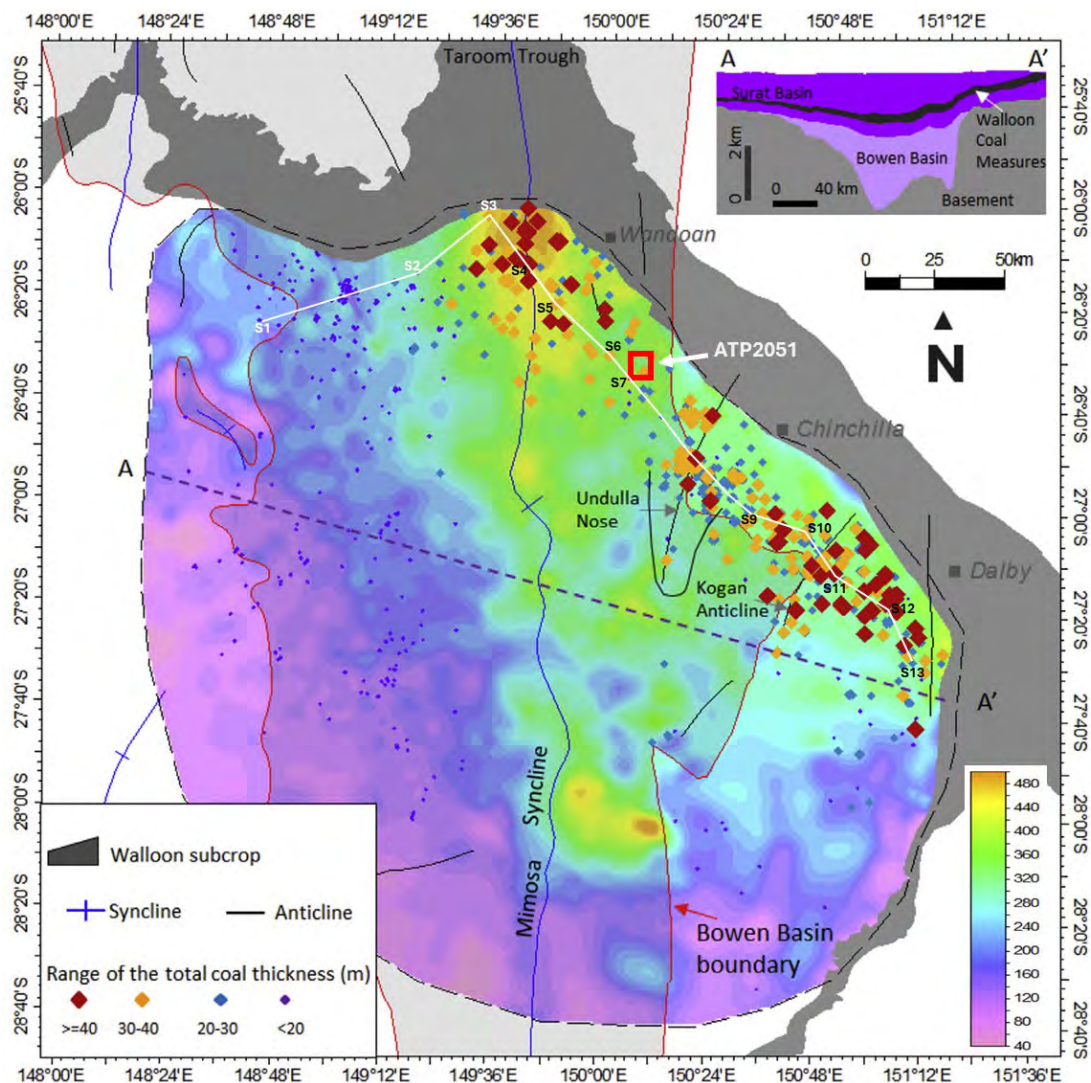


Figure 5-3: Walloon Coal Measures isopach map (m) overlain by net coal thickness of each well.⁶

⁶ The major structural features and the underlying Bowen Basin outline are also displayed. The top right inset shows a cross section of the basement, Bowen and Surat Basins. The white line (S1-S13) indicates the well cross-section shown in Figure 5-4. (From Zhou *et al.*, 2017)



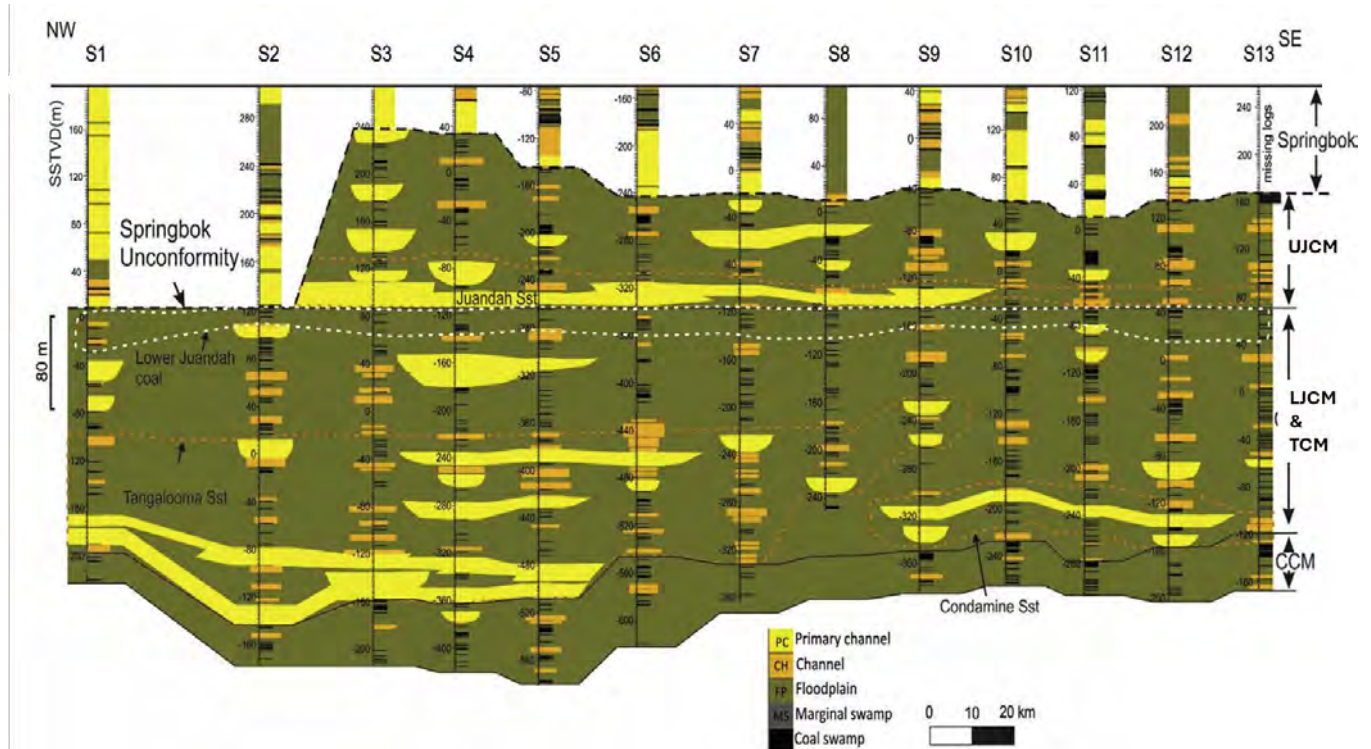


Figure 5-4: Well cross-section illustrating thickness and facies variations within the WCM (Zhou *et al.*, 2017)

The location of the cross-section is shown by the white line in Figure 5-3.

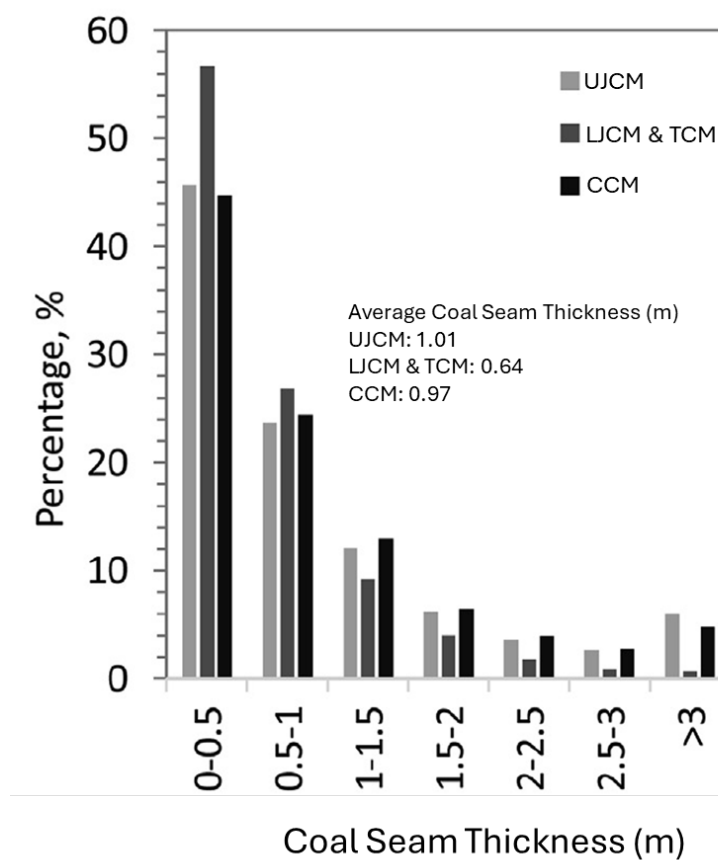


Figure 5-5: WCM coal seam thickness histogram (Zhou *et al.*, 2017)



The large variation in net coal thickness between relatively close wells is evident, i.e. wells with <20 m net coal are located within ~700 to 1100 m of wells with >40 m net coal (Figure 5-3). The lenticular geometry of the seams is displayed in Figure 5-6. Zhou *et al.* (2017) obtained an average seam length of 2.9 km and width of 1.2 km for coal seams over 2 m thick based upon dense well control. The lenticular and thin-bedded nature of these seams make individual seam correlation challenging, requiring the correlation of larger sediment packages. The Macalister and Wambo seams are generally thicker and more extensive than other seams.

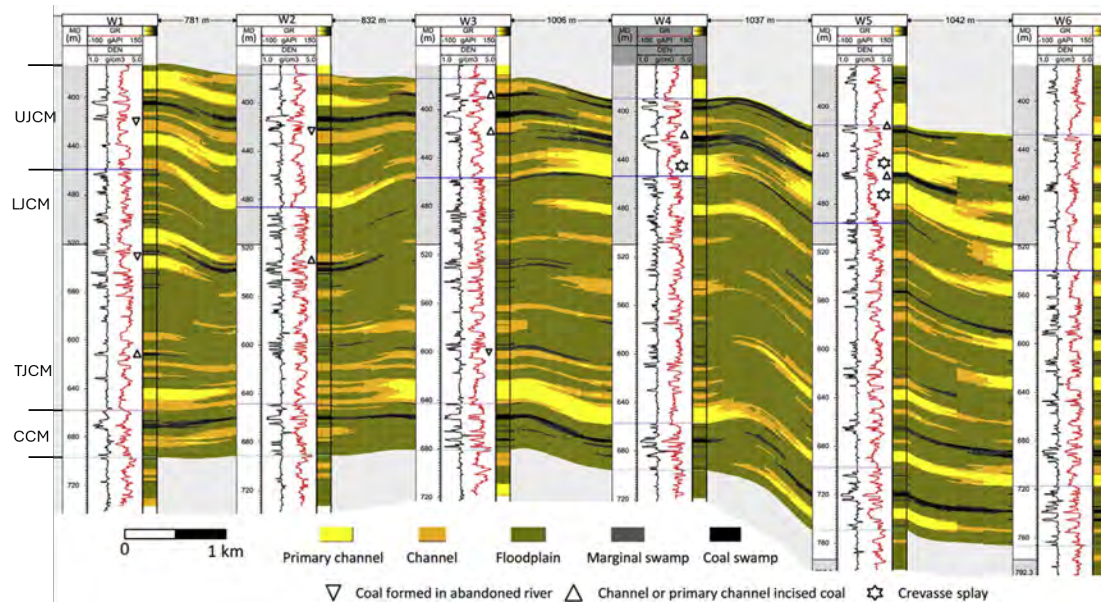


Figure 5-6: Facies model cross-section between wells showing the lenticular distribution of thicker coal seams and channel bodies (Zhou, *et al.*, 2017)

Note that the lateral distribution of numerous thin coal seams at wells is not displayed due to vertical model resolution.

The WCM reservoir properties, including permeability, gas content and saturation, vary with depth, coal seam composition, and structural position.

Permeability within the Walloon Coal Measures (WCM), as interpreted from well test data, generally exhibits a decreasing trend with increasing depth (Figure 5-7 and Figure 5-8, Mukherjee *et al.*, 2021; Ryan *et al.*, 2012). However, within similar depth intervals across the Surat Basin, permeability measurements show variations of several orders of magnitude. These differences are likely influenced by a combination of factors, including:

1. Structural position, such as enhanced permeability associated with the Undulla Nose and Kogan Anticline.
2. Burial and uplift history, with erosion of 400 – 1500 m of overburden affecting compaction and fracture development; and
3. Coal composition, where higher permeability correlates with increased telovitrinite content.

Permeability ranges of the ATP 2051 wells are shown in Figure 5-7 and Figure 5-8. They are generally less than 5 mD, which is on the lower side of the permeability range recorded in the WCM in the Surat Basin.



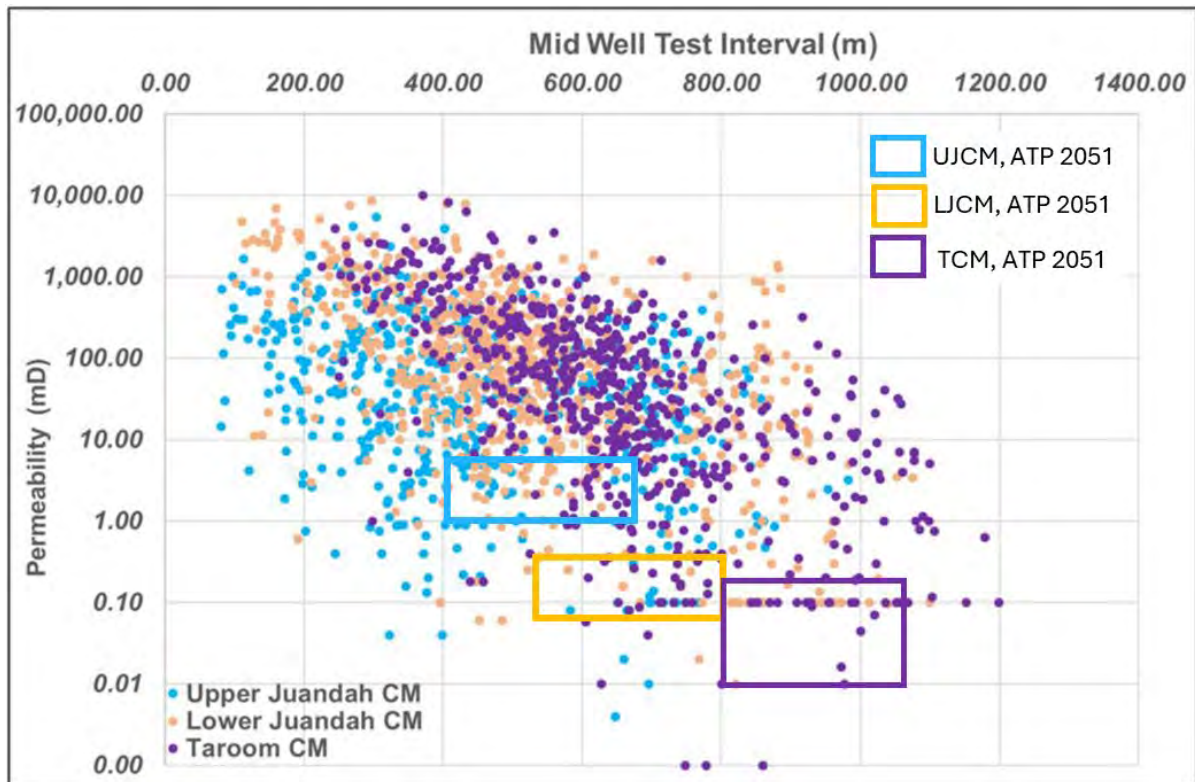


Figure 5-7: WCM permeability interpreted from well tests vs mid-depth of well-test section (Mukherjee *et al.* 2021)

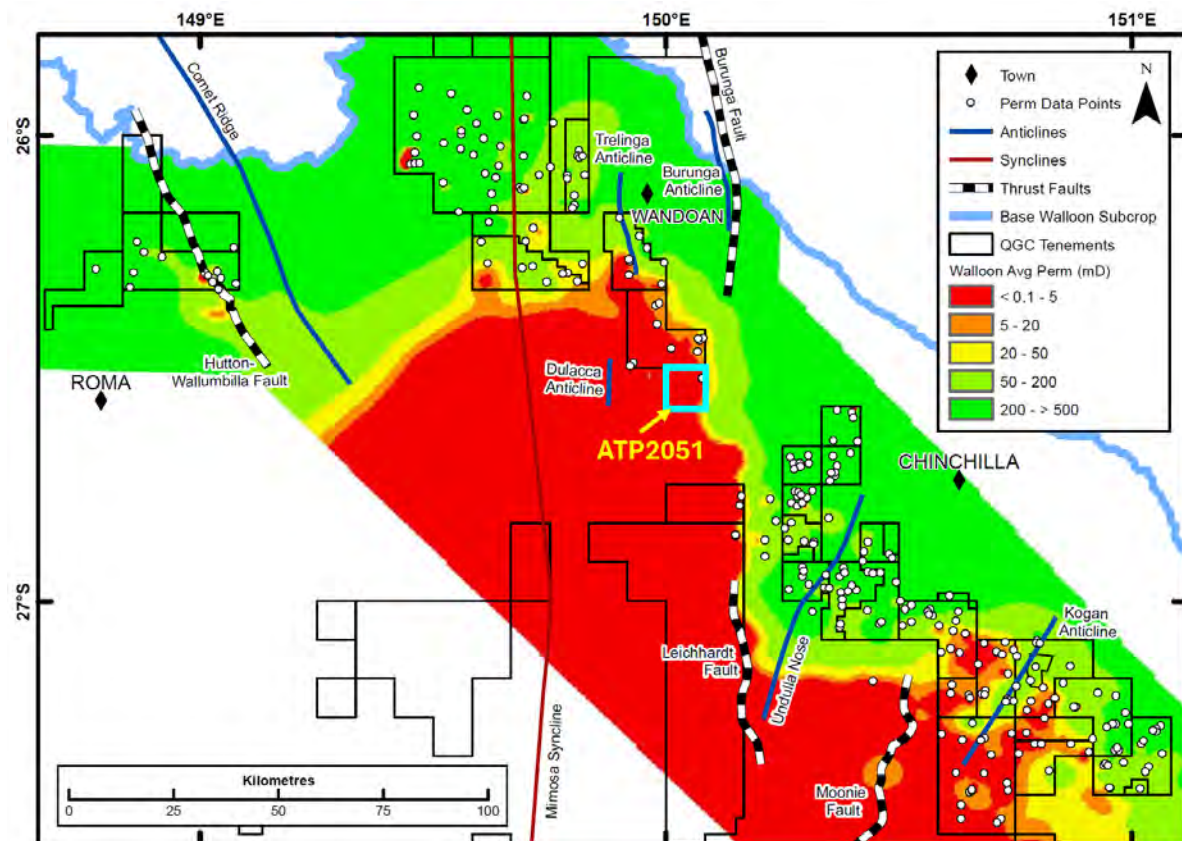


Figure 5-8: WCM average permeability (from Ryan *et al.* 2012)



Gas content has been observed to increase with depth, ranging from approximately 0.5 - 2 m³/tonne at shallow depths (<200 m GL) to over 5 m³/tonne at greater depths (>600 m GL) (Ryan *et al.*, 2012; Glassborow *et al.*, 2023).

In addition to depth-related trends, core analysis data also indicate variability in gas content across different coal measure units, with the Lower Juandah Coal Measures (LJCM) exhibiting notably higher gas content (Ryan *et al.*, 2012).

Glassborow *et al.* (2023) divided the WCM into three productivity regions (Figure 5-9). Category 1 is the current development fairway dominated by high permeability and moderate resource density and depth. Category 2 defines a deeper, lower permeability but high resource density area, requiring new technology to achieve economically viable gas rates. ATP 2051 is located in this category. Category 3 covers shallower depth, high permeability but lower resource density areas currently under appraisal or planned for future development.

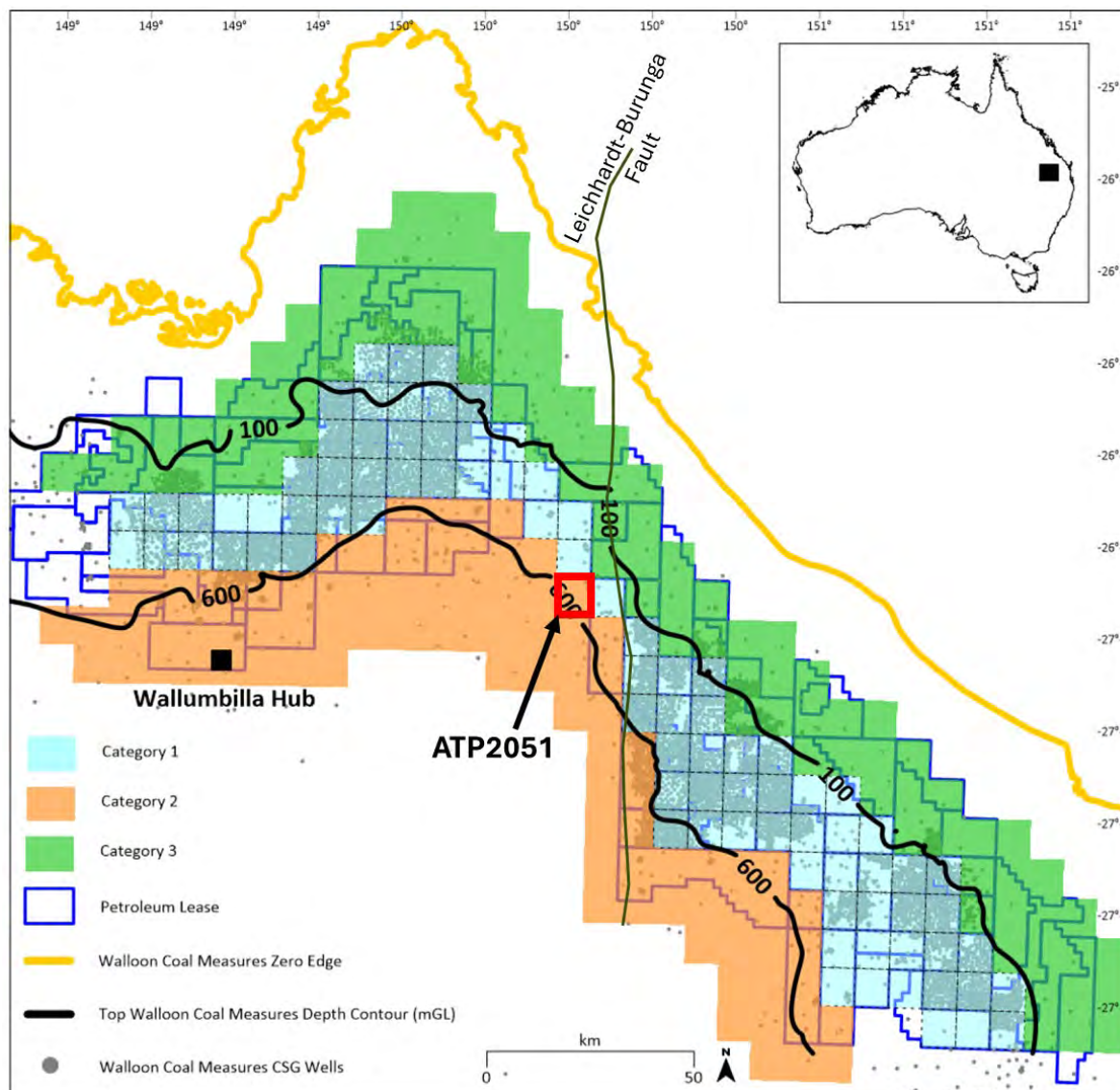


Figure 5-9: Walloon Coal Measures productivity categories (Glassborow *et al.*, 2023)

5.2. ATP 2051 Original-gas-in-place (OGIP) Assessment

Eastern Gas contracted Adavale Energy to assess ATP 2051 OGIP to support resource certification by Sproule Incorporated. Adavale's report (Adavale Energy, 2021) and data provided by Eastern Gas has been reviewed to validate the OGIP estimate.

OGIP is the product of area, net coal thickness, net coal density and gas content, which will be discussed in the following sections.

$$\text{OGIP} = \text{Area} \times \text{Net Coal Thickness} \times \text{Net Coal Density} \times \text{Gas content}$$

Each of these parameters is discussed in the sections below. Note that the maps shown reflect the best (mid case) estimate of the parameter discussed. High and low case estimates have also been evaluated but are not depicted in these figures. When combined, these parameters' ranges enable a Low, Mid and High case estimate of OGIP to be determined using a deterministic methodology that produces a single, fixed output for the given set of input parameters.

5.2.1 Depth and Gross Thickness

Well location map and cross-sections across ATP 2051 and adjacent wells are shown in [Figure 5-10](#), [Figure 5-11](#) (green line in [Figure 5-10](#)) and [Figure 5-12](#) (orange line in [Figure 5-10](#)).

Geological formation and coal seam pick tops and gross interval thickness in wells are shown in [Table 5-1](#). The top depth (in meters below ground level, m bGL) map of WCM or UJCM is shown in [Figure 5-13](#), which are largely between 400 to 650 m GL.

MA validated the depth maps against the well picks.

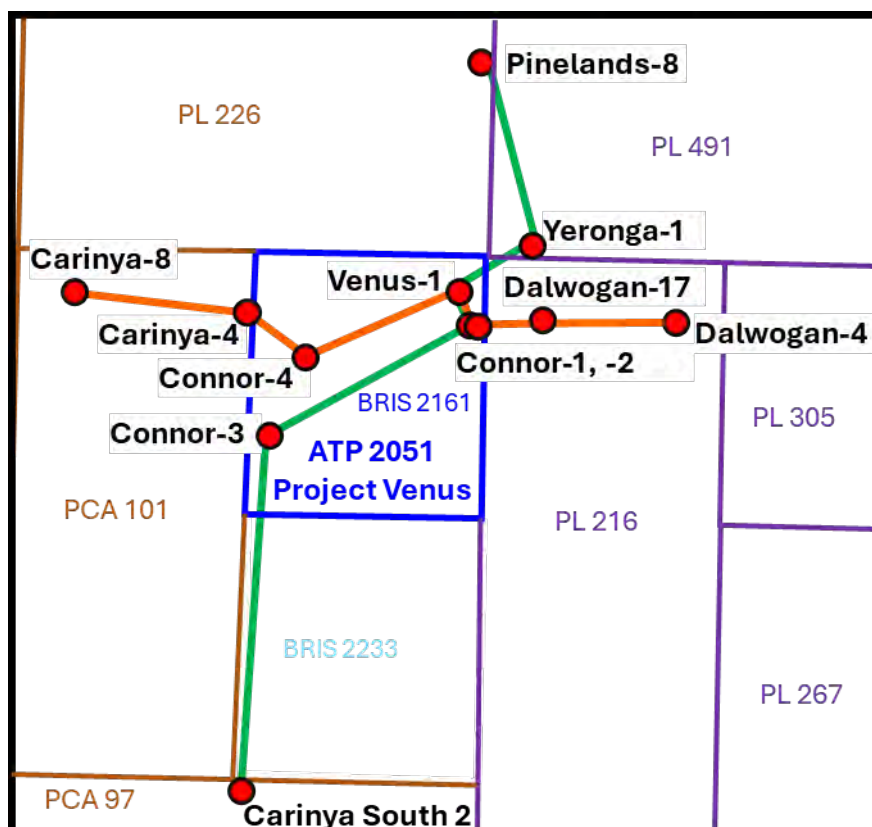


Figure 5-10: Well cross-section locations

North-South section is in green and East-West section is in orange



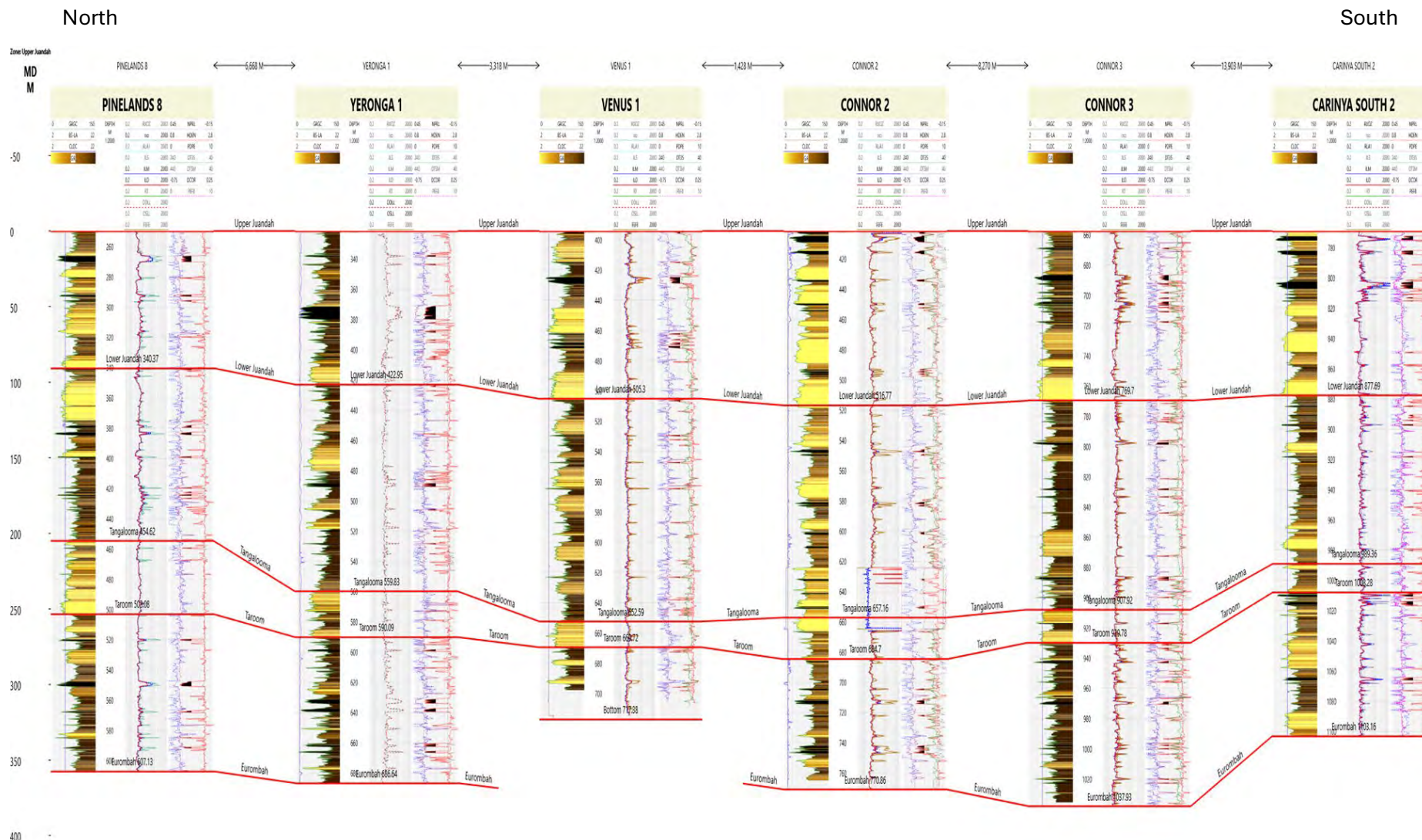


Figure 5-11: North-South well cross-section.
Line of section shown by green line in Figure 5-10. Coal seams are shown in black on Density and Gamma logs.

West

East

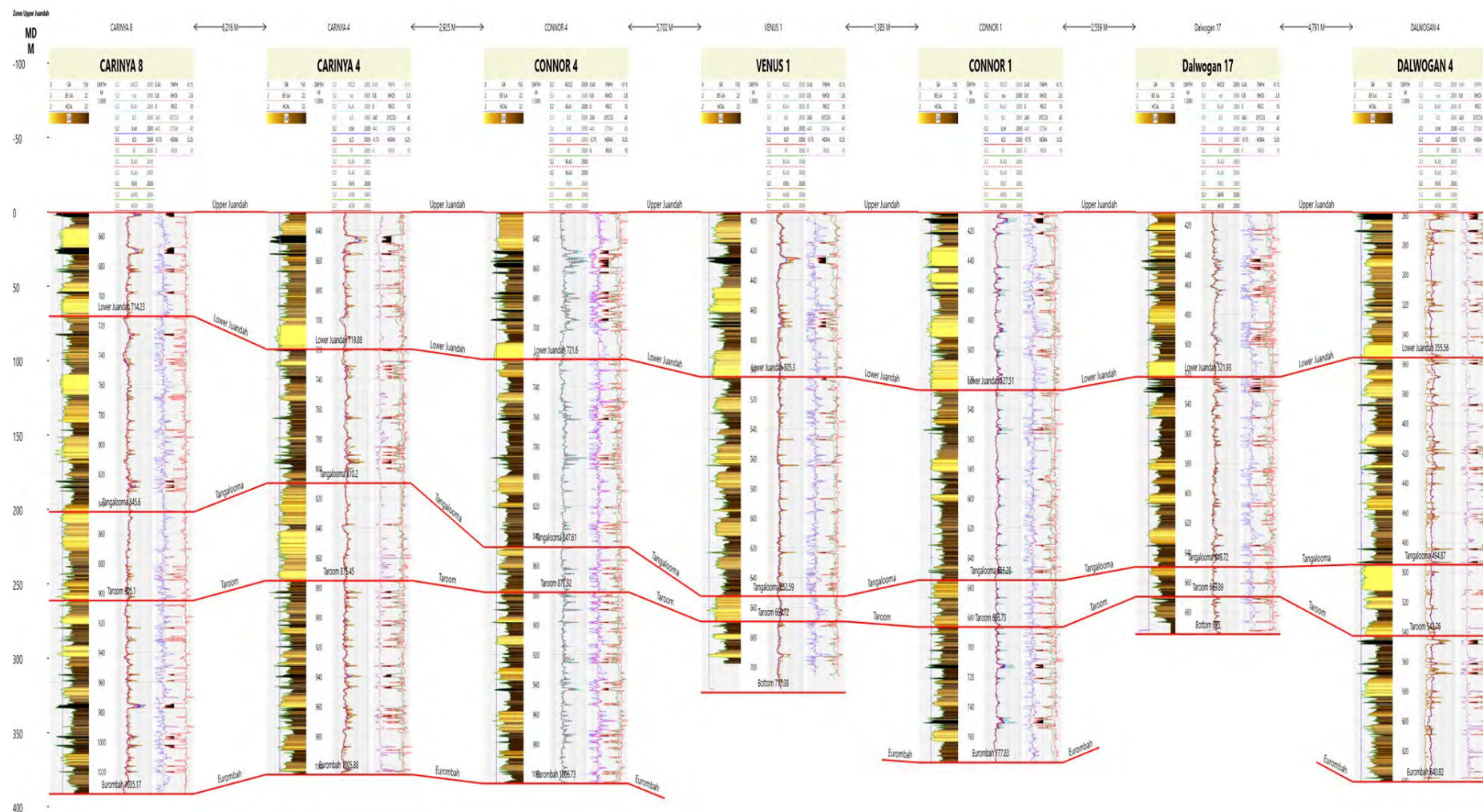


Figure 5-12: East-West well cross-section

Line of section shown by orange line in Figure 5-10. Coal seams are shown in black on Density and Gamma logs.

Table 5-1: Unit top and thickness, coal thickness, density, gas content (raw), gas saturation and permeability of ATP 2051 and adjacent wells

Wells	WSG			UJCM						LJCM						TCM					
	Top (m)	Thickness (m)	Net Coal (m)	Top (m)	Thickness (m)	Net Coal (m)	Density (g/cm ³)	Gas Content (m ³ /tonne)	Gas Saturation	Top (m)	Thickness (m)	Net Coal (m)	Density (g/cm ³)	Gas Content (m ³ /tonne)	Gas Saturation	Top (m)	Thickness (m)	Net Coal (m)	Density (g/cm ³)	Gas Content (m ³ /tonne)	Gas Saturation
Carinya-4	627.5	378.3	30.9	627.5	75.3	9.5				720.3	145.7	9.7				875.8	130.0	11.8			
Connor-1	407.6	370.2	31.2	407.6	99.9	12.9	1.529			527.0	126.6	8.2	1.5			666.7	111.1	9.2	1.495		
Connor-2	400.3	370.9	33.1	400.3	72.7	14.3	1.555	4.3	100.0	488.0	166.5	9.6	1.6	4.8	100.0	665.7	105.6	8.8	1.578	4	76
Connor-3	658.6	379.2	36.5	658.6	65.4	13.4	1.501			746.9	107.4	12.2	1.5			930.5	107.4	10.1	1.489		
Connor-4	621.5	401.0	36.8	621.5	88.5	17.0	1.469			722.0	125.8	7.3	1.5			913.0	109.6	8.0	1.509		
Venus-1	411.8			411.8	75.6	10.9	1.464			505.9	147.1	7.5	1.5			669.5			1.471		
Yeronga-1	320.2	373.7	38.9	320.2	73.5	16.5	1.455	3.7	72.4	393.7	158.1	9.4	1.5	5.7	76.3	571.9	122.0	12.5	1.439	5.8	89.6
Dalwogan MB5 H	488.3	368.9		488.3	51.4	8.1				549.6	143.3	10.0				708.2	148.9	12.6			
Dalwogan-17	423.2	360.7	28.7	423.2	47.7	7.0				485.2	189.2	14.1				685.8	98.2	7.6			
Average							1.504						1.53						1.508		

Note: Venus 1 did not reach the base of the TCM, therefore, the thickness and net coal of the TCM are not calculated.

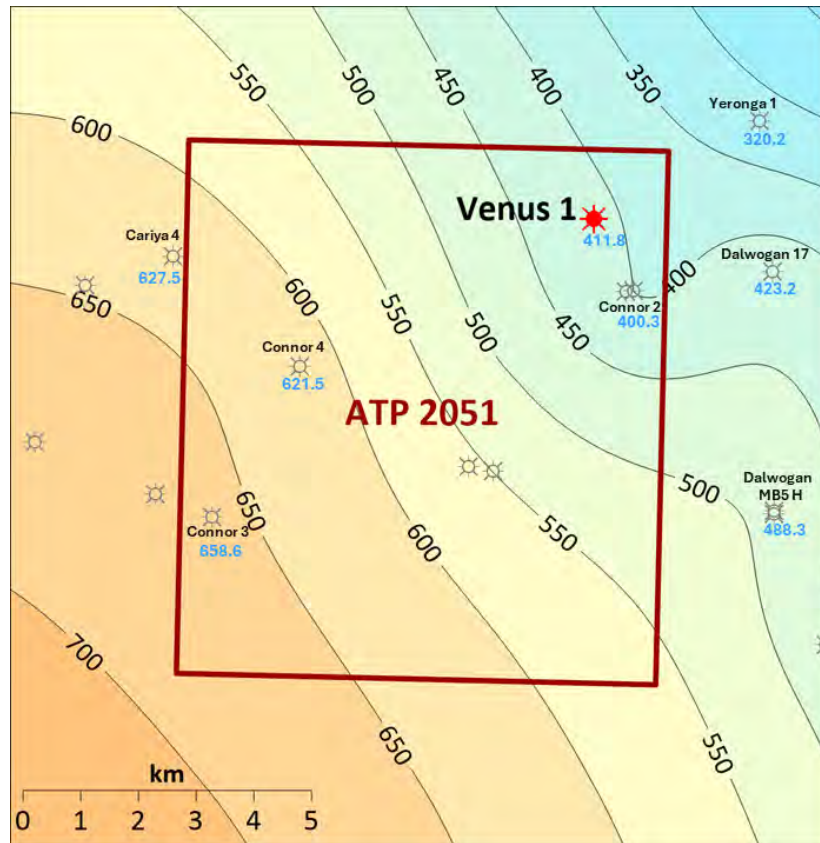


Figure 5-13: UJCM / WCM top depth map (m bGL)(Adavale Energy, 2021)⁷

5.2.2 Net Coal Thickness

Net coal in wells is defined from wireline logs based on the following cut-offs:

- Gamma ray <100 GAPI, and
- Density <1.8 G/cm³, and
- Deep resistivity log > OHMM

The cut-offs used are consistent with what are commonly used in this region by other operators (e.g. Zhou *at al.*, 2017, Gorton and Martin, 2022). The calculation of net coal thickness for each stratigraphic unit at each well in ATP2051 was checked and validated by MA. Adavale Energy used a total of 428 wells to constrain net coal thickness mapping over ATP 2051. Figure 5-14 and Figure 5-15 are extracted from the regional maps by Adavale Energy.

The mapping of net coal thickness is also validated using well data by MA (Figure 5-14 and Figure 5-15).

WCM net coal over ATP 2051 ranges from 30 to 40 m thick, and UJCM has a range of 10 to 17 m.

⁷ This figure, together with the other property maps (Figure 5-13 to Figure 5-19), reflects the best estimate scenario. High and low case outcomes have been evaluated but are not depicted in these figures.

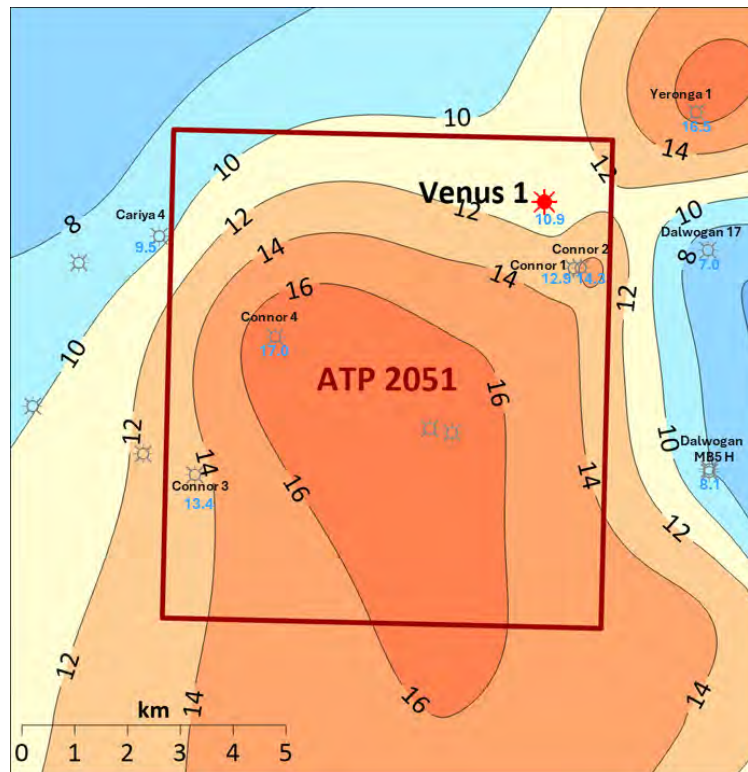


Figure 5-14: UJCM net coal thickness map (m) (Adavale Energy, 2021)⁷

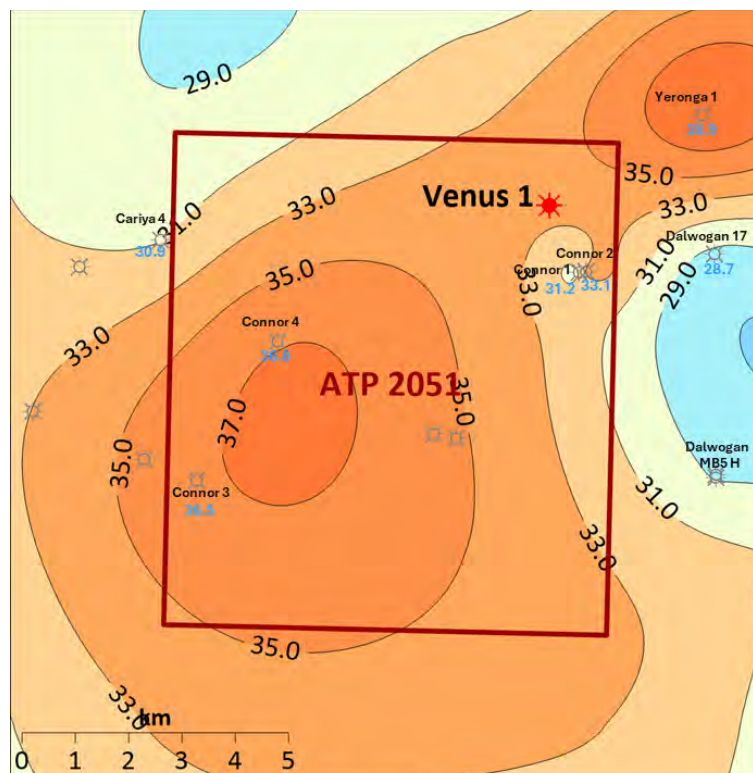


Figure 5-15: WCM net coal thickness map (m) (Adavale Energy, 2021)⁷



5.2.3 Gas Content and Gas Saturation

Samples for gas content and gas saturation analysis in ATP 2051 are from well Connor-2. Adavale Energy also used coal core analysis data from 32 adjacent wells to constrain the mapping of gas content and gas saturation across ATP 2051 (Figure 5-16 and Figure 5-17). Adavale Energy's gas content mapping is generally in line with the more regional gas content mapping by Ryan *et al.*, 2012. ATP 2051 is almost fully gas-saturated (Figure 5-17).

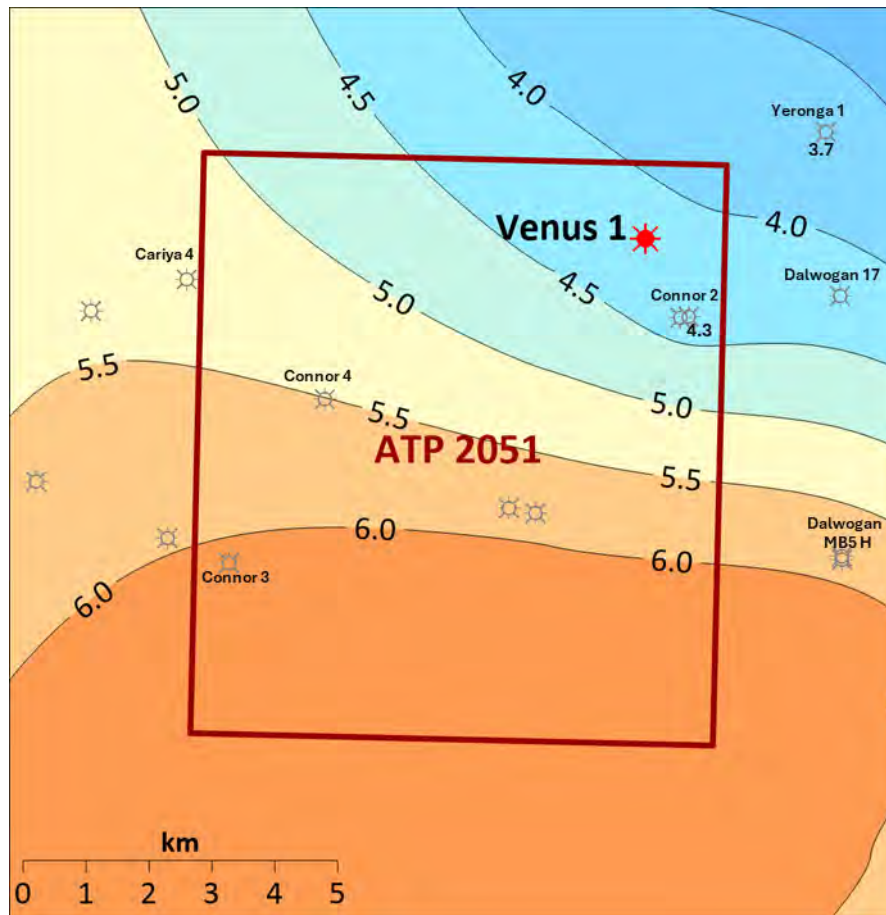


Figure 5-16: UJCM gas content map (m³/Tonne) (Adavale Energy, 2021)⁷



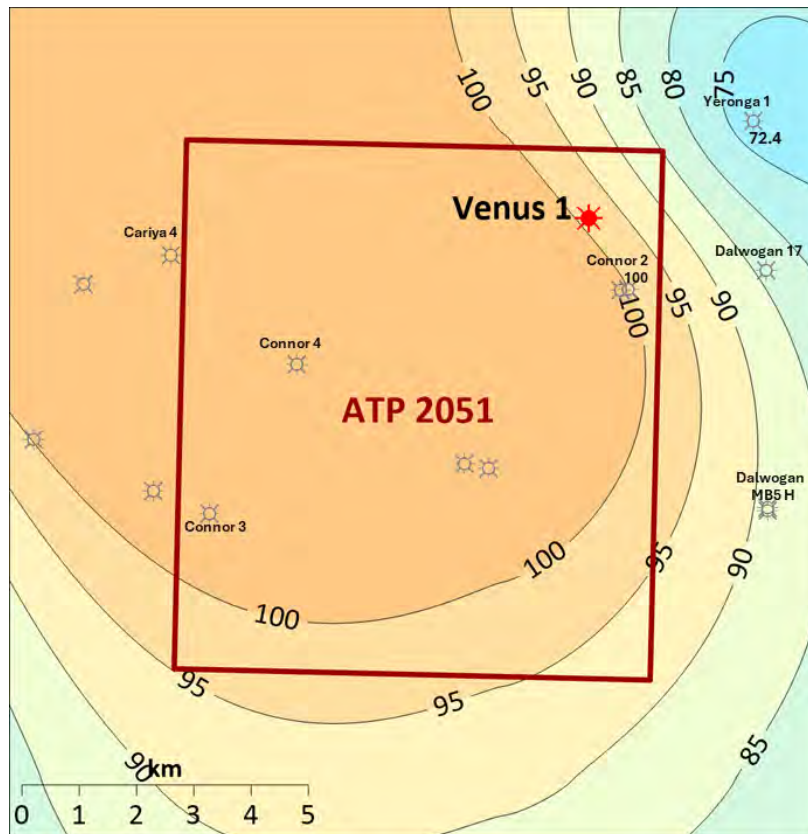


Figure 5-17: UJCM gas saturation map (%) (Adavale Energy, 2021)⁷

5.2.4 Coal Density

Adavale Energy used a constant coal density of 1.4 g/cm^3 based upon coal core analysis for OGIP calculation. Other operators in the region reported using a coal density of 1.45 g/cm^3 .

While some operators use core-derived coal density for OGIP calculations, others use compensated wireline density logs (e.g. Gorton and Martin, 2022; Zhou and Esterle, 2008). Density measurements made in the laboratory are from core samples that are subjected to gas loss, pressure and temperature changes from coring and laboratory processes. A more representative *in-situ* condition for core samples requires *in-situ* pressure- and gas-preserved core and laboratory conditions (Li *et al.*, 2025).

MA believes that the wireline density log is more representative of the density under *in-situ* conditions and is therefore the preferred source for OGIP calculation. The average density from compensated density wireline logs is calculated based upon data from ATP 2051 wells and is shown in Table 5-1.

The average density for the UJCM, LJC and TCM is 1.504 g/cm^3 , 1.53 g/cm^3 and 1.508 g/cm^3 respectively, which is about 8% higher than the 1.4 g/cm^3 value used by Adavale Energy.

5.2.5 Average Permeability

The average permeability estimated from ATP 2051 wells is derived from well test data that has been summarized by Adavale Energy in 2021, together with regional offset wells. The UJCM's permeability in ATP 2051 is generally lower than neighbouring blocks such as Peebs and Pinelands, although the ranges of recorded permeability overlap. It should be noted that there is no production data available from these offset blocks at time of preparation of this ITR.



Adavale Energy analysed 18 wells that were used to constrain permeability mapping across ATP 2051. ATP 2051 well permeability data is listed in [Table 5-2](#), and the UJCM average permeability map is shown in [Figure 5-18](#). The ATP 2051 permeability data and map are consistent with regional data and mapping (Mukherjee et al., 2021; Ryan et al., 2012). The UJCM permeability ranges from 1 to 5 mD, whereas the LJCM and TCM record permeabilities of less than 1 mD.

[Table 5-2: Summary of permeability derived from well tests \(Adavale, 2021\) ⁸](#)

Wells	Permeability (mD) UJCM	Permeability (mD) LJCM	Permeability (mD) TCM
Connor-1	5.30	0.10	0.02
Connor-2	4.76	0.10	0.10
Connor-3	1.00	n.a.	0.10
Connor-4	3.00	0.10	0.00
Yeronga 1	3.50	46.70	7.68
Marcus-2	0.30	n.a.	n.a.
Marcus-1	0.10	0.01	0.40
Peebs-1	10.40	13.00	2.00
Peebs-8	38.00	n.a.	1.90
Peebs-11	20.00	120.00	0.10
Peebs-14	5.00	6.00	3.00
Pinelands-6	3.50	11.00	3.85
Pinelands-8	39.00	7.60	4.00
Pinelands-9	11.00	n.a.	13.00
Pinelands-4	5.60	24.60	1.48
Pinelands-11	n.a.	n.a.	0.20
Andrew 1	0.30	0.10	n.a.
Andrew 3	0.14	0.10	0.10

⁸ Note: Grey shaded cells show data from wells in ATP2051 and Yeronga-1; n.a. = not available



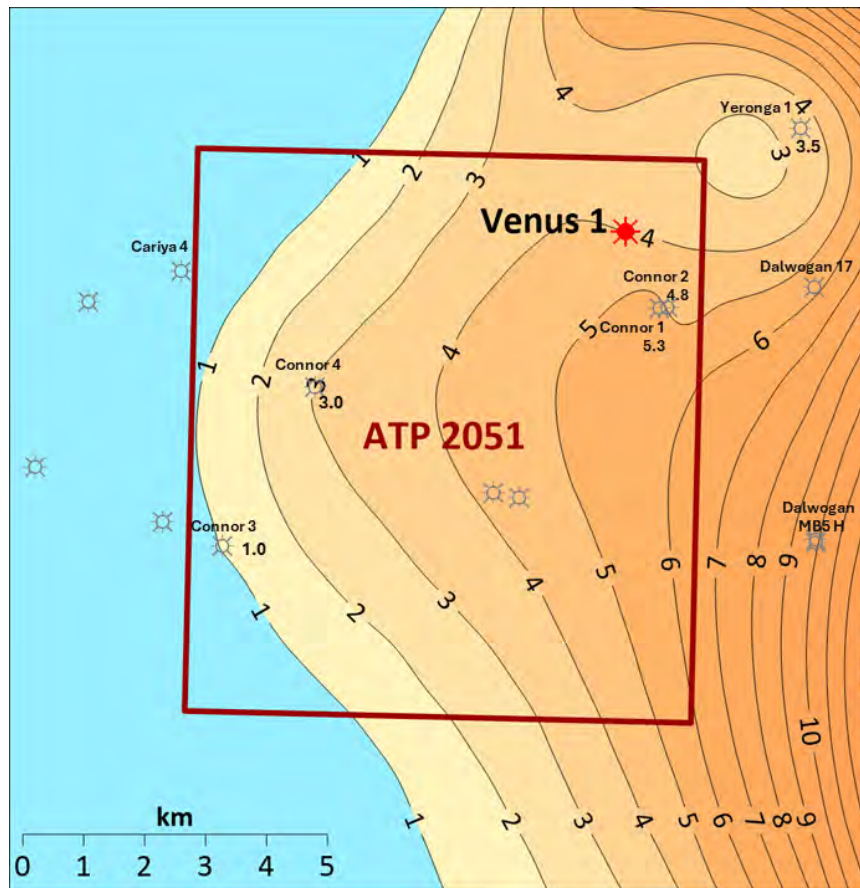


Figure 5-18: UJCM average permeability map (mD) (Adavale Energy, 2021)⁷

5.2.6 OGIP Calculation

Adavale Energy calculated OGIP density maps for the UJCM (Figure 5-19), LJC and TCM derived from the net coal thickness map, gas content map and a constant coal density using the following formula:

$$\text{OGIP} = A \times h \times pB \times GC$$

Where:

- OGIP = original gas-in-place, m³ (x 35.315/10⁹ for Bcf),
- A = area, m²
- h = net coal thickness, m
- pB = bulk density of net coal, g/cc
- GC = gas content, m³/tonne

OGIP was then calculated from the OGIP density map for each unit (Table 5-3).

Sproule was engaged to classify ATP 2051 resources in 2021. Sproule used a 2 mD permeability cutoff. OGIP volumes after applying a permeability cut-off are shown in Table 5-3.

The only adjustment made by MA to Adavale Energy's OGIP calculation is for coal density as discussed in Section 5.2.4. OGIP volumes shown in Table 5-4 were adjusted by MA using coal density determined from wireline log response listed in Table 5-1.

Adavale Energy carried a single case OGIP calculation as described in previous sections. MA deems this single case OGIP calculation as a reasonable mid-case (best estimate). MA believes



that it is important to incorporate uncertainty into the OGIP assessment, and while it is beyond the scope of this report to do full probabilistic uncertainty assessment of OGIP, MA uses a + (high) and – (low) 30% of the mid-case OGIP to capture the range of OGIP uncertainty for resource estimation based upon our experience.

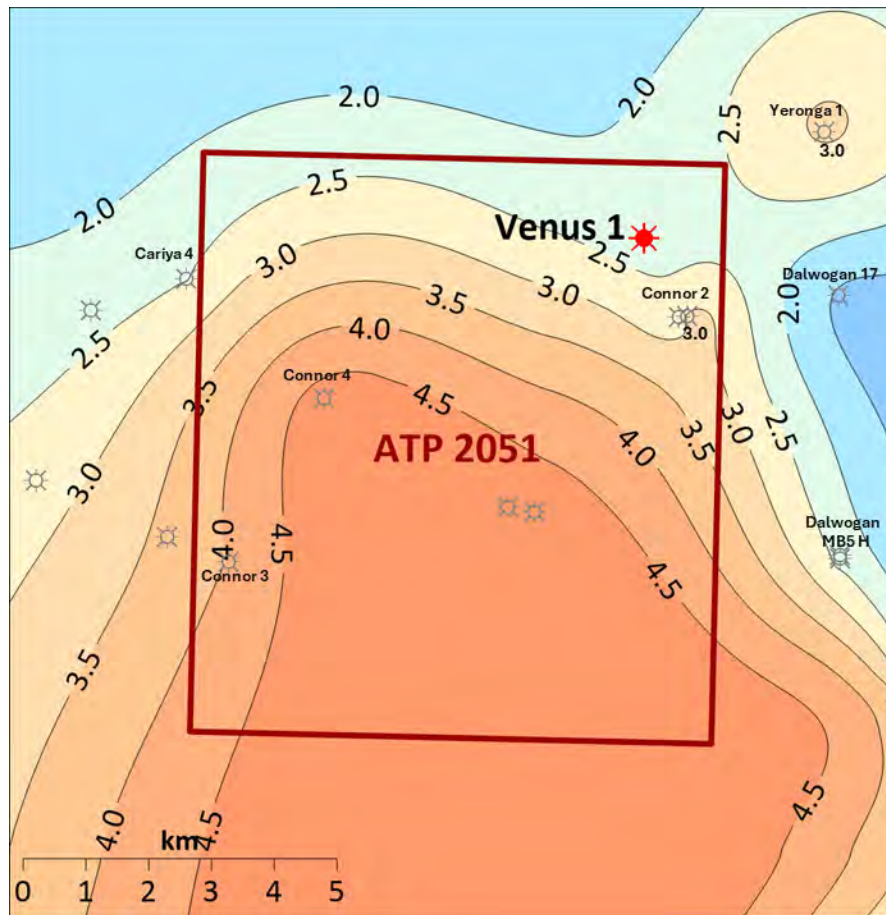


Figure 5-19: UJCM OGIP density map (Bscf/km²) (Adavale Energy, 2021)⁷

Table 5-3: OGIP in ATP 2051 calculated by Adavale Energy

Permeability Category	UJCM (B scf)	LJCM (B scf)	TCM (B scf)	WCM (B scf)
≥2 mD	242	18	0	260
<2 mD	65	152	149	366
Total	307	170	149	626

Table 5-4: OGIP in ATP 2051 adjusted for density by MA

Permeability Category	UJCM (B scf)	LJCM (B scf)	TCM (B scf)	WCM (Bscf)
≥2 mD	260	19	0	280
<2 mD	69	166	161	396
Total	330	185	161	676



5.3. Horizontal Well Simulation

The vertical fracture stimulation development concept was tested in all five CSG wells, the last of which was Venus-1 by Real Energy. However, the subsequent well tests failed to deliver what could be deemed to be commercial or sustainable gas production rates. Given that the Upper Macalister is the thickest coal seam and offers the best potential for horizontal wells, two horizontal well development scenarios have been designed and assessed through simulation by Adavale Energy (Adavale Energy, 2025).

The simulation models were built using data from the Connor-1 and Connor-2 wells drilled by QGC. Low stress levels observed in Connor-1, along with stress data from Connor-2, suggest that mixed-mode fracturing (both vertical and horizontal) is likely to occur when horizontal wells are drilled in the Upper Macalister coal seam, whereas transverse fracturing is expected in horizontal wells targeting the Lower Juandah or Taroom seams. Two scenarios targeting only the Upper Macalister coal seam were evaluated:

Scenario 1: A 1000 m lateral horizontal well was modelled within a $\sim 1 \text{ km}^2$ anisotropic grid ($k_x:k_y = 1:5$), drilled at $\sim 45^\circ$ NNE (x-direction) and positioned orthogonal to the dominant Walloon cleat angle ($\sim 135^\circ$ ESE, y-direction). The well schematic for this scenario is shown in [Figure 5-20](#).

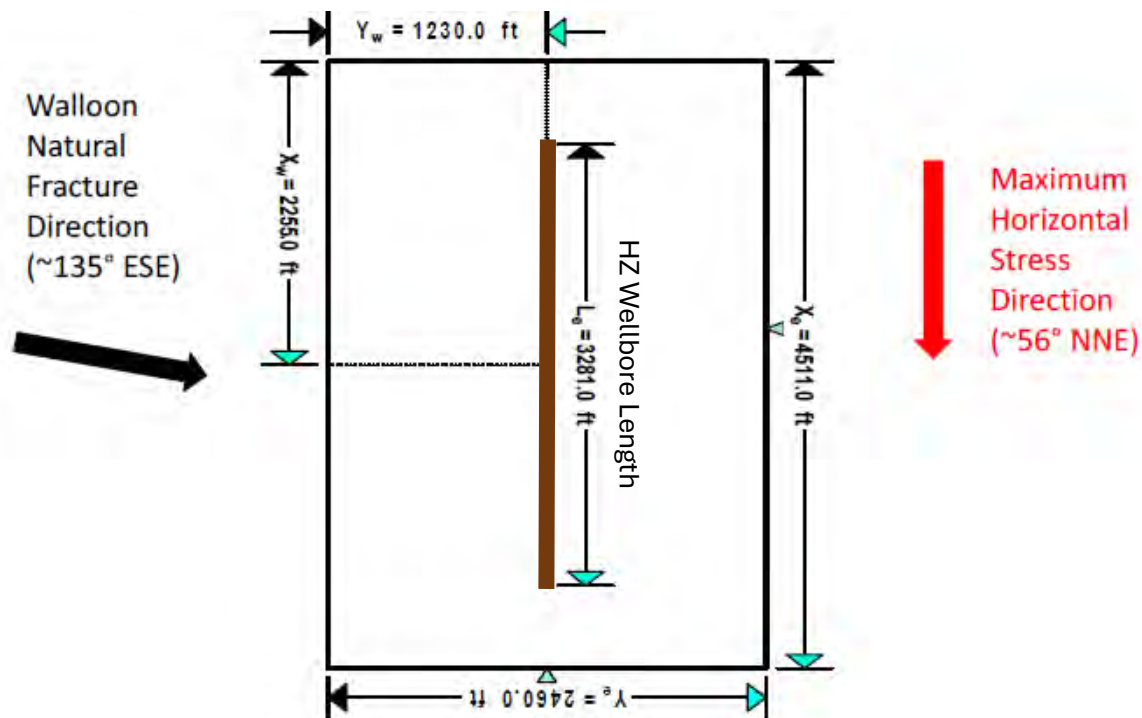


Figure 5-20: Horizontal well (no hydraulic fracture) in an anisotropic (approx. 1.0 km^2) grid (Johnson, 2021)

Scenario 2: A 1000 m lateral horizontal well was modelled as being drilled at $\sim 146^\circ$ ESE (approximately 10° off the Walloon cleat angle, x-direction) to stimulate transverse fractures orthogonal to the cleat direction ($\sim 56^\circ$ ESE, y-direction) or acutely to the natural fracturing. The simulation assumed eight hydraulically induced transverse fractures. The well schematic is shown in [Figure 5-21](#).



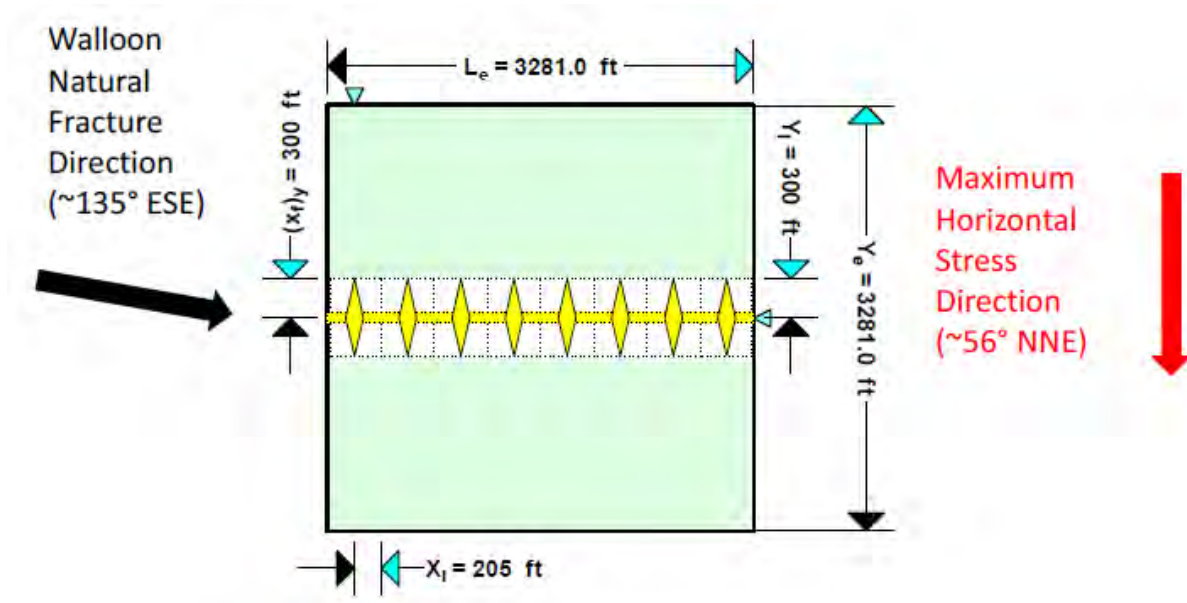


Figure 5-21: 1000 m horizontal lateral with hydraulic fracture in approx.1.0 km² grid (Johnson, 2021)

The simulated horizontal well performance for both scenarios is presented in Table 5-5.

Table 5-5: Summary for horizontal well performance from simulation (Johnson, 2021)

Scenario	Description	Fractured	HZ length (m)	Gas Recovery (MM scf)	OGIP (MM scf)	Recovery Factor (RF)	Water Production (M stb)	Note
1	1000 m lateral horizontal well in the Upper Macalister, drilled in the maximum horizontal stress direction (aligned with, or orthogonal to natural fractures)	No	1000	1,172	1,481	79.10%	437	MA High Case
2	1000 m lateral horizontal well in the Upper Macalister, drilled orthogonal to the maximum horizontal stress direction	Yes	1000	435	1,437	30.30%	234	MA Low Case

MA regards the gas recovery for Scenario 1, where the horizontal well trajectory is perpendicular to the natural fracture orientation (parallel to maximum horizontal stress, SH_{max}) as a High Case outcome. For Scenario 2, where the horizontal trajectory is parallel to the natural fracture orientation (perpendicular to SH_{max}) the result is considered representative of a Low Case outcome. The actual horizontal well trajectory is likely to be between the two scenarios because of the difficulty in predicting local stress and fracture orientations. As a result, the Mid Case is assumed to be the average of the Low and High Case recovery factors, namely 55%.

The basis for the Low-Mid-High Case recovery factor assumptions is supported by observations by Mukherjee et al., (2020) who noted large-scale variability in SH_{max} orientation within the WCM both laterally and with depth. It was observed that small-scale structures control the local in-situ stress and zones of high permeability and that these are often located where in-situ stress rotations are recorded. Furthermore, in the horizontal wells drilled by Westside Corporation into



the Permian-age Balaba Coal Measures in the Bowen Basin (Gorton and Martin, 2022), they found the most favourable production was where the well trajectory was actually normal to regional SHmax direction after trialling different well orientations.

5.4. ATP 2051 Resource Assessment

ATP 2051 is located in a “tight coal” area (see [Figure 5-8](#)) where lower permeabilities are mapped. Commercial flow has not yet been achieved from the five vertical CSG wells drilled in ATP 2051 although these five wells have been fracture-stimulated (‘fraced’). To achieve commercially attractive production rates, horizontal well drilling is now considered by Eastern Gas for coal seams in the UJCM.

Contingent resource categorisation of the resources of ATP2051 (i.e. 1C, 2C and 3C) was assigned based upon the following factors:

1. The technology to be used to exploit the CSG in UJCM is horizontal well drilling. This approach is supported using the study covering single well simulation modelling conducted using the data derived from the Connor-1 and Connor-2 wells drilled by QGC (see [Section 5.3 Horizontal Well Simulation](#)).
2. Horizontal well drilling has been successfully used to develop tight CSG resources in the Bowen Basin (Meridian asset; Gorton and Martin 2022) and globally, e.g. the Appalachian Basin, USA (Ma et al., 2022), the Barakar Formation in Madhya Pradesh, India (Sharan and Keswani, 2024) and the Qinshui Basin in China (Li et al., 2024, Von Schoenfeldt 2005). Also noting that a horizontal well has been drilled in 2017 by APLNG in the Surat Basin targeting the Walloon Coal Measures (Nuralishahi et al., 2018).
3. Further maturation (to Contingent Resources - Development Pending and Reserves categories) of the CSG resources of ATP 2051 is dependent upon achieving commercially attractive and sustainable gas flow rates. Upon success, a development plan and economic analysis can then be prepared.

The simulation modelling, together with horizontal well drilling experience from the Bowen and Qinshui basins, provide a range of estimates for gas recovery factors for UJCM CSG wells:

- 1C Low Estimate – 30% gas recovery factor
- 2C Best Estimate – 55% gas recovery factor
- 3C High Estimate – 80% gas recovery factor

The development area within ATP 2051 covers approximately 60 km². Based on simulation results from a representative horizontal well, the estimated drainage area per well is around 1.03 km² for one coal seam. Accordingly, full development of one coal seam (or one package of thin seams) in the area would require approximately 60 horizontal wells.

The likely success of a horizontal development concept is yet to be confirmed, and ATP 2051 requires further appraisal. MA estimates that between 80 and 180 wells may be required to fully develop the contingent resources presented in [Table 5-6](#), depending on the scenario (low - best - high cases). The best estimate case assumes an average recovery of approximately 0.8 - 1 PJ per well. Eastern Gas will appraise the performance of horizontal wells following the IPO.

Monte Carlo simulation (probabilistic modelling) was used to quantify the uncertainty range of EUR distribution and summary of the simulation results for the aforementioned scenarios are presented in [Table 5-6](#).

5.1. Risk and Opportunity Register

A Risk and Opportunity Register has been constructed to illustrate the key areas of concern and future upside for ATP 2051. This has been done, since drilling horizontal wells has not been



attempted before in ATP 2051 and therefore there are potential risks with adopting this development method. Likewise, the use of horizontal development wells in a single coal seam interval potentially ignores opportunities to develop other coal seams within the WCM or deeper horizons. The key risks and opportunities we identify, including associated mitigations are summarised in [Table 5-7](#).

[Table 5-6: Summary for OGIP, recoverable volume, gas available for sale in ATP 2051](#)

	1C (Low Estimate)	2C (Best Estimate)	3C (High Estimate)	Mean
OGIP (B scf)	182	260	338	260
Recovery Factor	30%	55%	80%	53%
Recovery (B scf)	70.3	132.9	210.3	137.3
Fuel and Shrinkage (B scf)	1.4	2.7	4.2	2.7
Gas AfS (B scf)	68.9	130.3	206.1	134.6
Gas AfS (PJ)	72.6	137.4	217.5	142.0

[Table 5-7: Key risk and opportunity register](#)

Key Risk or Opportunity	Potential Outcome	Mitigation
Wellbore Stability	Unable to drill 1000 m length wells	Geomechanical studies
Insufficient Coal Seam thickness or continuity	Insufficient coal seam exposure to achieve commercial flow rates	Geo-steering to stay within Coal Seam horizon Target alternative Coal Seam sections than the Upper Macalister
Lower than forecast Coal Seam permeability	Failure to achieve commercial flow rates	Alternative Stimulation method Multilaterals / longer wellbores
Produce from deeper Coal Seams	Higher production rates and EUR for ATP 2051	Include evaluation of deeper coal seams during appraisal / early development

5.2. Appraisal Work Program

Given that the vertical CSG wells drilled to date in ATP 2051 have failed to deliver sustainable commercial gas flows, and that hydraulic fracturing is prohibited under current regional regulations, Molyneux Advisors (MA) concurs with Eastern Gas that the preferred option for assessing the producibility of the Walloon Coal Measures (WCM) is to proceed with horizontal drilling and production testing.

MA understands that Eastern Gas has initiated, and will continue to undertake, an integrated set of Reservoir, Geological, Geophysical, and Geomechanical studies, along with well design and planning activities, to support the development of a comprehensive Appraisal Plan. This plan should form the foundation of a robust, staged work program.

MA recommends that the Appraisal Plan address the following key questions:

- What are the critical decisions and decision points required to progress ATP 2051 toward commercial CSG production?
- What are the key subsurface and operational uncertainties and risks that must be identified and quantified respectively addressed before these decisions can be made?
- What types and quantities of data (e.g., number of horizontal wells, well trajectory, duration and scope of production testing) are required to reduce these uncertainties to acceptable levels?



- What specific work program - including number, location, and sequence of horizontal wells and tests - is necessary to acquire the required data?

The results from the initial 2 wells, to be drilled with funding from the IPO will direct much of the Appraisal Plan and its key components expressed above.

It is worth noting that hundreds of horizontal wells, including multilaterals, have been successfully drilled by other operators in the Bowen Basin Permian coal measures, which share similar low permeability characteristics with the WCM in ATP 2051 (e.g., Gorton and Martin, 2022), as well as in analogous developments globally, such as in China and the United States. MA recommends that Eastern Gas incorporate relevant best practices and lessons learned from these horizontal CSG developments into the ATP 2051 appraisal strategy.



6. ATP 2051 SUMMARY

Eastern Gas holds 100% equity in Authority to Prospect (ATP) 2051, located on the northeastern flank of the Surat Basin and covering an area of 78 km². The permit benefits from proximity to key infrastructure, including east coast gas pipelines (PPL 123 and PPL 74) and processing facilities at Wallumbilla and Bellevue. Adjacent areas to the east and southeast have been successfully developed for coal seam gas (CSG) since 2004.

Across ATP 2051, approximately 600 km of 2D seismic data have been acquired, with five vertical CSG wells drilled between 2006 and 2020. The most recent well, Venus-1, applied coil-tubing abrasive jetting for stimulation. While gas was flowed to surface in all wells, none achieved sustainable commercial flow rates.

The primary target for CSG development is the Jurassic-aged Walloon Coal Measures (WCM), particularly the Upper Juandah Coal Measures (UJCM), which show high gas content (4–6 m³/tonne), high net coal (30–40 m), and depths between 400–600 m. However, well test-derived permeability is generally lower (<5 mD) than nearby acreages with established production.

In 2021, Sproule certified contingent gas resources in the UJCM of ATP 2051 at 130.3 PJ (2C), based on stimulation with coiled-tubing abrasive jetting.

Molyneux Advisors (MA), acting as Independent Technical Specialist, validated the OGIP assumptions and undertook an independent reassessment using horizontal well technology. MA's analysis indicates that contingent resources could range from **72.6 PJ (1C)** to **217.5 PJ (3C)**, with a mid-case estimate of **137.4 PJ (2C)**. These values reflect potential upside and downside related to horizontal well performance, OGIP variability, and development method.

MA supports Eastern Gas's proposal to trial horizontal drilling and long-term production testing in the UJCM.

Following PRMS 2018 classification guidelines, MA has classified the gas resources in ATP 2051 as **Contingent Resources – Development on Hold (CR-OH)**. This reflects the current lack of established horizontal well production in the Surat Basin, the absence of commercial flow to date.

ATP 2051 remains an asset with high OGIP density, adjacent to successful CSG developments, and material contingent gas volumes. Successful demonstration of commercial production through horizontal wells would provide a pathway to unlock its resource potential.



7. ATP 2051 REFERENCES

- Adavale Energy, 2021, ATP 2051 Project Venus Technical and Volumetric Summary. Report to Eastern Gas.
- Braimoh, D., 2023. Venus-1 end of production test summary. Real Energy report, May 2023.
- Cadman, S.J., Pain, L. and Vukovic, V., 1998. Bowen and Surat Basins, Clarence-Moreton Basin, Gunnedah Basin, and minor other onshore basins, Queensland, NSW, and NT. Bureau of Resources Sciences Australian Petroleum Accumulations Report, Vol. 11.
- Craig, A., 2024, 2023 exploration and appraisal year in review. Australian Energy Producers Journal 64 S1-S13
- Draper, J.J., 2013, Bowen Basin, in J PA (ed), Geology of Queensland, Geological Survey of Queensland.
- Exon N.F. (1976) Geology of the Surat Basin in Queensland. The Bureau of Mineral Resources, Geology and Geophysics 166.
- Glassborow, B., Scott, M., and Scott, S., 2023. The Walloon Coal Measures resource density: how low can we go? The APPEA Journal 63 11-24
- Gorton, J. and Martin, M., 2022. The transformation of Australia's first commercial CSG field into a major gas project: how innovation and subsurface understanding has driven its success. The APPEA Journal 62(1) 235-244.
- Hy, A. and Foster, L., 2021. Geology and 3D geological models for Queensland's Surat and southern Bowen Basins. Department of Regional Development, Manufacturing and Water, Office of Groundwater Impact Assessment (OGIA) Report.
- Johnson, R., 2021. ATP 2051 Reservoir Modelling. Internal Real Energy Report.
- Li, X., Jian, Z., Wang, Y., Mo, H., Li, H and Guo, J., 2024. Research on trajectory control technology for L-shaped horizontal exploration wells in coalbed methane. Scientific Reports | (2024) 14:11343 | <https://doi.org/10.1038/s41598-024-60550-4>. www.nature.com/scientificreports
- Li, J., Li, J, Wang, T., Liu, G., He, Z., Li, C. and Xie, H., 2025. Key techniques for precise measuring gas content in deep coal mine: in-situ pressure- and gas-preserved coring, International Journal of Mining Science and Technology, April 2025.
- Ma, T., Liu, J and Wu, B, 2022. Drilling and completion technologies of coalbed methane exploitation: an overview. International Journal of Coal Science and Technology 9:68
- Mukherjee, S., Rajabi, M., Esterle, J. and Copley, J., 2020. Subsurface fractures, in-situ stress and permeability variations in the Walloon Coal Measures, eastern Surat Basin, Queensland, Australia. International Journal of Coal Geology 222 (2020) 103449
- Mukherjee, S., Rajabi, M. and Esterle, J., 2021. Relationship between coal composition, fracture abundance and initial reservoir permeability: a case study in the Walloon Coal Measures, Surat Basin, Australia. International Journal of Coal Geology 240 (2021) 103726,
- Nuralishahi T., Vahmani E., Dharma Putra E., Wun, M. H., Thakur, K. K., Aung P. Y., Coman C., Delfani S., Wimbridge K., Rodriguez N. and Samaan J., 2018. Optimising Horizontal Coal Seam Gas Wells by Combining Reservoir Simulation and Transient Well Modelling. SPE-192010-MS, SPE Asia Pacific Oil & Gas Conference and Exhibition, Brisbane, Australia.
- QGC, 2012. Appendix D, Surat Basin geological model. https://www.shell.com.au/about-us/projects-and-locations/qgc/environment/water-management/reports/_jcr_content/root/main/section/list/list_item_copy_558534820.multi.stream/1699251832163/44af8c23e20c500740e476a5a6175e50c1e7e85e/appendix-d-surat-basin-geological-model.pdf
- Ryan, D.J., Hall, A., Erriah, L. and Wilson, P.B., 2012. The Walloon coal gas play, Surat Basin, Queensland. The APPEA Journal, 52(1), 273-289.



- Sharan, S.K. and Keswani, V.H., 2024. Successful Field Trial of Well Completion with Suitable Artificial Lift in CBM Horizontal Wells of India. SPE Artificial Lift Conference and Exhibition – Americas, August 2-222, 2024
- SPE. (2018). Petroleum Resource Management System. Society of Petroleum Engineers
- Sproule Corporation 2021. Contingent resource certification, Project Venus, ATP 2051. Report to Eastern Gas.
- Von Schoenfeldt, H., 2005. Unconventional drilling methods for unconventional reservoirs in the US and overseas. The 2005 Gussow Geoscience Conference: Coalbed Methane: Back to Basics of Coal Geology, Calgary, AB (Canada), 9-11 Mar 2005.
- Zhou, B. and Esterle, J., 2008, Toward improved coal density estimation from geophysical logs. Exploration Geophysics 39(2) 124-132.
- Zhou, F., Shields, D., Titheridge, D., Tyson, S. and Esterle, J., 2017. Understanding the geometry and distribution of fluvial channel sandstones and coal in the Walloon Coal Measures, Surat Basin, Australia. Marine and Petroleum Geology 86 (2017), P. 573-586



8. ATP 927 EXECUTIVE SUMMARY

Eastern Gas holds a 100% interest in Authority to Prospect (ATP) 927, comprising of 159 sub-blocks covering an area of 488 km² on the southeastern flank of the Cooper Basin in western Queensland. The permit is located close to established gas fields and existing infrastructure, such as the Santos-operated Whanto-Mt Howitt pipeline, connected to the Moomba processing facility.

8.1. Exploration and Appraisal of ATP 927

The seismic coverage within ATP 927 consists of a series of regional traverses (4 to 10 km apart) shot in an east to west direction with some limited infill grids on the east and west margins.

In 2014, Real Energy (previous operator of ATP 927) drilled two exploration wells, Tamarama-1 and Queenscliff-1. They were deliberately positioned beyond structural closure to test for stratigraphically trapped basin centre gas (BCG) and targeted proven sandstone reservoirs in the Permian Toolachee and Patchawarra Formations. Both wells flowed gas to surface when tested which could indicate that ATP 927 is part of a Basin-Centred Gas (“BCG”) play in the Windorah Trough. Flow rates, however, were sub-commercial.

In 2018 Real Energy drilled two appraisal wells, Tamarama-2 and Tamarama-3. Both wells were deviated and drilled parallel to the maximum horizontal stress direction to optimise reservoir stimulation when hydraulically fractured (fraced) to improve production. Fraccing was also performed in Tamarama-1 but sustainable and commercially viable post-stimulation flow rates were not achieved in any of the wells. The Tamarama-1 gas rate declined from 1.1 MM scf/d initially to 0.02 MM scf/d after 36 hours of flow, whereas Tamarama-2 and -3 recorded initial flow rates of 2 MM scf/d and 2.5 MM scf/d respectively that declined following water production to 0.24 MM scf/d after 208 hours (~9 days) and 0.05 MM scf/d after ~72 hours (3 days). The associated water production decreased from ~170 bwpd in the early stage to ~70 bwpd by test completion.

Together the Tamarama and Queenscliff areas are collectively referred to as the Windorah Gas Project.

Eastern Gas has identified areas of improvement in hydraulic fracture stimulation and well completion design based upon the lessons learned from the Tamarama wells and now proposes to apply the latest technologies and well designs to Queenscliff-1 as a key part of the future work program for ATP 927. MA concurs with Eastern Gas’s proposal, including the trialling of drilling long horizontal wells with multi-stage fracs to achieve commercial gas flow rates.

8.2. Contingent Resources of ATP 927

Real Energy engaged DeGolyer & MacNaughton in 2015 to certify ATP 927 hydrocarbon resources following the drilling of Tamarama-1 and Queenscliff-1, followed by Aeon Petroleum Consultants in 2019 to certify resource estimates in the Tamarama area only after drilling and fracking Tamarama-2 and -3. Eastern Gas combined the contingent resource estimate of the Queenscliff area by DeGolyer & MacNaughton (2015) with that of the Tamarama area by Aeon (2019) to determine a contingent resource estimate for ATP 927 as a whole. The results of this work are shown in [Table 8-1](#).

It is beyond the scope of this report for MA to generate a fully independent, probabilistic resource assessment of ATP 927. However, it is the view of MA that the parameters used in the previous resource estimates do not sufficiently capture the range of uncertainty given the limited data available. In particular, the parameter ranges appear skewed (too high or too low) to be what would be expected in MA’s opinion.

When assessing the contingent resource areas used by DeGolyer & MacNaughton (2015), Aeon (2019) and Eastern Gas’s own interpretation of net pay thickness, porosity and gas saturation,



MA believes that these OGIP estimates are too low. This observation is of particular importance if applicable to the unexplored areas of ATP 927 indicating that the OGIP of the total licence area may be significantly under-reported.

Table 8-1: Summary of contingent gas resources in ATP 927⁹

Area	Formation	EUR (Bscf)			Sale Gas (PJ) ¹⁰			
		P90	P50	P10	1C	2C	3C	
Queenscliff-1 Area	Toolachee	16.4	56.6	141.0	14.4	49.6	123.5	DeGolyer & MacNaughton (2015)
	Patchawarra	31.7	117.4	284.7	27.8	102.8	249.4	
	Arithmetic Sum	48.2	174.0	425.6	42.2	152.4	372.9	
Tamarama Area	Nappamerri	4.2	9.5	21.0	3.7	8.3	18.4	Aeon August (2019)
	Toolachee	11.8	27.8	65.4	10.4	24.3	57.3	
	Patchawarra	53.8	119.0	258.1	47.1	104.3	226.2	
	Arithmetic Sum	69.8	156.3	344.6	61.2	137.0	301.9	
Windorah Gas Project Arithmetic Sum		118.0	330.3	770.2	103.4	289.4	674.8	

Overall, the lower OGIP reported by DeGolyer & MacNaughton (2015) and Aeon (2019) in Contingent Resource Area is partially offset by their estimates of recoverable gas due to DeGolyer & MacNaughton's use of a lower shrinkage factor and Aeon's use of a higher recovery factor. As a result, their P50 recoverable gas volume estimates fall within what would be considered to be an acceptable range of uncertainty, which MA supports.

MA has classified this resource as **Contingent Resources, Development on Hold (CR-OH)**. This is based upon the poor performance of the wells drilled and tested to date and the failure to demonstrate a development plan that could recover economic volumes of gas under the prevailing commercial terms of the licence:

This limitation has been recognised by the operator, and a series of appraisal activities are now planned (Section 9.3) to determine if production rates and ultimate recovery can be improved. The aim of this work program will be to

- Optimise well stimulation by maximizing lateral fracture propagation within reservoirs, whilst simultaneously minimising the fracturing of adjacent coal seams and reducing formation damage caused by fines migration.
- Develop a fit-for-purpose approach to either delay water production or artificially lift the produced water in a cost-effective manner.

⁹ Eastern Gas holds a 100% net equity interest in ATP 927; therefore, the company's net share of resources is equal to the project's gross (100%) volumes. All reported resources are according to economic interest, net of royalties, and that no pure service contracts apply

⁹ A gas conversion factor of 0.894 PJ per Bscf has been applied throughout this report; relatively lower gross heating value reflects higher CO₂ content

¹⁰ A gas conversion factor of 0.894 PJ per Bscf has been applied throughout this report; relatively lower gross heating value reflects higher CO₂ content (Section 5.4)



- Identify an alternative development concept based on those successfully applied to Basin Gas developments elsewhere, such as the drilling of horizontal production wells combined with multi-stage fracking.

MA concurs that the above activities are an essential prerequisite to the successful development of ATP927 and the maturation of the associated resources from the current designation of **Contingent Resources Development on Hold** to Contingent Resources, Development Pending and ultimately Reserves.



9. ATP 927 OVERVIEW

9.1. ATP 927 Location and Permit History

ATP 927 is located in the regionally extensive Cooper-Eromanga Basin of western Queensland and comprises some 159 sub-blocks covering an area of approximately 488km² (Figure 9-1). The permit overlies both the Jurassic- and Cretaceous-age Eromanga Basin and the Permian- and Triassic-age Cooper Basin. ATP 927 was first awarded on 27 August 2007 to Drillsearch Energy Limited and then transferred to Real Energy through a sales and purchase agreement on 17 March 2014. The current working interest is 100% to Eastern Gas (Operator).

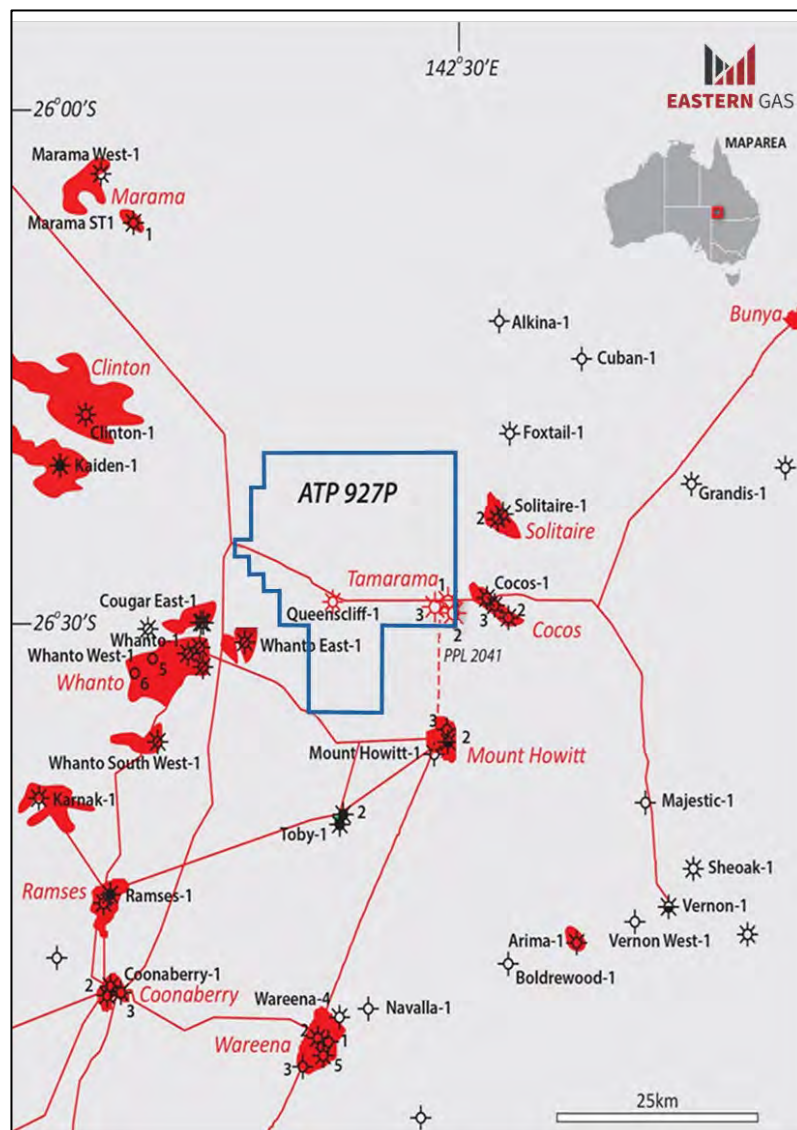


Figure 9-1: ATP 927 including surrounding wells, gas infrastructure and producing fields (Real Energy, 2019a, 2019b)

Since awarding the original permit, a number of sub-blocks within ATP 927 were relinquished in 2019 and 2023 due to regulatory requirements. In addition, those blocks that overlapped with the recently regulated Lake Eyre Designated Area (previously known as the as Pristine Rivers

area) were also mandated relinquishments. The remaining area of 159 sub-blocks that now constitute ATP 927 is shown in [Figure 9-1](#).

The permit is located close to established gas fields (e.g., Whanto, Mount Howitt and Cocos) and existing infrastructure ([Figure 9-1](#)), such as the Santos Wanto – Mt Howitt pipeline connecting to the Moomba processing facility (Real Energy, 2019b).

9.2. ATP 927 Exploration and Appraisal History

The seismic coverage within ATP 927 consists of a series of regional traverses shot an east to west direction with some limited infill grids on the east and west margins ([Figure 9-2](#)). The east-to-west traverses were acquired in 1980, 1982, 1984 and 1995. spaced at between 4 and 10 km with most being about 5 to 6 km apart. There are no strike lines with which to tie the regional grid completely, but two lines of 1995 vintage cross diagonally through the NE area of the block and provide some out of plane control.

Real Energy Queensland drilled two Permian gas exploration wells, Tamarama-1 and Queenscliff-1, in 2014 and two pilot production wells, Tamarama-2 and Tamarama-3, in 2018 ([Table 9-1](#), [Figure 9-3](#)). Tamarama-1 was the first well drilled outside of structural closure in this area and established the presence of gas trapped stratigraphically within sandstones of Permian age ([Figure 9-3](#), Real Energy, 2019a, 2019b). The expenditure on the work programme was approximately \$35,750,000 (Real Energy, 2019b).

All four wells targeted reservoir sandstones within the Late Permian-age Toolachee Formation and the Early Permian-age Patchawarra Formation. All wells flowed gas to surface, albeit at sub-commercial rates, from cased hole tests (Real Energy, 2019a, 2019b). The three Tamarama wells were hydraulically fracture-stimulated (fracked) but sustainable and commercially viable post-stimulation flow rates were not achieved. Tamarama-2 and Tamarama-3 were both drilled as deviated wells parallel to the maximum horizontal stress direction to optimise fracture placement. Initial flow rates of 2 MM scf/d, and 2.5 MM scf/d were achieved respectively, but within a few days these rates declined to <0.25 MM scf/d in both wells due to water production. The associated water production declined from ~170 bwpd in the early stages of the test to ~70 bwpd by test completion.

Table 9-1: Wells drilled in ATP 927

Well	Operator	Spud	Elevation	TD	Result	Comment
Tamarama-1	Real Energy	2014	147.54 m	2475.66 m (logged depth)	Gas discovery in Toolachee and Patchawarra formations	Fracked; tested with gas flows to surface
Queenscliff-1	Real Energy	2014	144.88 m	3221.7 m (logged depth)	Gas discovery in Toolachee and Patchawarra formations	Completed; tested with gas flows to surface
Tamarama-2	Real Energy	2018	145.3 m	2581.0 m MD (drilled depth)	Gas discovery in Arrabury, Toolachee and Patchawarra formations	Fracked; tested with gas flows to surface
Tamarama-3	Real Energy	2018	143.15 m	2639.0 m MD (logged depth)	Gas discovery in Toolachee and Patchawarra formations	Fracked; tested with gas flows to surface



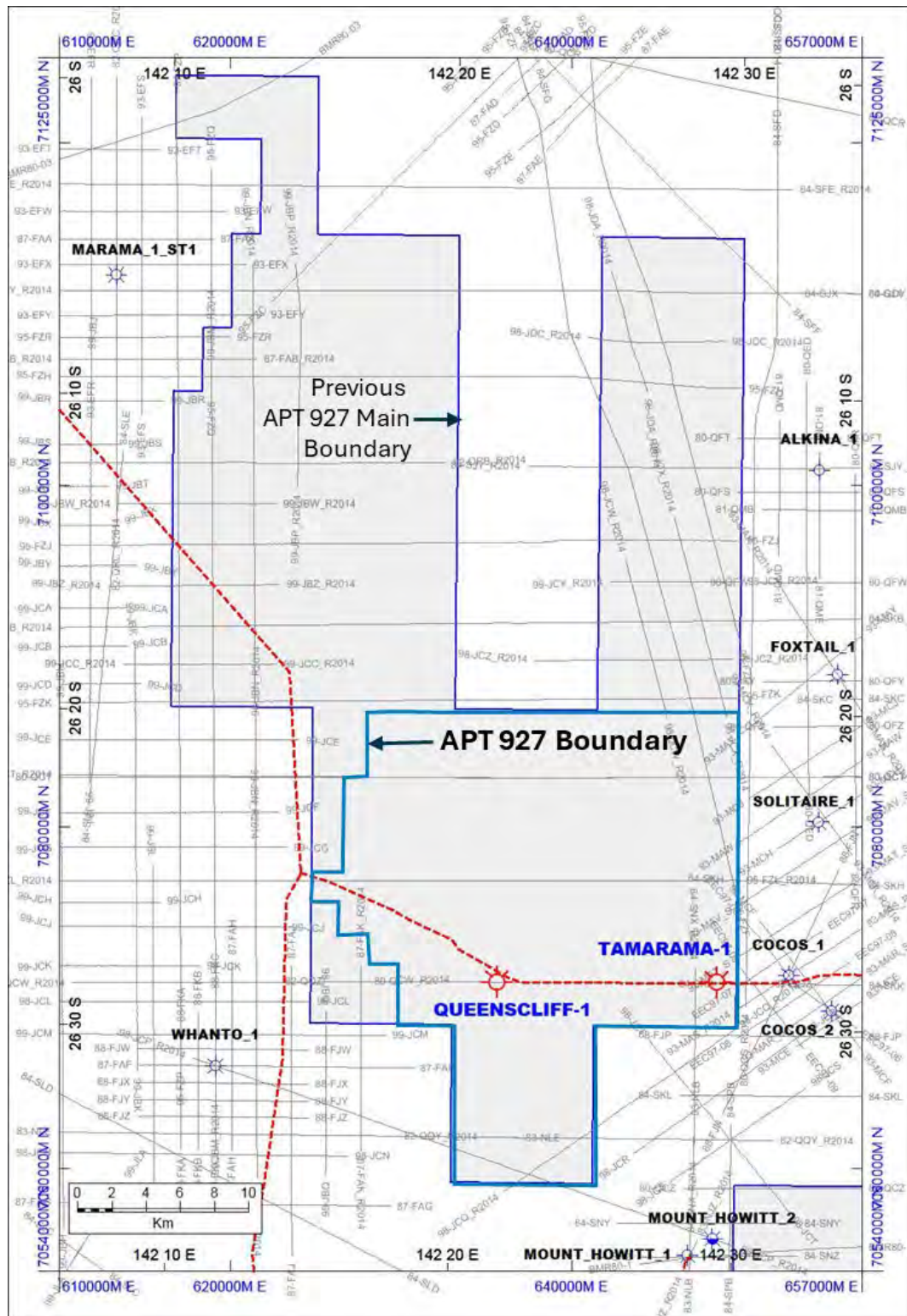


Figure 9-2: 2D seismic lines in ATP 927 area (Real Energy, 2019a)



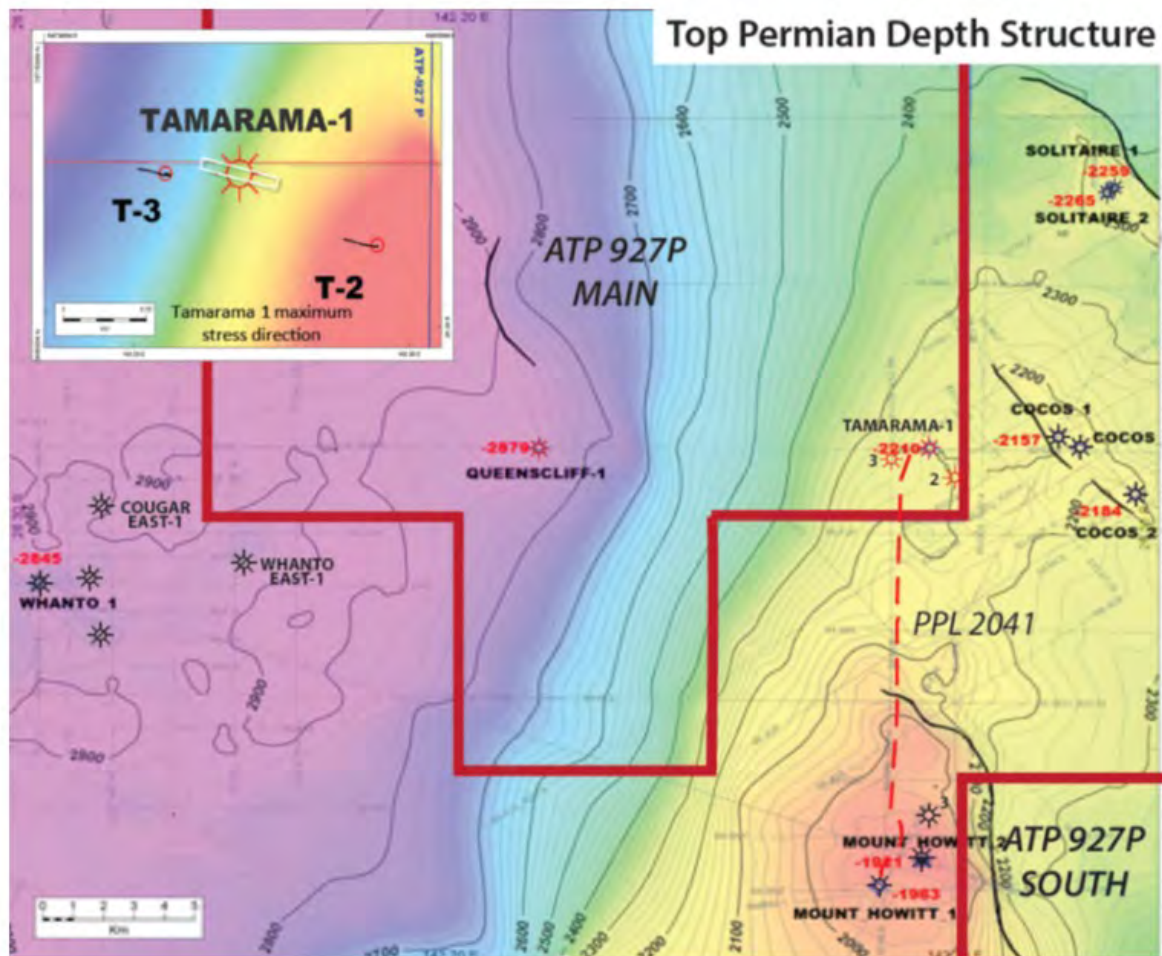


Figure 9-3: Top Permian depth map and locations of Queenscliff and Tamarama wells
Inset shows detailed well location and maximum stress orientation. Note the reported structural closures at Mt Howitt and Cocos, and the red dashed line between Tamarama and Mt Howitt is the planned pipeline (PPL2041). (Real Energy 2019a, 2019b)

9.3. Work Program

A Special Amendment to change the previous work program was submitted in September 2023. In addition, the application for the renewal of ATP 927, including the proposed work program (Windorah Gas Project), was lodged on 31 August 2023 and approved in April 2025. The Proposed Later Work Program (LWP) for the current 4-year term of the permit is summarized in Table 9-2.

Table 9-2: ATP 927 Proposed later work program (LWP)

Year End Date	Proposed Work
Period Ending 30 September 2027	Queenscliff-1 diagnostic Fracture Injection Test (DFIT), fracture stimulation
	Technical evaluation
	Total

In addition, an application for a Potential Commercial Area (PCA) over ATP 927 was lodged on September 2023 and a declaration of Potential Commercial Area (PCA) Number 341 received in April 2025 for a 15-year period.



Although not funded from the IPO proceeds, the planned future work program will primary focus on fracture stimulation of Queenscliff-1 well. It is anticipated that there is potential for considerable improvements in gas flow rate following fracture stimulation, leveraging modern fracture stimulation techniques learned from the extensive use of such technologies in the Cooper Basin. Following the extended production test of Queenscliff 1, a detailed technical analysis of the results will be undertaken to refine the planning of future drilling and fracture stimulation operations.

Currently, no site operations are taking place on the Windorah Gas Project, however, desktop studies and workflows have been completed to support the IPO and planned operations.



10. ATP 297 REGIONAL GEOLOGICAL SETTING

10.1. The Cooper-Eromanga Basin

ATP 927 is located within the Cooper-Eromanga Basin region of south-western Queensland, covering approximately 488 km² (Figure 10-1). This area is a key part of Australia's onshore petroleum province (Hall et al. 2015) comprising the Permian-Triassic Cooper Basin and the Eromanga Basin (Jurassic and Cretaceous in age) (Figure 10-2). These basins extend into South Australia and play a significant role in Australia's hydrocarbon production (Hall et al., 2015).

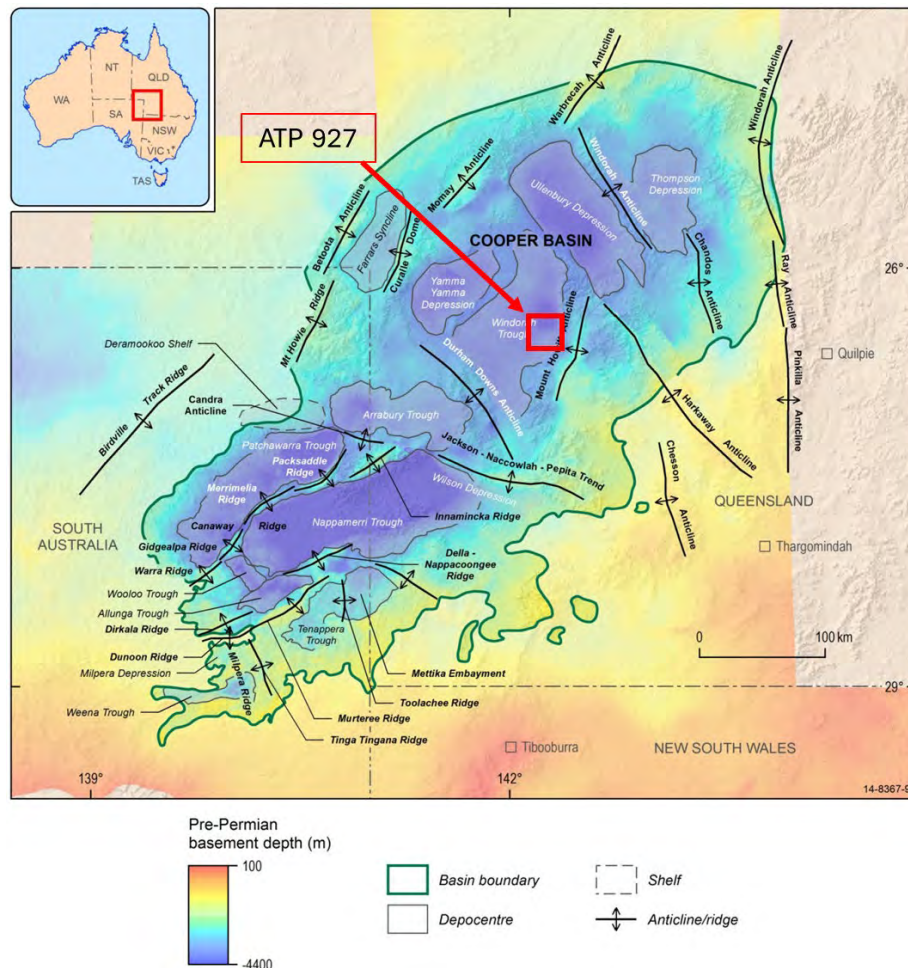


Figure 10-1: Cooper Basin structural elements overlain on the Pre-Permian-age basement horizon (based on Hall et al. 2015).

Oil and gas exploration of the Cooper and Eromanga basins began in 1945. The Cooper Basin is predominantly gas-bearing with a significant light liquid component, while the Eromanga Basin is mainly oil-bearing with minor gas content; however, the Permian-age Cooper Basin has been the main source for the hydrocarbons. The Cooper and Eromanga Basins have produced over 7.58 trillion cubic feet (Tcf) of gas and some 418 MM bbl of oil to the end of 2019, with reported 2P reserves of 50 MM bbl of oil, 12 MM bbl of condensate, 17 MM bbl of liquefied petroleum gas, and 1 Tcf of gas (Geoscience Australia, 2024a, Geoscience Australia, 2014b).

The Cooper Basin is an intra-cratonic rift basin that is located in the south-western part of Queensland extending into north-eastern South Australia, covering a total area of 130,000 km² (95,000 km² in Queensland). The Cooper Basin overlies the (Cambrian- and Ordovician-age) Warburton Basin and is in turn unconformably overlain by the younger Eromanga Basin.



Structurally, the area is deformed into a series of troughs and depressions, bounded by anticlines (Figure 10-1, Figure 10-2).

The Cooper Basin sequence comprises the Permian-age basal Gidgealpa Group and the overlying Triassic-age Nappamerri Group (Figure 10-2, Real Energy, 2019a).

The Gidgealpa Group can be subdivided in ascending order into the Merrimelia Formation, Tirrawarra Sandstone, Patchawarra Formation, Murteree Shale, Epsilon Formation, Roseneath Shale, Daralingie Formation and the Toolachee Formation.

The Nappamerri Group comprises the Callamurra, Paning and Wimmera Sandstone members of the Arrabury Formation, which are capped by the Doonmulla and Gilpeppee members of the Tinchoo Formation

The main gas targets at ATP 927 are the Permian aged Toolachee and Patchawarra Formations, which comprise fluvial sandstones interbedded with flood plain siltstone, mudstone, shale and thicker, laterally extensive coal units. Gas trapped in fluvial sandstones are sourced from mature, thick, and pervasive coal seams and carbonaceous shales. The sediment thickness in the central region of the basin can reach up to 1,250m.

The secondary target in ATP 927 is the Triassic aged Nappermerri Group which consists of sandstone, siltstone and mudstone deposited on a vegetated floodplain cut by low to high sinuosity rivers with localised shallow lakes. The Nappermerri Group also provides a regional seal for the Copper Basin and separates the Copper Basin from the overlying Eromanga Basin.

The Eromanga Basin covers approximately 550,000 km² extending across western Queensland, into the Northern Territory, South Australia and New South Wales. The Eromanga Basin strata reflect sediments associated with two major depositional events.

The lower part, of Late Triassic–Jurassic to Early Cretaceous age, is predominantly of terrestrial origin and consists of a mix of generally permeable sandstone units with more argillaceous tighter units. Deposition in the northern part of the Eromanga Basin began in the Early Jurassic. The sandstone units are mainly quartzose or sub-labile, commonly medium to coarse-grained and non-calcareous. They include some of the main artesian aquifers of the Great Artesian Basin.

The upper part, of Early to Late Cretaceous age, is predominantly shallow marine and deltaic in origin, consisting of sandstone, siltstone, mudstones, shale, coal and limestone.



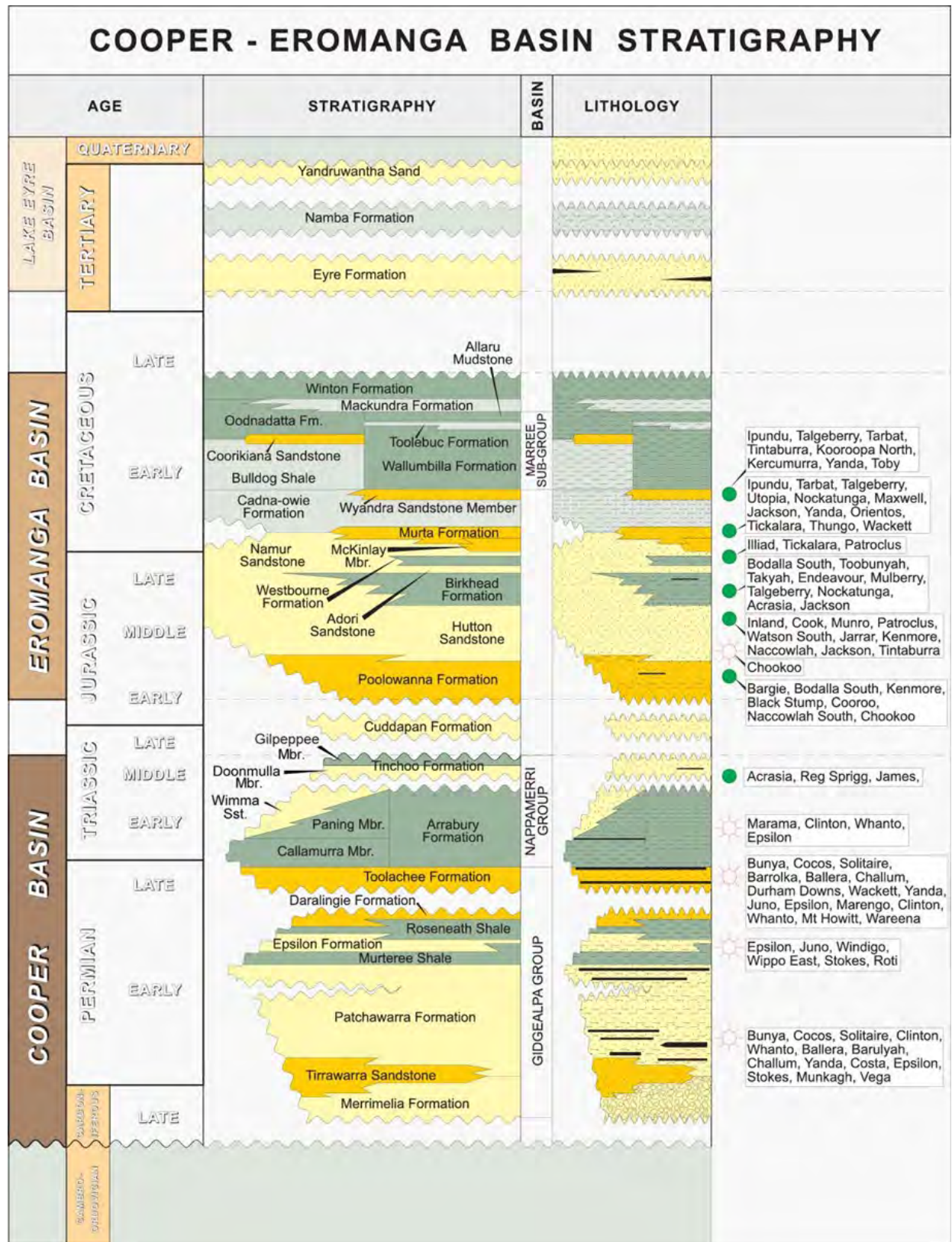


Figure 10-2: Stratigraphy of the Copper-Eromanga Basins (Real Energy, 2019a)



10.2. ATP 927 Regional Structural Setting

ATP 927 overlies the eastern part of the Windorah Trough and the adjacent, western flank of the prominent north plunging Mt Howitt Anticline (Figure 10-3, Real Energy, 2019a). A structural high, along which several low relief culminations occur, is located immediately west of ATP 927, within the deeper Windorah Trough. Several gas discoveries have been made following the deep structural trend (e.g. Whanto, Clinton, Marama) and on the Mt Howitt anticline (e.g., Mt Howitt, Cocos, Solitaire) (Figure 10-3).

The Cooper Basin in ATP 927 area consists of a thick Triassic-age section overlying a thinner Permian section (Figure 10-4, Real Energy, 2019a). Regional uplift of the basin during the early Late Permian resulted in the creation of the basin-wide Daralingie unconformity that in the NE Cooper Basin, and ATP 927 area, separates the Early Permian Patchawarra Formation from the Late Permian Toolachee Formation (Figure 10-2). Low-angle truncation of the Patchawarra Formation beneath the Toolachee is evident from well log correlation and seismic data across the area.

Widespread compressional folding, regional uplift and erosion terminated deposition in the Cooper Basin at the end of the Middle Triassic. In the ATP 927 area, the NW plunging Coonavalla and NE-SW striking Vernon anticlinal trends (Figure 10-3) were both largely formed during this period of deformation.

There was only minor tectonic activity in the area of ATP 927 during the deposition of the Eromanga Basin Jurassic to Cretaceous-age sedimentary sections. Regional tectonism during the latest Cretaceous terminated deposition in the Eromanga Basin. East-west compression during the Palaeogene re-activated and inverted many of the Palaeozoic and Permian-Triassic structures in the Cooper Basin, as well as developing a number of large new anticlinal structures affecting both the Cooper and Eromanga Basin section. The creation of the Windorah Trough and Mt Howitt anticline (Figure 10-3) occurred in this episode. The Coonavalla and Vernon anticlines also experienced further re-activation and growth during this period.

The Mt Howitt Anticline is a large north to south-oriented anticlinal trend. At its southern end it is bounded on all sides by re-activated reverse faults. These faults die out northwards near the southern boundary of ATP 927 and the northern extension of the structure is a simple anticlinal uplift (i.e. with no associated reverse faults). Underlying the present N-S structural grain of the Mt Howitt anticline are a number of more subtle NW to SE trending features. The location and the trend of some of these may have been inherited from underlying Palaeozoic strata.

Formation of the Mt Howitt anticline resulted primarily from a period of major basin inversion and fault reactivation occurring in the latest Cretaceous and early Tertiary.



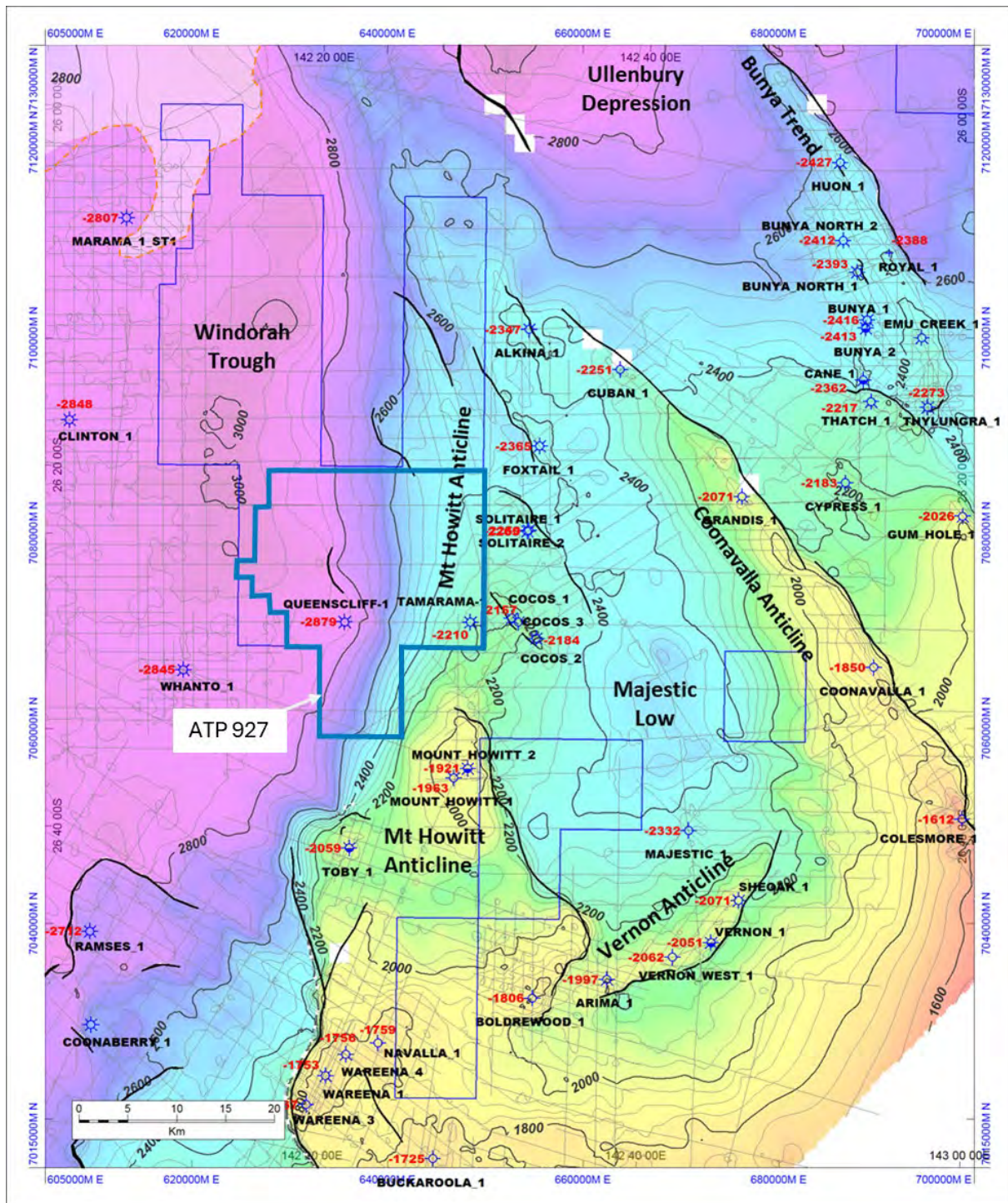


Figure 10-3: ATP 927 structural setting illustrated by top Permian depth map (Real Energy, 2019a)



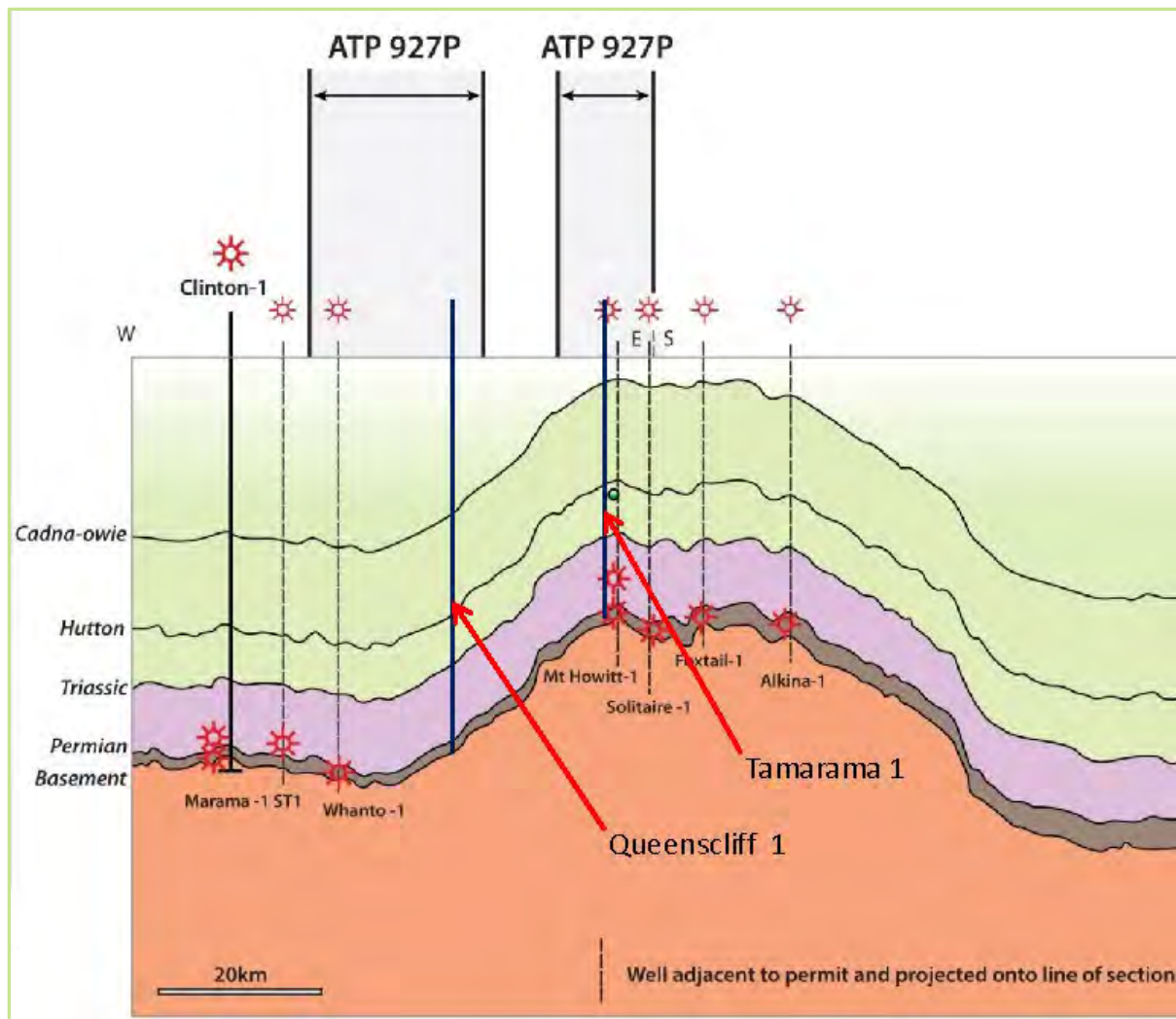


Figure 10-4: Regional cross-section of ATP 927 area (modified from Real Energy, 2019a)

10.3. ATP 927 as a potential Basin-Centred Gas play

The extent of the potential Permian Basin-centred gas (BCG) accumulation within ATP 927 and controlling factors including structural depth at peak hydrocarbon generation, thermal maturity and formation thickness, are shown in Figure 10-5 (Real Energy, 2019a, 2019b).

The map in Figure 10-5 indicates the structural depth configuration at the time of peak hydrocarbon generation and expulsion (with purple indicating structurally low areas).

The isopach thickness contours of the Toolachee and Patchawarra formations show they are thickest in ATP 927 and thin from there in all directions.

The vitrinite reflectance contour ($VRo = 1.35\%$) indicates a high thermal maturity level on and to the west of this contour, which approximates to the upper depth limit of a potential Permian BCG play. Lower maturation levels occur to the east and south of this contour line with wells with known free water-bearing Permian-age sandstones (from both DST and log analysis results) and Permian gas fields with confirmed gas-water contacts.

The above data and interpretations, including interpretation of gas below closure at nearby Whanto West-1 (Beach 2015, Santos 2016), may indicate the presence of a BCG system - and therefore the potential for a significantly increased gas resource area. However, given the paucity of well data, stratigraphic and / or structural elements cannot be discounted and as has



been seen in other geological basins globally, it is only with significant well data that BCG systems can be confirmed (Law, 2002).

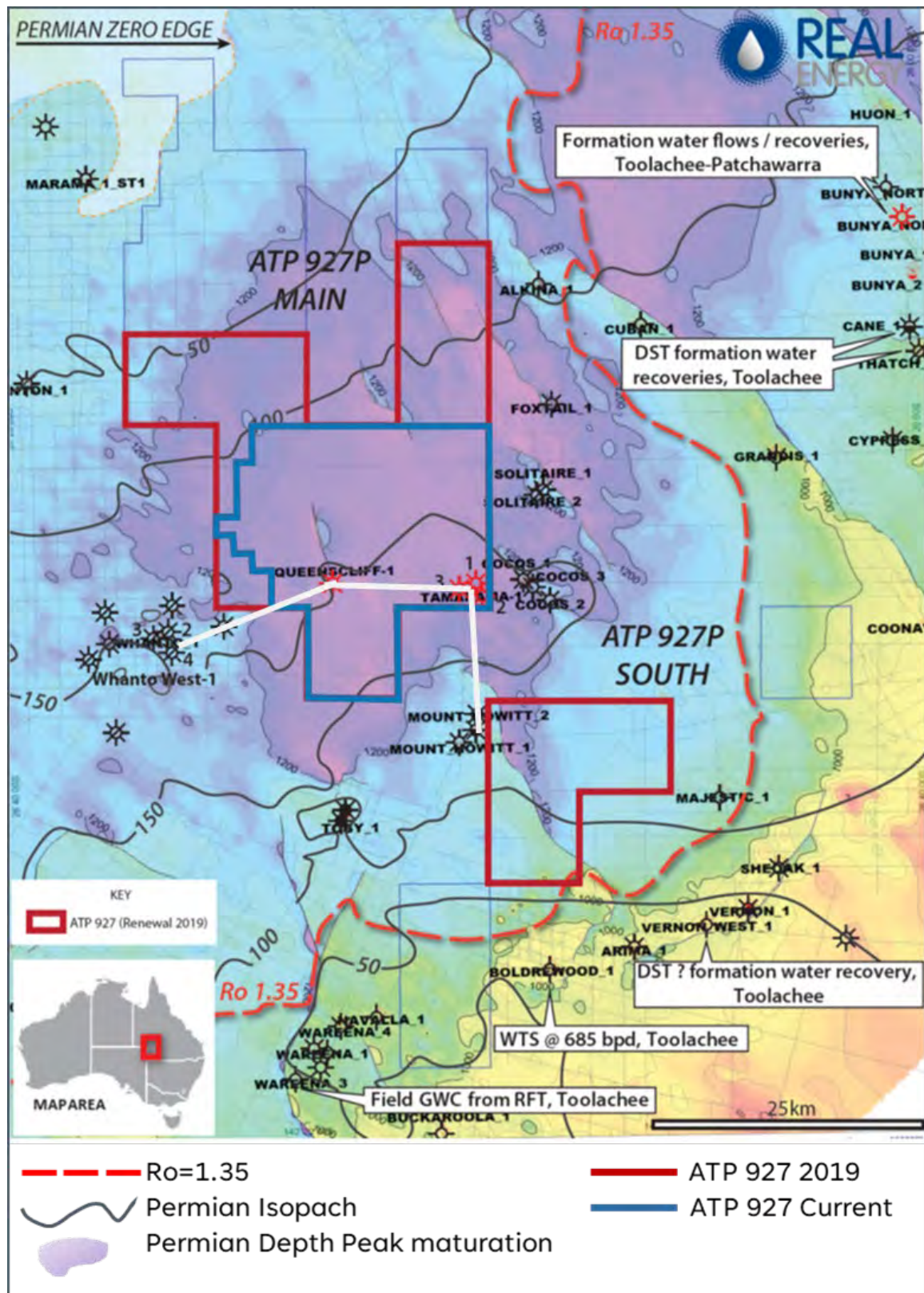


Figure 10-5: Controlling factors for a potential BCG play in ATP 927 (Real Energy, 2019a, 2019b) The white line shows the location of the well cross section (Figure 10-7).



Tamarama-1 and Queenscliff-1 were the first two well drilled outside of the reported structural closures (e.g. Mt Howitt and Cocos fields) in this area (Figure 9-3, Figure 10-4, Figure 10-6) and established the presence of gas trapped stratigraphically within the Permian sequence (Figure 10-7, Figure 10-8). ATP 927 well test results are summarised below.

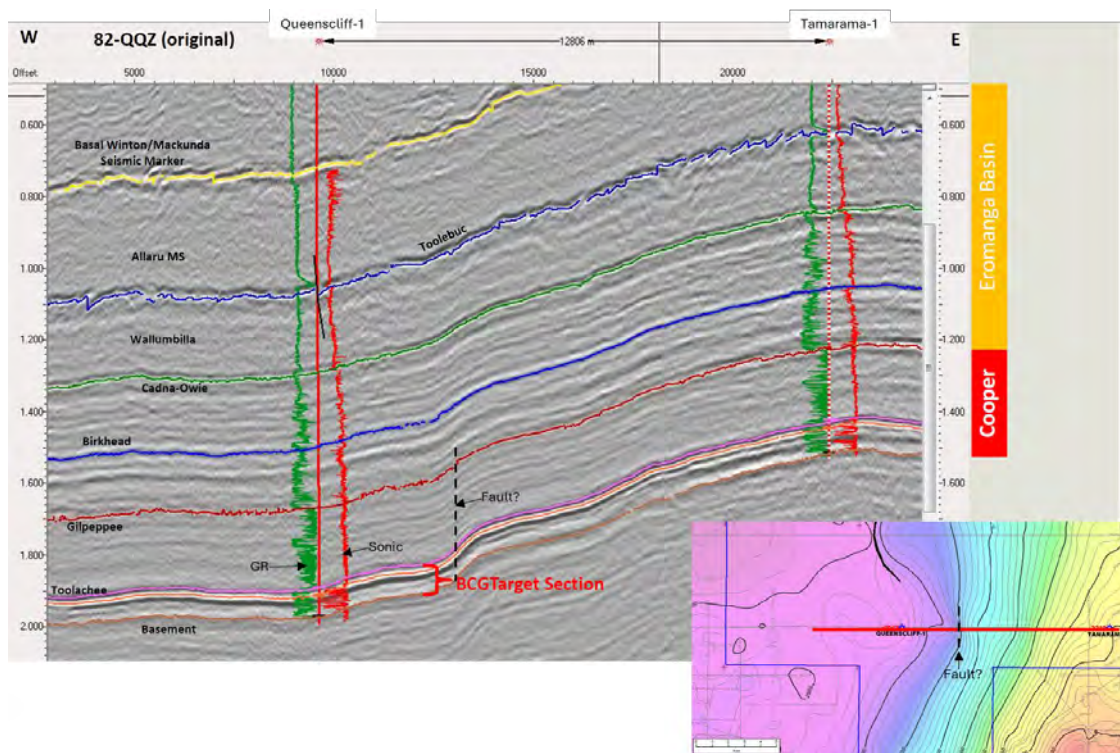


Figure 10-6: Seismic section between Tamarama-1 and Queenscliff-1

Note the dashed line to the east of Queenscliff-1 could indicate a fault, and the current wide-spaced seismic lines map do not allow resolution of a structural closures against this fault.

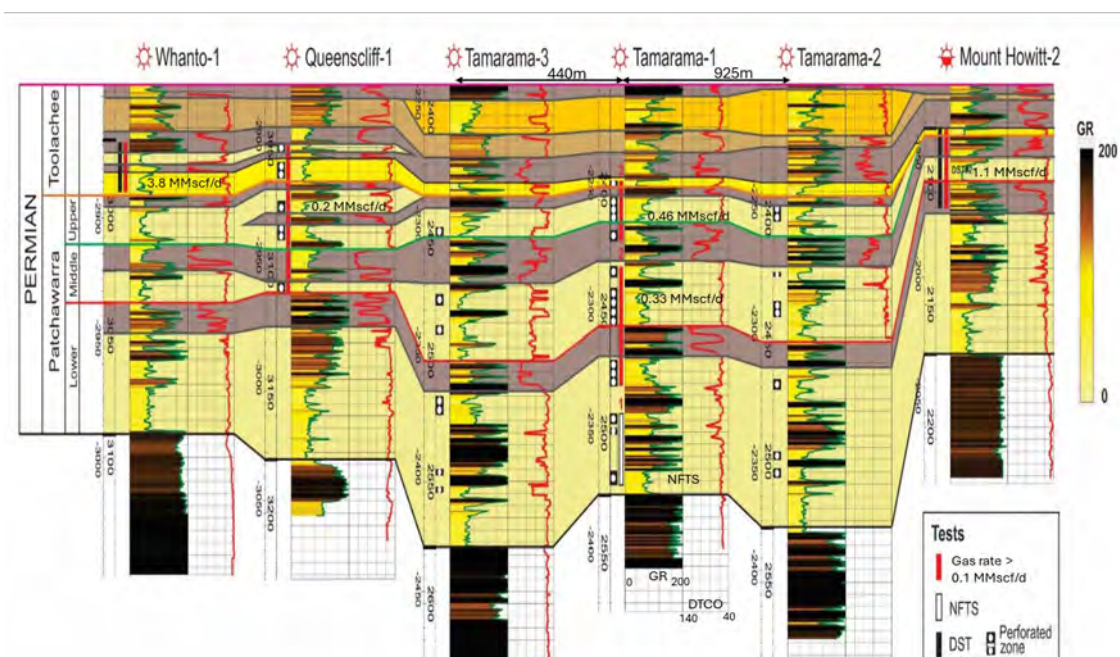


Figure 10-7: ATP 927 well correlation with gas flow data (Well location show by white line on Figure 10-5)



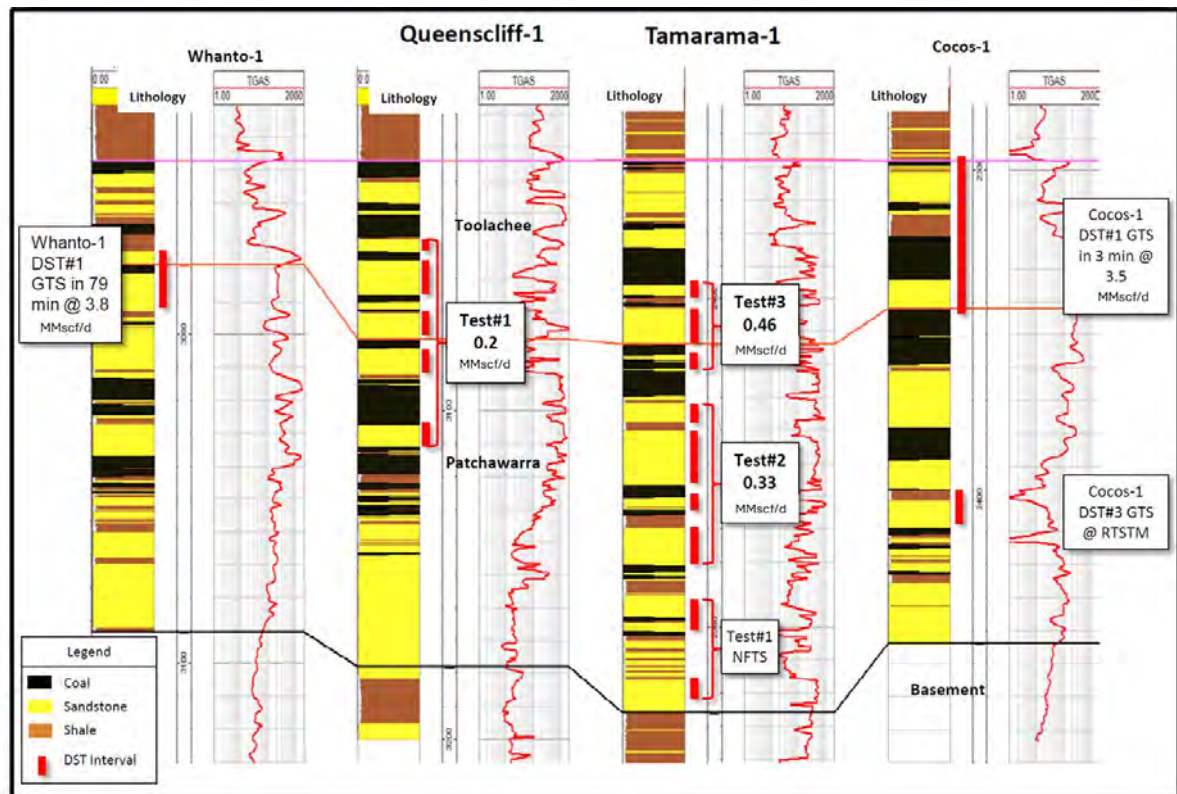


Figure 10-8: Tamarama to Queenscliff well cross-section showing lithology, total mud-gas and well test results.

11. ATP 927 EVALUATION OF DATA RECEIVED

The data and information used in the preparation of this report were provided by Eastern Gas and supplemented by public domain information. MA has relied upon the information provided and has undertaken the evaluation based upon a review and audit of existing interpretations and assessments as supplied, making adjustments that in our judgment were necessary.

MA has not conducted a site visit.

11.1.1 Tamarama-1

Tamarama-1 is a vertical well, drilled to a total depth of 2574 m MD bRT in basement. The well is located about 4 km west of and 60 m down dip from the Cocos Gas Field (PL 116) that produced gas from reservoirs in the Toolachee and Patchawarra formations. Tamarama-1 was deliberately drilled outside seismically-mapped structural closures (however, note the large spacing between seismic lines shown in [Figure 9-2](#) to confirm the presence of stratigraphically-trapped gas within the Permian section beyond the structural limits of the Cocos field ([Figure 9-3](#)).

Gas-bearing sandstones were found in the Triassic-age lower Arrabury Formation from 2157.5 m ss, and throughout the Permian Toolachee and Patchawarra Formations from 2210.5 m ss ([Figure 10-7](#), [Figure 10-8](#)). Nine zones within the Patchawarra and Toolachee Formations were tested in three separate pre-frack cased hole tests ([Figure 10-7](#), [Figure 10-8](#)):

- Test #1, over the basal sand of the ‘lower’ Patchawarra Formation failed to flow gas, which is interpreted to be due to tight reservoir.
- Test#2 over the main Patchawarra sandstones, successfully flowed gas to surface. The recorded initial rate on clean-up flow through a 12/64” choke was 0.426 MM scf/d with a FTHP of 556 psi that stabilized at ~0.336 MM scf/d with a FTHP of 446 psi within 30 minutes. Multi-rate flows were undertaken but the recorded data was inaccurate due to brine cushion unloading.
- Test#3 targeted the basal Toolachee Formation and also flowed gas to surface. On clean-up flow, a maximum initial rate of 0.46 MM scf/d was achieved with a FTHP of 327 psi on a 16/64” choke.

No formation water was recorded in Test#2 and #3.

11.1.2 Queenscliff-1

Queenscliff-1 was drilled in late 2014 to a depth of 3219 m ss and is located 12.85 km due west, and 668 m downdip of Tamarama-1. Based upon current mapping, also located outside any mapped structural closure and therefore testing potential for a basin-centered gas system.

Gas-bearing sands were found in the Triassic lower Arrabury Formation at 2812.1 m ss, with gas shows observed throughout the Permian Toolachee and Patchawarra Formations.

Five zones were perforated and tested (cased hole) in a combined (commingled) section within the middle and upper Patchawarra and the lower Toolachee formations. Gas samples were obtained and formation pressure data was also recorded ([Figure 10-7](#), [Figure 10-8](#)).

The well flowed gas on clean-up at a maximum initial rate of approximately 0.2 MM scf/d.

11.2. Appraisal Drilling and Fracture Stimulation

Tamarama-2 and -3 were drilled to appraise the Tamarama-1 gas discovery. Their results are summarised below.



11.2.1 Tamarama-2

Tamarama-2 was drilled at a location approximately 925 m ESE of Tamarama-1 as a directional well on a planned azimuth of 285°, parallel to the maximum horizontal stress (SH_{max}) direction with the aim of optimising hydraulic fracture placement and efficiency. The rationale was to improve reservoir deliverability based upon the learnings from Tamarama-1 (Real Energy, 2019a, 2019b).

Gas-bearing sands were found in the Triassic Lower Arrabury Formation at 2129.9 m TV ss, and throughout the Permian-age Toolachee and Patchawarra formations. Wireline logs together with mud gas levels indicated gas-saturated reservoirs that can be correlated to Tamarama-1 (Figure 10-7).

Five sections were initially perforated for DFIT and hydraulic fracture stimulation. The depth ranges for the sections are 2396 - 2402 m MD bRT, 2435- 2441 m MD bRT, 2468 - 2471 m MD bRT, 2497 - 2500 m MD bRT and 2504-2507 m MD bRT (Figure 10-7).

After shut-in for over two months, additional perforations from 2311 - 2314 m MD bRT (Arrabury Formation) and 2423 - 2425 m MD bRT (Patchawarra Formation) were added prior to well testing. A flow test was conducted for over 208 hours before shutting-in the well for a pressure build-up survey. Thereafter initial gas flow rates were just over 2 MM scf/d before declining to approximately 0.25 MM scf/d with water rates of about 75 bwpd recorded at the end of the flow test period (Figure 11-1).

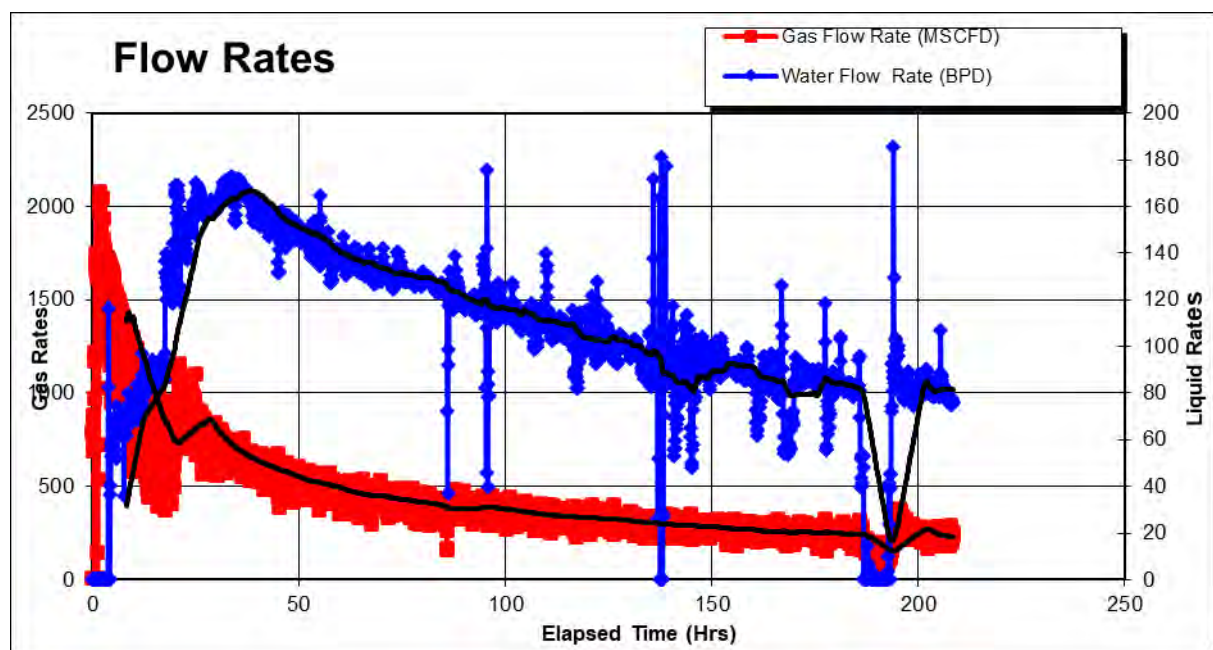


Figure 11-1: Tamarama-2 gas and water flow rates during test.

11.2.2 Tamarama-3

Tamarama-3 was drilled at a location 440 m west of Tamarama-1 as a directional well parallel to the maximum horizontal stress (SH_{max}) direction with the aim of optimising hydraulic fracture placement and efficiency, thus improving reservoir deliverability based upon learnings from Tamarama-1 (Real Energy, 2019a, 2019b).

Gas-bearing sands were found in the Triassic Lower Arrabury Formation from 2177.3 m TV ss, and throughout the Permian Toolachee and Patchawarra formations from 2230.1 m TV ss (Figure 10-7).



5 zones were perforated for DFIT and fracture stimulation. The perforated zones are: 2446 -2450 m MD bRT, 2473.5 - 2477.5 m MD bRT, 2486 - 2490 m MD bRT, 2515-2523 m MD bRT, 2545-2547 m MD bRT and 2552 - 2554 m MD bRT (DFIT only).

After shut-in for over two months, Tamarama-3 was put on pre-frack flow test for a ~72-hour period before shutting-in for a pressure build-up survey. The initial gas flow rates were over 2.5 MM scf/d declining to below 0.05 MM scf/d with slugging water rates around 70 bwpd by the end of the flow test period (Figure 11-2).

The source of water is probably from the reservoir section surrounding Tamarama-1 due to its proximity and evidence of pressure interference between these two wells (Real Energy, 2019a, 2019b).

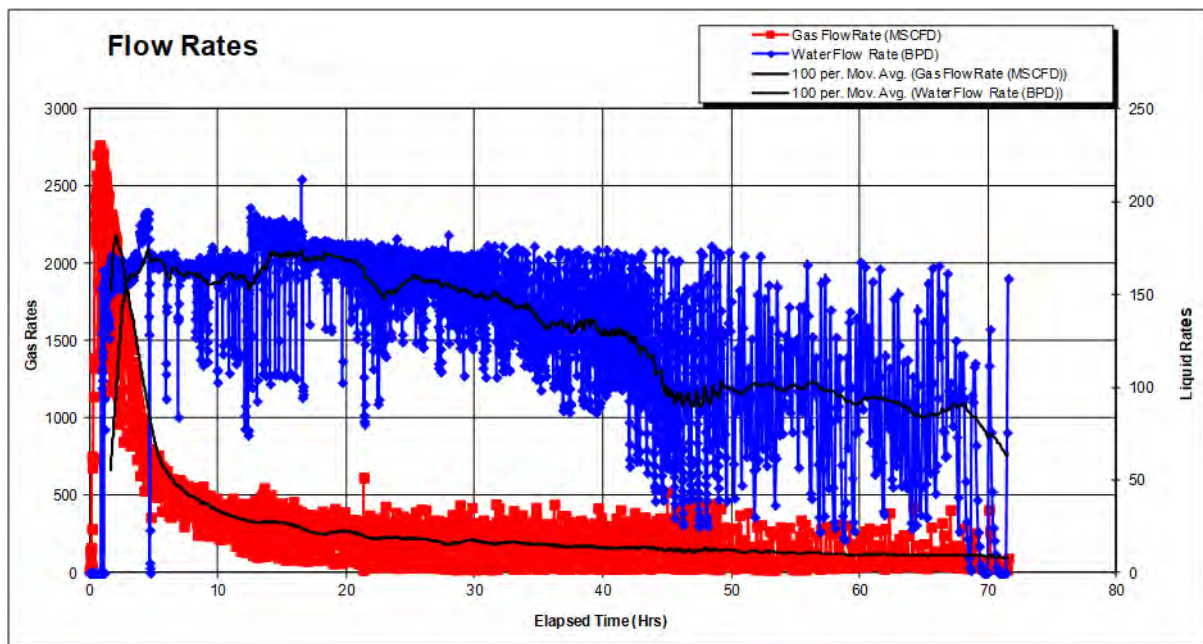


Figure 11-2: Tamarama-3 gas and water flow rates during tests.

11.2.3 Tamarama-1 Fracture Stimulation

A five-stage frack stimulation program was performed on Tamarama-1 in May 2016. During the final stage, the well screened out, leaving some sand in the tubing. Subsequent bailing operations were not able to remove enough sand to enable the well to flow back the frack fluids. Coiled tubing was then used to clean out the sand from the tubing; however, the well was still not able to flow. Work-over operations, carried out in July - August 2016, cleared the obstruction. After recovering ~95% of the frack fluid, the well was shut-in for pressure build-up.

A flow test commenced in October 2016 with the gas rate declining from 1.1 MM scf/d to ~0.02 MM scf/d in 36 hours. Higher salinity water (compared to Permian formation water) flowed to surface after 3 hours; water rates ranged from 368 bwpd to 60 bwpd (Real Energy, 2019b).

Production testing following the frack was limited by the ability to maintain flowing conditions because of high water-rates. The fifth stage of the frac treatment was believed to have predominantly stimulated the coal section within the Toolachee formation and this may be the source of the produced water:

Based upon the pressure build-up data throughout the flowback and the flow behaviour after each pressure build-up period where water was detected at the wellbore, it is believed the highly saline (>13,000 ppm) water production is sourced from coal seam de-watering. In comparison



reservoir water salinity is around 2,000ppm from Permian-age reservoirs in the surrounding area (e.g. Boldrewood-1: 1600ppm; Judge-1: 2123 ppm) (Real Energy, 2019a). There are, however, no direct measurements of formation water properties for the gas reservoirs in ATP 927 and its immediate vicinity (Real Energy, 2019a).

11.2.4 Appraisal Summary and Discussion

Tamarama-2 and -3 proved the extension of gas discovered in Tamarama-1. The interference in pressure observed between Tamarama-3 and Tamarama-1 indicated reservoir connectivity between some zones. Both Tamarama-2 and -3 recorded improved gas flow rates compared to Tamarama-1, partly due to avoiding the frack screen-out experienced in Tamarama-1 and applying learnings from Tamarama-1 operations.

Following the results from the Tamarama wells, Eastern Gas concluded that the use of 30/50 mesh proppant - rather than the coarser 20/40 mesh ceramic proppant - should be adopted across all stimulation stages. This finer proppant is believed to enhance proppant placement volume, reduces the risk of screen-out, and results in improved fracture length and conductivity.

The >2 MM scf/d initial gas rates from Tamarama-2 and -3 after fracture stimulation is a clear improvement compared to Tamarama-1, however, the rapid decline in gas rate together with water production needs to be understood to improve future frac design and placement. Furthermore, understanding gas-water distribution in the reservoir, employing artificial-lift designs for optimising gas production and potential co-development of coal-seam gas and tight-sand gas also needs to be considered.

Because of the high salinity of produced water from Tamarama-1, and the possibility of fracking the coal seams at the fifth stage in Tamarama-1, it was assumed that the water produced from the Tamarama wells is from coal seams. This implies that either the stimulated fractures in the sandstones in Tamarama-2 and -3 extended into coal seams or natural fractures exist between coal seams and sandstones.

To minimize water production in the scenario of stimulated fractures extending into coal seams, future fracture design and operation need to restrict fractures within sand bodies only. Regarding management of the presence of natural fractures, on one hand, good productivity requires fractures, however, fractures will likely be the cause of high-water production from coal sections.

In the scenario of fully de-watering coal seams then producing gas from both coal seams and sandstones, the length of de-watering and its economic viability need to be addressed. Effective de-watering in such deep and low-permeability reservoirs is technically demanding and likely to be cost-intensive.

The possibility of produced water being the connate water within sandstone reservoirs is still not fully excluded; because there are no directly measured formation water properties for the gas reservoirs in ATP 927 and its immediate vicinity (Real Energy, 2019a). This would have a significant impact on water saturation interpretation and resource assessment.

The decline rates of total produced volume (gas and water) in Tamarama-2 and -3 were also attributed to reservoir damage by fines migration and possibly frac fluid gel (Real Energy, 2019b). Tamarama-2 appears to be the least damaged and Tamarama-3 appears to be more severely damaged, probably due to long duration milling operations.

The production well design where gas is produced from the annulus and water is pumped through the tubing string through a rod-pump system to efficiently de-water the coal seams, needs to be evaluated to see if the Tamarama wells could produce 1 - 2 MM scf/d of gas. If feasible, this should be part of future field appraisal plan.



In common with other potential Basin-Centred Gas (BCG) wells in the Cooper Basin (Cooper et al. 2023), well tests from Tamarama-1, Tamarama-2, and Tamarama-3 experienced similar difficulty in maintaining consistent and commercially-viable gas flow rates. The sub-surface stress regime in this basin may play a role in maintaining rate of production as regional geomechanical studies indicate that frack closure pressures in the area are extremely high for both sandstone and shale stimulations, with pressure gradients exceeding 1 psi/ft - characteristic of a reverse stress regime (Reynolds et al., 2006; Nelson et al., 2007). Under such conditions, induced fractures are prone to rapid closure due to elevated compressive stresses.

11.3. Reservoir Properties

Reservoir sandstones of the Toolachee and Patchawarra formations are interpreted to have been deposited mainly by high-sinuosity fluvial channels. The sandstones in wells in the ATP 927 region are predominantly fine to medium-grained, quartzose to quartz-lithic, moderately well sorted, with variable clay content and silica cement. Carbonaceous and micaceous laminae are common, particularly in finer grained sandstones. Based on whole core analysis, the massive and cross-bedded channel sandstone facies exhibit better reservoir quality than the fine-grained, laminated sandstone facies.

A comprehensive data set evaluating the reservoir quality of the Toolachee and Patchawarra sandstones is available from whole core in Cocos-2 (Figure 11-3, Figure 11-4). Reservoir quality in Cocos-2 is shown to range from very poor to moderate with porosity of the cored interval ranging from ~4% to ~10%, while permeability is more variable, reported to range from 0.01 mD to <20 mD (note: higher measured permeability values of >100mD, are due to induced fractures in core plugs).

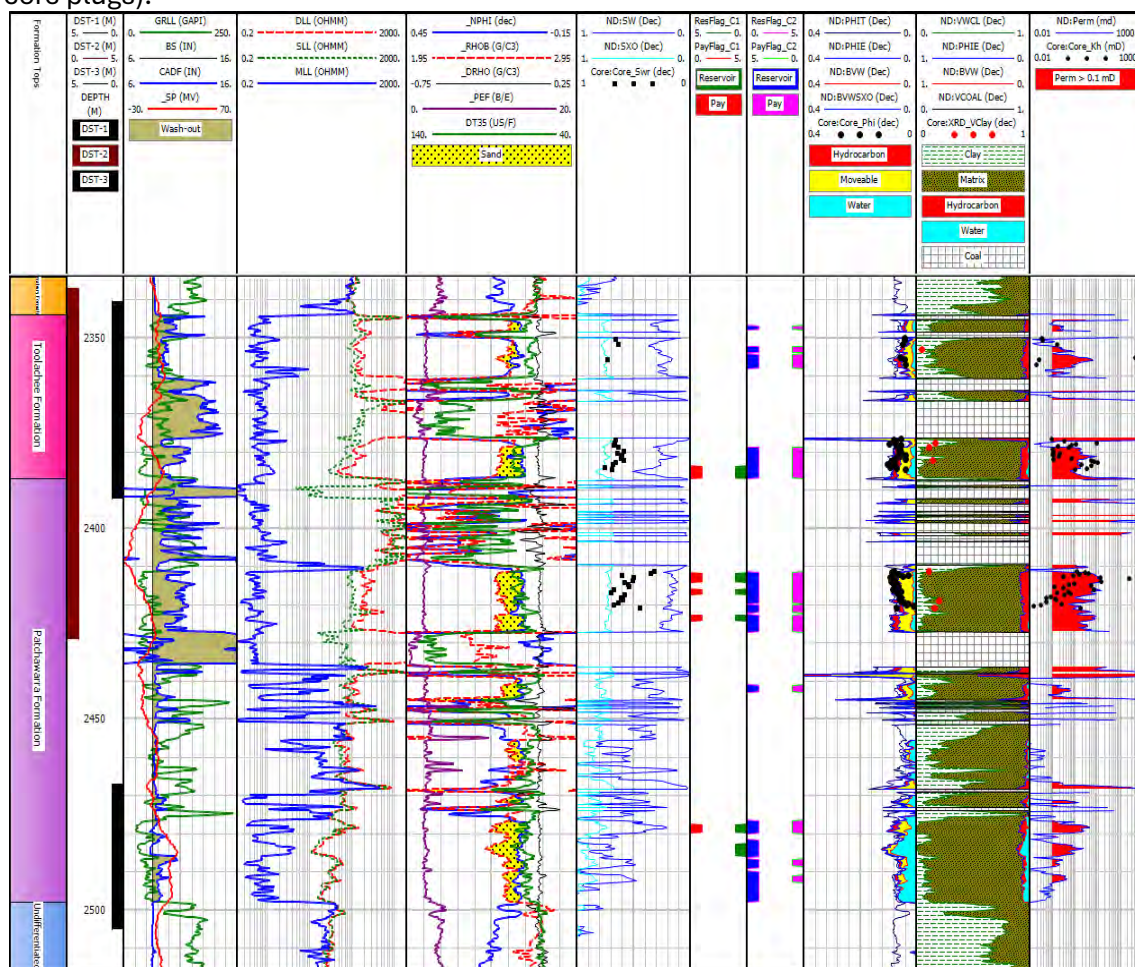


Figure 11-3: Cocos-2 interpreted logs (Real Energy, 2019a)



Petrographic analysis of core samples shows porosity to be dominantly secondary, mostly inter-particle microporosity in authigenic clays with less common grain dissolution macroporosity. Occlusion of primary porosity is due to compaction, pressure solution and quartz overgrowths.

Authigenic clays are mostly pore-filling kaolinite and illite grain rims. Kaolinite occurs as an early, pore-filling cement and replacement of feldspar grains. The illite grain rims exhibit a moderate to high crystallinity that is consistent with the relatively high maximum temperatures that these rocks have experienced.

XRD analyses undertaken by Real Energy on cuttings samples from the Toolachee and Patchawarra formations in Tamarama-1 have confirmed the abundant presence of kaolinite and illite clay minerals. These sandstones are unlikely to be fresh-water sensitive, with migrating fines expected to be more of an issue than swelling clays for gas production.

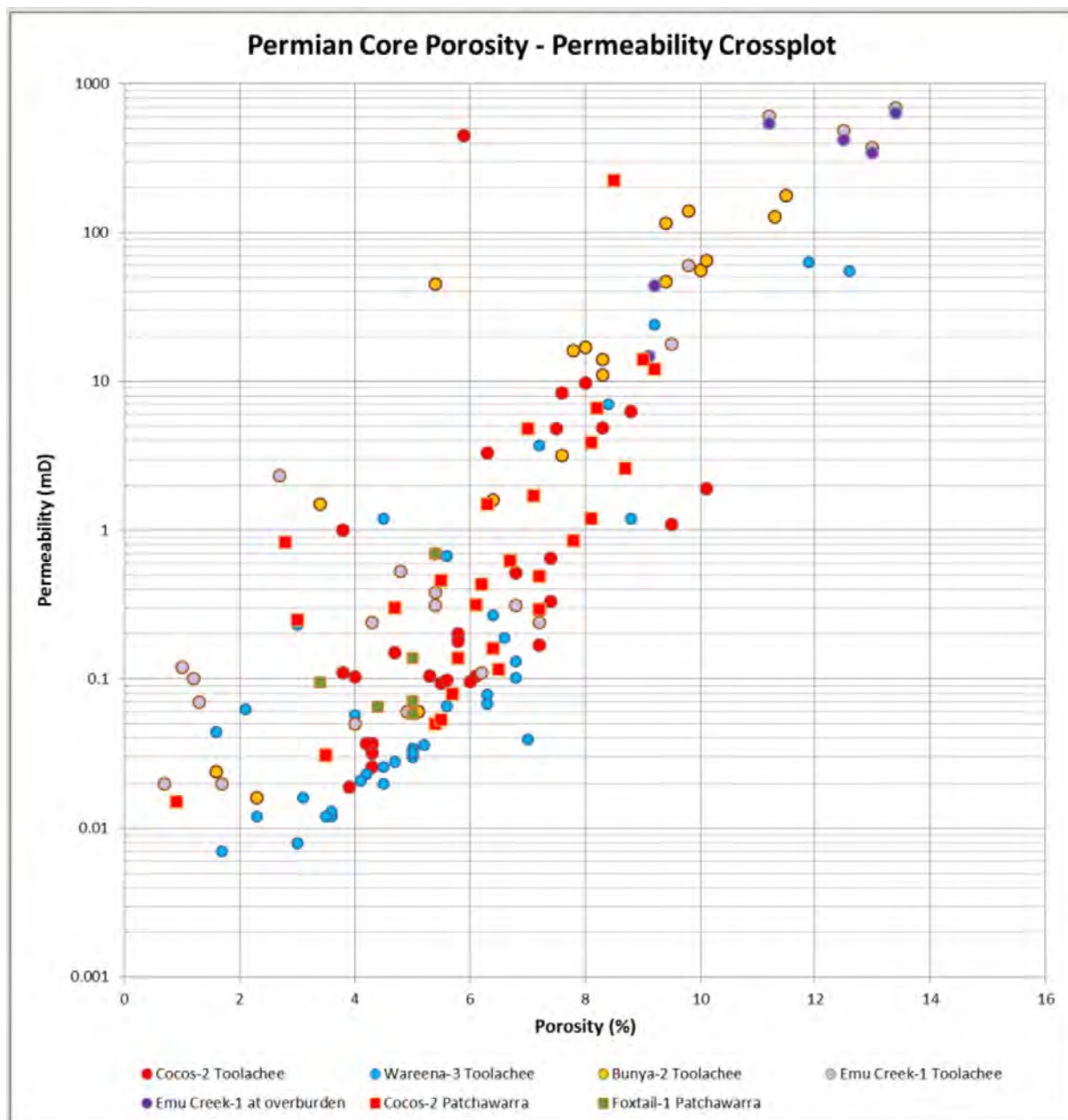


Figure 11-4: Permian core porosity and permeability cross-plot (Real Energy, 2019b)



Petrographic analysis of core samples from both the Toolachee and Patchawarra Formations in Cocos-2, e.g., show little compositional difference between the two formations.

Petrophysical re-interpretation of 14 wells in the vicinity of ATP 927 was undertaken by Do (2013) to estimate porosity, water saturation and net pay thickness. To validate and calibrate the petrophysical methodology, the log derived porosity values in the Toolachee and Patchawarra formations in Cocos-2, Bunya-2 and Foxtail-1 were compared with core porosity values in these wells (e.g. Cocos-2 in [Figure 11-3](#)), with a reasonably good match between them. MA summarised the results of these analyses for those wells more relevant to the ATP 927 in [Table 11-1](#) and [Table 11-2](#).

Subsequently, wireline log data obtained in Tamarama-1 and Queenscliff-1 wells drilled by Real Energy in late 2014 were interpreted by the same Petrophysicist applying a similar petrophysical methodology for consistency (Real Energy, 2014). The analyses results for these two wells are summarized in [Table 11-1](#) and [Table 11-2](#) by MA.

[Table 11-1: Toolachee reservoir properties of ATP 927 and offset wells](#)

Wells	Top (m)	Base (m)	Gross (m)	Net Pay (m)	N/G	Phi	Sw
Alkina-1	2554.8	2593.2	38.4	18.5	0.48	0.084	0.137
Clinton-1	2951.7	2977.6	25.9	15.9	0.61	0.083	0.277
Cocos-1	2297.0	2342.0	45.0	20.1	0.45	0.147	0.064
Cocos-2	2344.0	2387.0	43.0	14.7	0.34	0.074	0.268
Foxtail-1	2539.0	2574.5	35.5	7.3	0.20	0.083	0.166
Mt Howitt-2	2059.5	2116.2	56.7	21.3	0.38	0.1	0.093
Solitaire-2	2413.0	2450.0	37.0	13.3	0.36	0.139	0.070
Whanto-1	2946.5	2992.7	46.2	23.4	0.51	0.076	0.093
Whanto-4	2967.2	3011.1	43.9	11.4	0.26	0.075	0.132
Queenscliff-1	3024.0	3064.0	40.0	21.3	0.53	0.091	0.076
Tamarama-1	2358.0	2399.5	41.5	20.0	0.48	0.126	0.108
Tamarama-2	2329.1	2369.5	40.4	13.9	0.34	0.071	0.230
Tamarama-3	2373.2	2414.2	41.0	11.6	0.28	0.083	0.276
Mean: All (above) wells			41.1	16.4	0.40	0.097	0.130
Std Deviation: All wells			7.0	4.8	0.12	0.026	0.082
Std Error: All wells			1.9	1.3	0.033	0.007	0.023
Mean_P90_Tdist: All wells			38.5	14.5	0.35	0.087	0.100
Mean P10 Tdist: All wells			43.7	18.2	0.44	0.106	0.161
Min: All Wells			25.9	7.3	0.20	0.071	0.064
P90: All Wells			29.7	8.9	0.23	0.072	0.066
P50: All Wells			41.0	15.9	0.38	0.083	0.132
P10: All Wells			52.5	22.6	0.58	0.144	0.277
Max: All Wells			56.7	23.4	0.61	0.147	0.277
Net Pay cut off	Phi>=0.05, Vclay<=0.5, Sw<=0.6						



Table 11-2: Patchawarra reservoir properties of ATP 927 and offset wells

Well	Top (m)	Base (m)	Gross (m)	Net Pay (m)	N/G	Phi	Sw
Alkina-1	2593.2	2650.5	57.3	43.4	0.76	0.086	0.306
Clinton-1	2977.6	3001.7	24.1	6.3	0.26	0.076	0.369
Cocos-1	2342.0	2444.0	102.0	56.6	0.55	0.118	0.169
Cocos-2	2387.0	2498.0	111.0	35.9	0.32	0.076	0.451
Foxtail-1	2574.5	2665.0	90.5	20.8	0.23	0.075	0.36
Mt Howitt-2	2116.2	2170.2	54.0	25.0	0.46	0.083	0.347
Solitaire-2	2450.0	2542.0	92.0	46.0	0.50	0.138	0.133
Whanto-1	2992.7	3090.7	98.0	45.8	0.47	0.081	0.108
Whanto-4	3011.1	3112.1	101.0	21.3	0.21	0.069	0.287
Queenscliff-1	3064.0	3178.0	114.0	54.0	0.47	0.104	0.135
Tamarama-1	2399.5	2526.0	126.5	65.3	0.52	0.128	0.164
Tamarama-2	2369.5	2418.9	49.4	20.9	0.42	0.091	0.224
Tamarama-3	2414.2	2544.7	130.5	47.3	0.36	0.087	0.311
Mean, All wells			91.7	39.0	0.42	0.100	0.215
Std deviation, All wells			31.6	17.4	0.15	0.022	0.110
Std error, All wells			9.1	5.0	0.042	0.006	0.030
Mean_P90_Tdist, All wells			79.4	32.2	0.37	0.092	0.173
Mean_P10_Tdist, All wells			104.1	45.8	0.48	0.108	0.256
Min, All Wells			24.1	6.3	0.21	0.069	0.108
P90, All Wells			34.2	12.1	0.22	0.071	0.118
P50, All Wells			98.0	43.4	0.46	0.086	0.287
P10, All Wells			128.9	61.8	0.68	0.134	0.418
Max, All Wells			130.5	65.3	0.76	0.138	0.451
Net Pay cut off	Phi>=0.05, Vclay<=0.5, Sw<=0.6						

The wireline log data obtained in Tamarama-2 and -3 by Real Energy in 2018 were interpreted by Schlumberger (2018a, 2018b) using different interpretation software and methodology. The analyses results for these two wells are summarized in Table 11-1 and Table 11-2 by MA, and the interpreted logs for Tamarama-3 is displayed in Figure 11-5 as an example.

MA performed simple data analysis on the reservoir properties of the Toolachee and Pachawarra Formations for ATP 927 and offset wells, with minimum, P90, P50, mean (and uncertainty of means based on T-distribution: Mean_P90_Tdist and Mean_P10_Tdist), P10 and maximum summarized in Table 11-1 and Table 11-2. In general, Toolachee has thinner pay, similar porosity and lower water saturation in comparison to Pachawarra.

It is important to note that the higher porosities of Cocos-1, Solitaire-2, Tamarama-1 and Queencliff-1 are most probably due to less reliable density log data over the Toolachee and Patchawarra section resulting from the observed borehole washout and rugosity (Real Energy, 2019a). Therefore, due to these wireline log quality and interpretation uncertainties, the low and mid case OGIP and resources should not use these wells, but high case could.



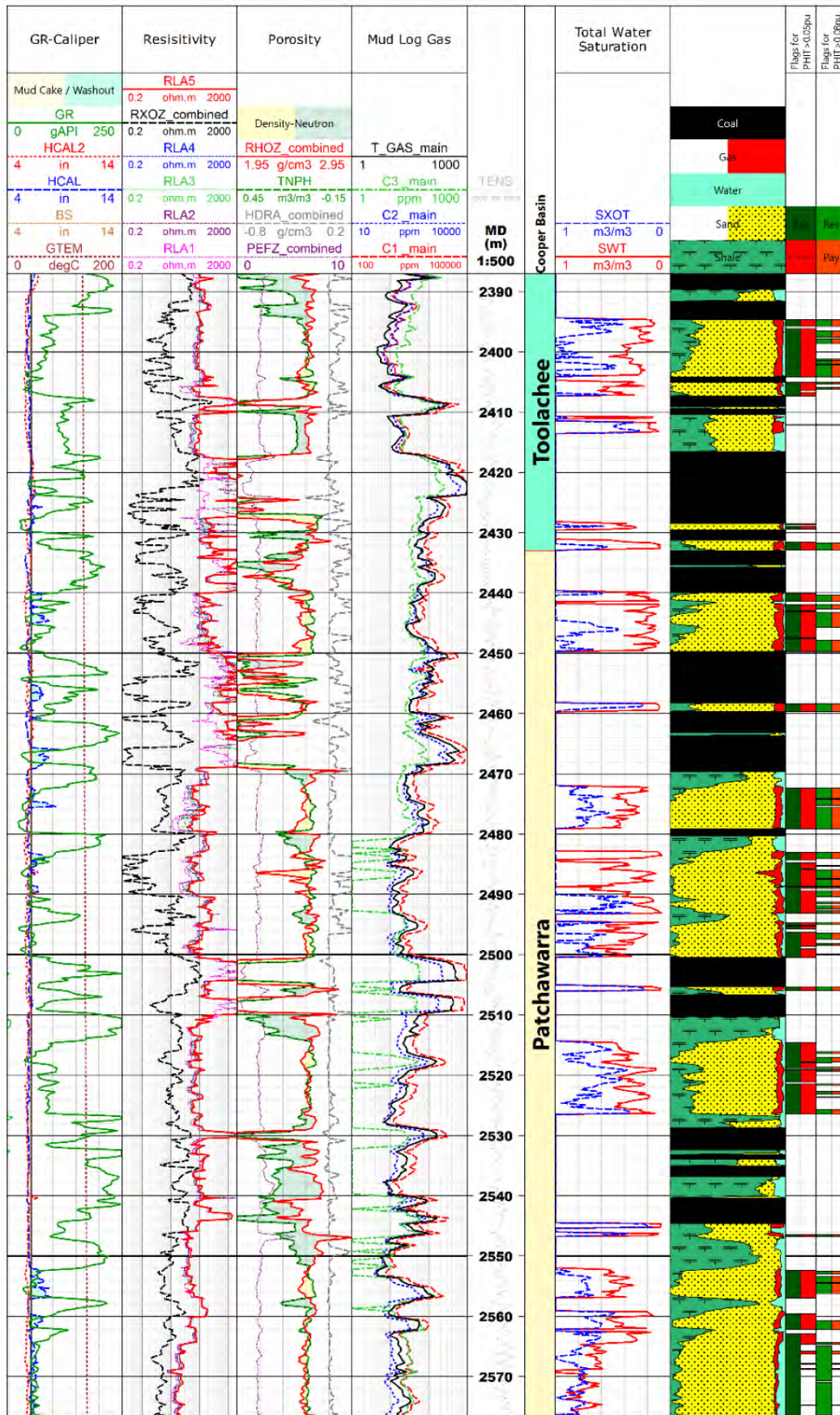


Figure 11-5: Tamarama-3 interpreted logs



In determining reservoir property ranges for OGIP and resource assessment of the Tamarama and Queenscliff areas, Tamarama-1, -2 and -3 and Queenscliff-1, along with their closest offset wells, were given the highest weight respectively.

For the Tamarama area, MA regards the mean values of Tamarama-2 and -3 wells as the mid-case because of the poor quality of density and neutron logs in Tamarama-1 (Table 11-3, Table 11-4). Tamarama-1 can only be incorporated in the high-case.

Table 11-3: Toolachee reservoir properties of Tamarama and offset wells

Well(s)	Top (m)	Bottom (m)	Gross (m)	Net Pay (m)	N/G	Phi	Sw
Cocos-2 (CCS-2)	2344.0	2387.0	43.0	14.7	0.34	0.074	0.268
Tamarama-2 (TAM-2)	2329.1	2369.5	40.4	13.9	0.34	0.071	0.230
Tamarama-3 (TAM-3)	2373.2	2414.2	41.0	11.6	0.28	0.083	0.276
Mean: (CCS-2, TAM-2, TAM-3)			41.5	13.4	0.32	0.076	0.258
Mean: Tamarama-2 & -3			40.7	12.8	0.31	0.076	0.253
Tamarama-1	2358.0	2399.5	41.5	20.0	0.48	0.126	0.108
Mean: Tamarama-1, -2 & -3			41.0	15.2	0.37	0.098	0.171
Net Pay parameters	Phi $\geq$ 0.05, Vclay $\leq$ 0.5, Sw $\leq$ 0.6						

Table 11-4: Patchawarra reservoir properties of Tamarama and offset wells

Well(s)	Top (m)	Bottom (m)	Gross (m)	Net Pay (m)	N/G	Phi	Sw
Cocos-2 (CCS-2)	2387.0	2498.0	111.0	35.9	0.32	0.076	0.451
Tamarama-2 ¹¹ (TAM-2)	2369.5	2418.9	49.4	20.9	0.42	0.091	0.224
Tamarama-3 (TAM-3)	2414.2	2544.7	130.5	47.3	0.36	0.087	0.311
Mean: (CCS-2, TAM-2, TAM-3)			122.7	41.6	0.34	0.084	0.336
Mean: Tamarama-2 & -3			130.5	47.3	0.36	0.088	0.284
Tamarama-1	2399.5	2526.0	126.5	65.3	0.52	0.128	0.164
Mean: Tamarama-1, -2 & -3			128.5	56.3	0.44	0.108	0.214
Net Pay parameters	Phi $\geq$ 0.05, Vclay $\leq$ 0.5, Sw $\leq$ 0.6						

For the Queenscliff area, MA regards the mean from the closest offset wells as the mid-case because of the poor quality of density and neutron logs in Queenscliff-1 (Table 11-5, Table 11-6). Queenscliff-1 can only be incorporated in the high-case.

11.4. Gas Composition

No PVT analysis was conducted on Tamarama-1, -2, -3 or Queenscliff-1 due to unstable flow rates. Gas composition and heating value data from choke manifold samples are included in the table below. The gas is dry, with low condensate / LPG yields and increasing CO₂ content with depth; no H₂S was detected.

¹¹ Tamarama-2 only partially penetrated the Patchawarra Formation



The results of the gas composition analysis are listed below [Table 11-7](#). These samples show elevated inert content, primarily due to high CO₂ levels. This presents a potential requirement to mitigate greenhouse gas emissions and could lead to increased development costs.

[Table 11-5: Toolachee reservoir properties of Queenscliff and offset wells](#)

Well	Top (m)	Bottom (m)	Gross (m)	Net Pay (m)	N/G	Phi	Sw
Mt Howitt-2	2059.5	2116.2	56.7	21.3	0.38	0.1	0.093
Whanto-1	2946.5	2992.7	46.2	23.4	0.51	0.076	0.093
Whanto-4	2967.2	3011.1	43.9	11.4	0.26	0.075	0.132
Tamarama-2	2329.1	2369.5	40.4	13.9	0.34	0.071	0.230
Tamarama-3	2373.2	2414.2	41.0	11.6	0.28	0.083	0.276
Mean: Above wells			45.6	16.3	0.36	0.082	0.144
Queenscliff-1	3024.0	3064.0	40.0	21.3	0.53	0.091	0.076
Net Pay parameters	Phi ≥ 0.05, Vclay ≤ 0.5, Sw ≤ 0.6						

[Table 11-6: Patchawarra reservoir properties of Queenscliff and offset wells](#)

Well	Top (m)	Bottom (m)	Gross (m)	Net Pay (m)	N/G	Phi	Sw
Mt Howitt-2	2116.2	2170.2	54.0	25.0	0.46	0.083	0.347
Whanto-1	2992.7	3090.7	98.0	45.8	0.47	0.081	0.108
Whanto-4	3011.1	3112.1	101.0	21.3	0.21	0.069	0.287
Tamarama-2 ¹¹	2369.5	2418.9	49.4	20.9	0.42	0.091	0.224
Tamarama-3	2414.2	2544.7	130.5	47.3	0.36	0.087	0.311
Mean: Above wells			99.5	34.8	0.35	0.083	0.245
Queenscliff-1	3064.0	3178.0	114.0	54.0	0.47	0.104	0.135
Net Pay parameters	Phi ≥ 0.05, Vclay ≤ 0.5, Sw ≤ 0.6						

11.5. Reservoir Pressure and Temperature

Initial reservoir pressures for the Toolachee and Patchawarra formations were interpreted from pressure build-up surveys (BUS) in Tamarama-1, Queenscliff-1, and DFIT data from Tamarama-3. Tamarama-1's BUS in the basal Toolachee-upper Patchawarra section showed radial flow and a reliable extrapolated pressure of ~3580 psia at 2409.5 m RT. Mid-upper Patchawarra build up survey (BUS) lacked radial flow, making results less reliable, though both sections appear to be in the same pressure system (~0.49 psi/ft).

Queenscliff-1 BUS did not reach radial flow with a Horner plot indicating ~4500 psia at 3079.25 m RT. Tamarama-3 DFIT#3 results recorded 3635 psia at 2490 m MD TVD (~0.445 psi/ft gradient). [Figure 11-6](#) presents a pressure versus depth plot for the majority of wells drilled in the Windorah Trough. The data indicates the presence of overpressure within the Permian-age reservoirs, a characteristic commonly associated with Basin-Centred Gas Systems.



Table 11-7: Summary of reservoir fluid composition (Real Energy, 2019a)

Well Name	Tamarama-1			Tamarama-3	Tamarama-2	Queenscliff-1
Sample ID.	1	2	103659	L-885	L-889	2
Formation	Patchawarra	Toolachee	Toolachee-Patchawarra	Toolachee-Patchawarra	Toolachee-Patchawarra	Toolachee-Patchawarra
N ₂	2	1.29	1.62	2.18	1.86	0.33
CO ₂	11.98	10.24	14.14	14.19	12.88	14.51
C ₁	81.52	82.23	79.1	79.16	80.31	84.31
C ₂	3.96	5.37	4.47	3.91	4.12	0.82
C ₃	0.38	0.55	0.4	0.35	0.48	0.03
iC ₄	0.06	0.09	0.07	0.06	0.08	0
nC ₄	0.05	0.08	0.06	0.05	0.09	0
iC ₅	0.01	0.02	0.02	0.01	0.03	0
nC ₅	0.01	0.01	0.01	0.01	0.02	0
C ₆	0.01	0.02	0.02	0.01	0.03	0
C ₇	0.02	0.06	0.05	0.04	0.06	0
C ₈	0	0.03	0.03	0.02	0.03	0
C ₉	0	0.01	0.01	0.01	0.01	0
C ₁₀	0	0	0	0	0	0
C ₁₁	0	0	0	0	0	0
C ₁₂₊	0	0	0	0	0	0
Total	100	100	100	100	100	100
GHV ¹²	914	958	900	891	916	871
SG ¹³	0.705	0.697	0.73	0.728	0.719	0.701

Table 11-8: Summary of reservoir pressure and temperature (Based on Real Energy, 2019a)

Well	Depth (m TVD ss)	Pressure (Psia)	Reservoir Temperature (Deg C)
Tamarama-1	2261.96	3580	141.1
Queenscliff-1	2934.37	4500	175.6
Tamarama-3	2346.85	3635	141.1
Tamarama-2			135.0

¹² GHV: Gross Heating Value; the total amount of heat released by the complete combustion of a gas, including the latent heat of vaporization of water. Unit: BTU/scf.

¹³ SG: Specific Gravity; the ratio of the substance's density to that of air (relative density to air).



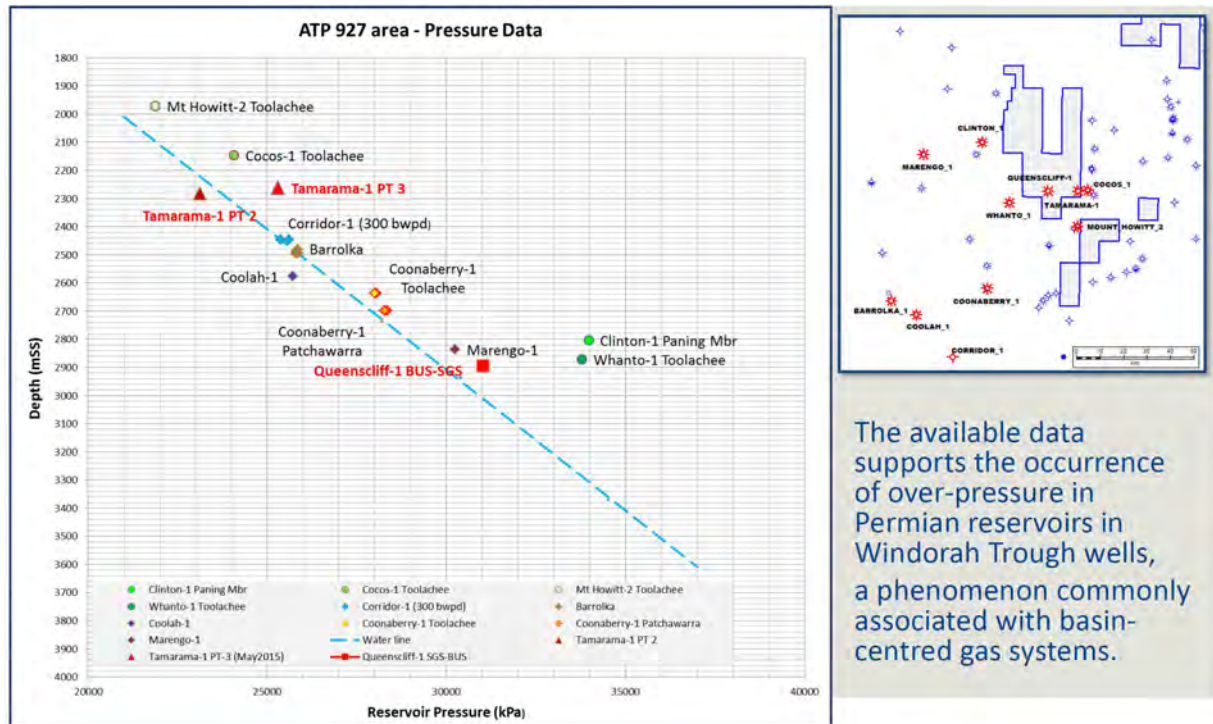


Figure 11-6: Pressure vs. depth for wells drilled in Windorah Trough (Real Energy, 2019b)

12. ATP 927 ESTIMATION OF RESOURCES

This section covers the description of the petroleum system, the calculation of in-place (static) and recoverable (dynamic) resources. The Contingent Resource Area section then addresses the Contingent Resources of ATP 927, and the following section then covers treatment of key components in the aforesaid calculations, followed by a summary of the ATP 927 Contingent Resources estimates.

The stochastic, or probabilistic method was used to calculate contingent resources in ATP 927 incorporating randomness and using probability distributions to account for uncertainty.

12.1. Calculation of in-place and recoverable hydrocarbons

In-place Volumes (i.e. volumes *in-situ* in the reservoir expressed at surface conditions) can be calculated based on the following input parameters:

$$OGIP = (A \times H \times NTG \times \emptyset \times (1 - Sw) \times Bg)$$

where:

OGIP = Original Gas in Place at a temperature base of 60 Degrees Fahrenheit and at a pressure base of 14.7 pounds per square inch absolute (psia) surface volume.

A = Area.

H= Thickness.

NTG = Net to gross.

$\emptyset$ = Total porosity.

Sw = Total water saturation; and

Bg = Gas Expansion factor

$$GUR = OGIP \times Rf \times (1 - \text{Shrinkage factor})$$

where:

GUR= Gross raw gas ultimate recovery

Rf= Recovery efficiency(factor)

Each of the input parameters has a high degree of uncertainty which is expressed as a distribution based on measurements or analogue data. Each parameter distribution (including recovery factor) is sampled statistically using a Monte Carlo approach to provide a stochastic range of gas initial in-place and recoverable volumes.

From this volumetric distribution, minimum, low, best, high, maximum and mean estimates of unconventional resource volumes have been extracted that align to P90, P50, P10, and Mean probabilities respectively.

12.2. Contingent resource area

Real Energy engaged DeGolyer & MacNaughton in 2015 to certify resources in Queenscliff and Tamarama areas following the drilling of Tamarama-1 and Queenscliff-1. Following the appraisal drilling of Tamarama-2 and -3, Real Energy engaged Aeon to certify resources in Tamarama area in 2019. The evaluation by Eastern Gas has combined the Queenscliff OGIP and resources from DeGolyer & MacNaughton (2015) with the Tamarama OGIP and resources from Aeon (2019) as ATP 927 OGIP and resources ([Table 12-5](#)).

DeGolyer & MacNaughton's 2015 contingent resource area for Queenscliff is based upon a development well spacing of 80 acres [Figure 12-1](#). DeGolyer & MacNaughton (2015) considered this to be appropriate to develop ATP 927. The 3C resource area is displayed in [Figure 12-2](#).



The low case (P90) area includes the blue and red areas, which is two development well spacing areas (DSAs) from each side. The best case (P50) area includes the blue, red and green areas (4 DSAs from each side). The high case (P10) area includes the red, green, and orange areas (6 DSAs from each side).

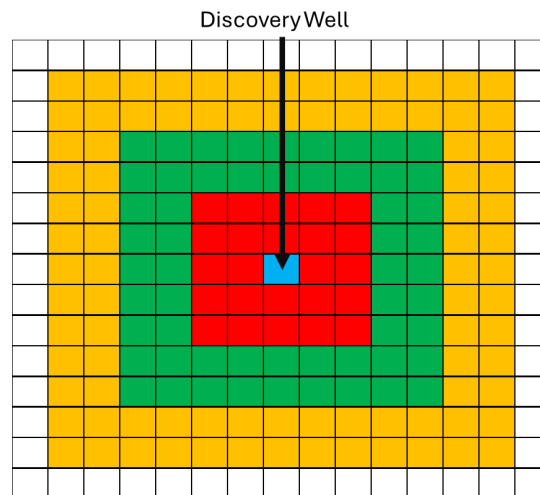


Figure 12-1: Schematic diagram showing proximity to each discovery well

The discovery well is shown in blue. Each box represents 80 acres well spacing (DeGolyer & MacNaughton, 2015). Red = 1C, green = 2C and orange = 3C.

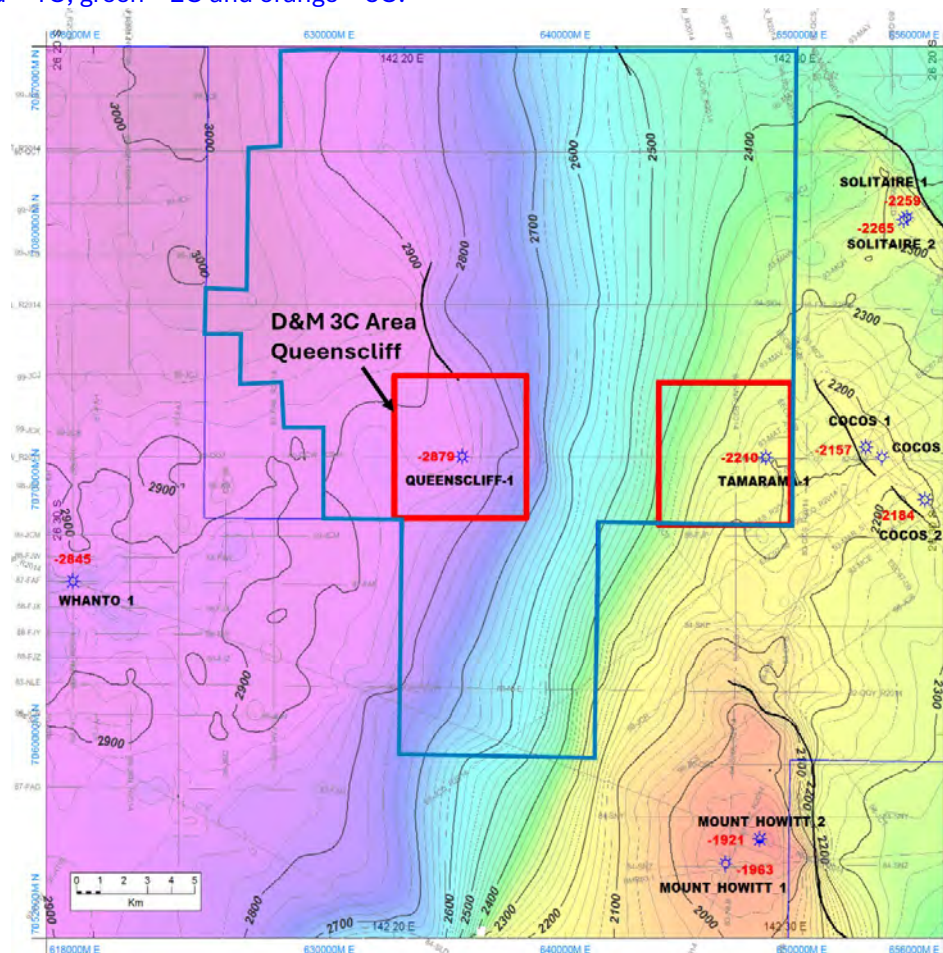


Figure 12-2: Queenscliff 3C resource area by DeGolyer & MacNaughton (2015). The depth map is the top of the Toolachee Formation (m MSL). Red box = 3C area



MA regards the areas used by DeGolyer & MacNaughton (2015) for Queenscliff are reasonable assumptions, and the 80 acre well spacing as notional, for early stage of appraisal in this area, noting that 45 - 50 acre late-development stage infill well spacing has been used for conventional gas fields with lower reservoir quality in Patchawarra Formation of the Cooper Basin (Richards and Cote, 2018).

The contingent resources areas used by Aeon (2019) for the Tamarama area is shown in [Figure 12-3](#). Aeon (2019) did not provide a rationale on why the areas were chosen delineated by contours of the top Toolachee depth map, given that Tamarama wells were drilled deliberately below structural closure. MA deems the contingent resource areas defined by Aeon (2019) as reasonable assumptions for further appraisal at this early stage in the hydrocarbon maturation of this area.

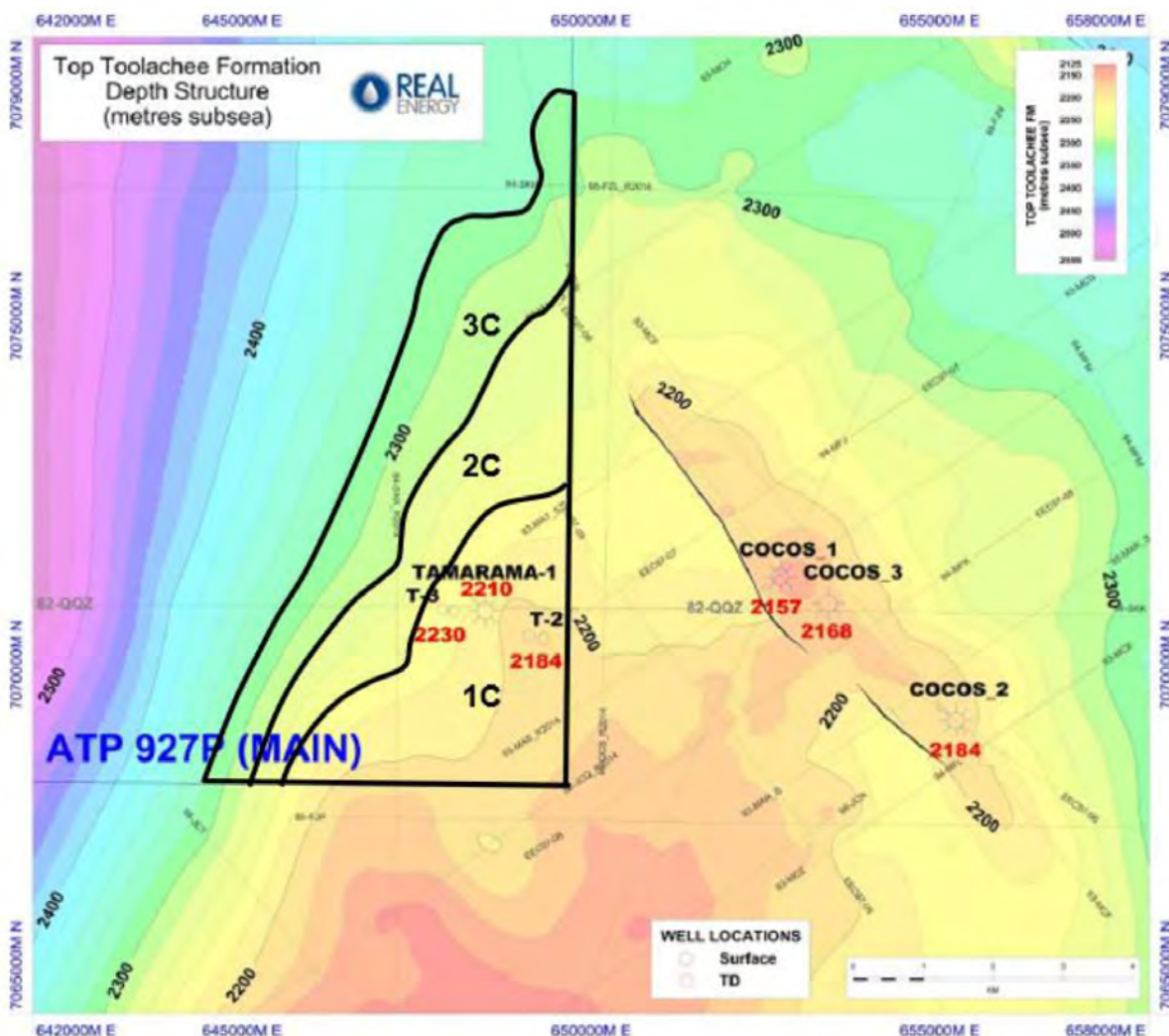


Figure 12-3: Contingent resource areas used by Aeon (2019) for Tamarama Area

12.3. Input reservoir parameters used by DeGolyer & MacNaughton and Aeon

Reservoir parameters used by DeGolyer & MacNaughton (2025) and Aeon (2019) for OGIP and resource assessment are shown in [Table 12-1](#), [Table 12-2](#), [Table 12-3](#) and [Table 12-4](#).

DeGolyer & MacNaughton (2015) generated net pay thickness, porosity and gas saturation for ATP 927 and offset wells, but no details for the basis of the interpretation were provided.



Aeon (2019) determined net pay thickness, porosity and water saturation from logs of Tamarama-1, -2 and -3 for Tamarama area, without providing any details for the basis of their assessment.

Table 12-1: Toolachee Formation parameters used by D & M (2015) for Queenscliff area

Parameters	P90	P50	P10
Area (km ²)	8.1	26.2	54.7
Net Pay (m)	9.8	12.1	14.8
Phi	0.06	0.07	0.08
Sg	0.93	0.95	0.97
Bg	219	226	233
Rf	0.252	0.388	0.56
Shrinkage	0.07	0.1	0.13

Table 12-2: Patchawarra Formation parameters used by D & M (2015) for Queenscliff area

Parameters	P90	P50	P10
Area (km ²)	8.1	26.2	54.7
Net Pay (m)	30.2	32.6	35.5
Phi	0.05	0.06	0.07
Sg	0.73	0.77	0.82
Bg	225	232	239
Rf	0.252	0.388	0.56
Shrinkage	0.07	0.1	0.13

Table 12-3: Toolachee Formation parameters used by Aeon (2019) for Tamarama area

Parameters	P90	P50	P10
Area (km ²)	9.2	15.6	26.1
Net Pay (m)	4.7	8.1	13.9
Phi	0.063	0.084	0.11
Sg	0.564	0.701	0.795
Bg	184.7	188	191.3
Rf	0.461	0.601	0.735
Shrinkage	0.159	0.153	0.146

Table 12-4: Patchawarra Formation parameters used by Aeon (2019) for Tamarama area

Parameters	P90	P50	P10
Area (km ²)	9.2	15.6	26.1
Net Pay (m)	26.1	33.3	42.4
Phi	0.056	0.085	0.129
Sg	0.561	0.698	0.794
Bg	185.9	189.5	193.1
Rf	0.463	0.601	0.739
Shrinkage	0.159	0.152	0.146



12.4. OGIP and Recoverable Hydrocarbon Gas Volume

With these inputs discussed in section 12.2, 12.3, DeGolyer & MacNaughton (2015) and Aeon (2019)'s OGIP estimates are listed in Table 12-5. The estimated ultimate recovery (EUR) for the two contingent resource areas (Figure 12-2 and Figure 12-3) are listed in Table 12-6.

Table 12-5: ATP 927 OGIP by DeGolyer & MacNaughton (2015) and Aeon (2019)

Area	Formation	OGIP (Bcf)				Note
		P90	P50	P10	Mean	
Queenscliff Area	Toolachee	44.3	149.9	338.2	175.2	Based on DeGolyer & MacNaughton (2015)
	Patchawarra	91.4	302.2	679.8	353.3	
	Arithmetic Sum	135.7	452.2	1017.9	528.5	
Tamarama Area	Nappamerri	7.4	16.1	34.4	19.2	Based on Aeon (2019)
	Toolachee	20.6	46.8	108.8	58.2	
	Patchawarra	96.0	201.4	422.0	236.5	
	Arithmetic Sum	124.0	264.3	565.2	313.8	
Windorah Gas Project (Arithmetic Sum)		259.7	716.5	1583.2	842.4	

Table 12-6: ATP 927 EUR by DeGolyer & MacNaughton (2015) and Aeon (2019)

Area	Formation	EUR (Bcf)				Note
		P90	P50	P10	Mean	
Queenscliff-1 Area	Toolachee	16.4	56.6	141.0	69.8	Based on DeGolyer & MacNaughton (2015)
	Patchawarra	31.7	117.4	284.7	140.8	
	Arithmetic Sum	48.2	174	425.6	210.6	
Tamarama Area	Nappamerri	4.2	9.5	21.0	11.5	Based on Aeon (2019)
	Toolachee	11.8	27.8	65.4	34.9	
	Patchawarra	53.8	119	258.1	142.1	
	Arithmetic Sum	69.8	156.3	344.6	188.5	
Windorah Gas Project (Arithmetic Sum)		118	330.3	770.2	399.1	

12.5. Classification of Contingent Resources in ATP 927

DeGolyer & MacNaughton (2015) classified the resources within ATP 927 as **contingent resources with undetermined economic status**, noting that it was too early to define the ultimate chance of commerciality.

Aeon (2019), following the drilling of Tamarama-2 and -3, focused their evaluation on the Tamarama area. They included the Nappamerri Group (Triassic), Toolachee Formation (Permian), and Patchawarra Formation (Permian) in their contingent resource estimates - despite the absence of any well test data from the Nappamerri Group.

Aeon classified the Tamarama area's resources as contingent resources, identifying two key requirements that must be resolved to enable to more mature booking classification (CR-Development Pending etc):

- Future wells must deliver production and decline rates exceeding those observed to date.
- The recoverable volumes per well must improve.



Overall, MA accepts the rationale supporting Aeon's resource classification. However, we have excluded the Nappamerri Group (Triassic) from this ITR due to the lack of supporting well test data.

12.6. MA Reviews on Contingent Resource

12.6.1 Review of Inputs for Contingent Resource estimates by DeGolyer & MacNaughton (2015)

In MA's view, the uncertainty ranges used by DeGolyer & MacNaughton (2015) for net pay, porosity and gas saturation in Queenscliff ([Table 12-1](#), [Table 12-2](#)) are too narrow to capture the full range of outcomes. For example, the Patchawarra porosity range (0.05 - 0.06 - 0.07) shown in [Table 12-2](#) is on the extreme low-end (below P90) and the Toolachee gas saturations (0.93 - 0.95 - 0.97) shown in [Table 12-1](#) are on the extreme high-end (above P10), when compared to ATP927 and offset wells analysed by Eastern Gas ([Table 11-1](#) and [Table 11-2](#)).

DeGolyer & MacNaughton (2015) applied low-, mid- and high-case gas expansion factors of 219, 226, and 233 respectively in their volumetric calculations - approximately 10% higher than those used by Aeon (2019). MA's review of the gas expansion factor used by Aeon (2019) finds that it falls within the acceptable range of uncertainty. In contrast, the values used by DeGolyer & MacNaughton (2015) are 10-15% higher based upon what MA would expect based on analogue data.

When considering inert gas content and liquid drop out during the transition from reservoir to standard conditions, the shrinkage factor of 7 - 10 - 13% applied by DeGolyer & MacNaughton appears to be low based on analogue data.

DeGolyer & MacNaughton (2015) applied gas recovery factors of 25%, 39%, and 56% in their recoverable volume estimates, assuming a well spacing of 80 acres. While MA considers these recovery factors to fall within a reasonable range of uncertainty, achieving such outcomes would typically require closer well spacing - approximately 40 to 50 acres (Richards and Cote 2018).

Overall, the lower OGIP estimated by DeGolyer & MacNaughton (2015) is partly offset by their use of lower shrinkage factors and higher recovery factors. As a result, their P50 recoverable hydrocarbon gas volumes fall within what MA considers to be an acceptable range of uncertainty.

12.6.2 Review of Inputs for Contingent Resource estimates by Aeon 2019

MA finds that the uncertainty ranges used by Aeon (2019) for net pay, porosity and gas saturation in Tamarama area are reasonable, but (given the limited data set) are still not wide enough to capture the full range of outcomes. For example, P10 net pay values for the Toolachee and Patchawarra formations shown in [Table 12-3](#) and [Table 12-4](#) are lower than the mean values interpreted by Eastern Gas for Tamarama-1, -2 and -3 shown in [Table 11-3](#) and [Table 11-4](#).

The Formation volume factor used by Aeon is reasonable and captures the uncertainty range due to changes of reservoir pressure and temperature.

The Shrinkage factor of 15.9 - 15.2 - 14.6% used by Aeon is defensible considering gas inert content and liquid drop out from reservoir conditions to standard conditions, although this has not been confirmed by fluid simulation.

Assessment of the contingent resource areas used by DeGolyer & MacNaughton (2015), Aeon (2019) and Eastern Gas's own interpretation of net pay thickness, porosity and gas saturation, MA concludes that these OGIP estimates are too low. This highlights significant log interpretation uncertainty given both Aeon (2019) and Eastern Gas (2019) used the same log data of Tamarama-1, -2 and -3.



Aeon (2019) used low-, mid- and high-case recovery factors of 46%, 60%, and 74% respectively in their calculations; however, the associated well spacing was not specified. MA considers these recovery factors to be overly optimistic for Basin-Centred Gas (BCG) systems. A comprehensive literature review conducted by MA, including ATP 927 nearby discovered fields such as Whanto, Cocos etc, indicates that such high recovery factors have not been reported or achieved in comparable regional BCG or tight gas developments.

Again, the lower OGIP estimated by Aeon (2019) is partly offset by their use of higher recovery factor. As a result, their P50 recoverable hydrocarbon gas volumes fall within what MA considers to be an acceptable range of uncertainty.

12.6.3 Review of Appraisal Work Program

Hydraulic fracture-stimulation (fracking) operations were carried out on Tamarama-1, -2 and -3. However, sustainable commercially-viable post-frack flow rates were not achieved. Tamarama-1 had a post-frack initial gas flow rate of 1.1 MM scf/d, that rapidly declined to 0.02 MM scf/d after 36 hours. Tamarama-2 and -3 had post-stimulation initial flow rates of 2 MM scf/d and 2.5 MM scf/d respectively, that rapidly declined following water production to 0.24 MM scf/d after 208 hours (~9 days) and 0.05 MM scf/d after ~72 hours (3 days) respectively. The associated water production is significant, from ~170bbs/d in the early stage to ~70 bbls/day at the end of tests.

Eastern Gas identified areas of improvements for fracture stimulation design and operation based upon lessons learned from the Tamarama wells and propose to apply the latest fracture stimulation technologies and lessons learned to reservoir stimulation operations for Queenscliff-1 as a major part of future work program for ATP 927. MA concurs with Eastern Gas's proposal.

As currently understood by MA, the proposed work program requires further elaboration and refinement. Specifically, a clearly articulated rationale should be provided to demonstrate how the proposed activities will collect the necessary static, dynamic and geomechanical data to support a decision on whether to proceed with commercial development of ATP 927.

MA understands that Eastern Gas has initiated, and will continue to undertake, an integrated set of reservoirs, geological, geophysical, and geomechanical studies, along with well design and planning activities to support the development of a comprehensive Appraisal Plan. This plan should form the foundation of a robust, staged work program.

MA recommends that the Appraisal Plan address the following key questions:

- What are the critical decisions and decision points required to progress ATP 927 toward commercial gas production?
- What are the key subsurface and operational uncertainties and risks that must be quantified and identified respectively before these decisions can be made?
- What types and quantities of data (e.g., geomechanical and in-situ stress data for fracture design, number of horizontal wells, well trajectory, duration and scope of production testing) are required to reduce these uncertainties to acceptable levels?
- What specific work program - including number, location, and sequence of vertical/horizontal wells and tests - is necessary to acquire the required data?

12.7. Risk and Opportunity Register

A Risk and Opportunity Register has been constructed to illustrate the key areas of concern and future upside for ATP 927. The key risks and opportunities we identify, including associated mitigations are summarised in [Table 12-7](#).



Table 12-7: Key risk and opportunity register

Key Risk or Opportunity	Potential Outcome	Mitigation
Commercial gas rates are not established	ATP 927 Permian reservoirs cannot be developed (not commercially attractive)	Ensure latest technology for hydraulic fracture stimulation is employed and investigate alternative development options e.g. long horizontal wells with multi-stage frack sections
Produced water management is not effective or not cost competitive	ATP 927 Permian reservoirs cannot be developed (not commercially attractive)	Investigate source of water production (e.g. coal seams). Explore selective water shut off and isolation techniques.
High CO₂ Content (10 - 15%)	Increased fluid treatment and compliance costs (upgraded tubulars and facilities)	(i) Investigate cost of CO ₂ -resistant materials or other mitigation alternatives e.g. installation of glycol unit. (ii) Develop Green House Gas Management plan



13. ATP 927 SUMMARY

Eastern Gas holds a 100% interest in Authority to Prospect (ATP) 927, comprising of 159 sub-blocks covering an area of 488 km² on the southeastern flank of the Cooper Basin in western Queensland. The permit is located close to established gas fields and existing infrastructure, such as the Santos-operated Whanto-Mt Howitt pipeline, connected to the Moomba processing facility.

Exploration and appraisal to date have confirmed the presence of gas across key Permian-age reservoirs, that may indicate that ATP 927 is part of a Basin-Centred Gas (BCG) play. Gas has flowed to surface from all wells drilled; however, sustained commercial flow rates have yet to be achieved from well tests.

Analysis of previous independent technical reviews suggest resource estimates may be conservative for original gas in place (OGIP) volumes, while recovery and development assumptions require refinement.

MA classifies this resource as **Contingent – Development on Hold (CR-OH)**, following PRMS 2018 guidelines.

Eastern Gas has identified key technical improvements - such as next-generation hydraulic fracture stimulation techniques and potentially horizontal well designs - that could significantly enhance well productivity and economics.



14. ATP 927 REFERENCES

- Aeon, 2019, Estimation of contingent resources as of July 31, 2019, in the Tamarama Area, ATP 927, Queensland, Australia. *Aeon report to Real Energy*.
- Beach 2015, Interim Report for half-year end 2015
- Cooper G., Channon G., Bekkers P. and Young, N, 2023. The Permian gas potential of the Taroom Trough, Queensland: new ideas to unlock a multi-TCF play. *The APPEA Journal* 63(1), 157–172. doi:10.1071/AJ22033
- Do, D., 2013, Petrophysical evaluation of the Toolachee and Patchawarra Formations in the Windorah Trough and Ullenbury Depression. *Real Energy internal report*.
- DeGolyer & MacNaughton, 2015, Report as of June 30, 2015, on contingent resources in ATP 927 of the Cooper Basin, Queensland. *DeGolyer & MacNaughton Report to Real Energy*
- Geoscience Australia, 2024a, Australia's energy commodity resources 2024: Oil. <https://www.ga.gov.au/aecr2024/oil>
- Geoscience Australia, 2024b, Australia's energy commodity resources 2024: Gas. <https://www.ga.gov.au/digital-publication/aecr2021/gas>
- Hall, L.S., Hill, A.J., Troup, A., Horsch, R., Radke, B., Nicoll, R.S., Palu, T.J., Wang, L. & Stacey, A., 2015, Cooper Basin architecture and lithofacies, regional hydrocarbon prospectivity of the Cooper Basin, Part 1. *Geoscience Australia Records 2015/31*
- Law, B.E., 2000, What is a basin-centred gas system: 2000 Basin-centred gas Symposium: Rocky Mountain Association of Geologists, 8p.
- Law, B.E., 2002, Basin-Centered Gas Systems. *AAPG Bulletin* (2002) 86 (11): 1891 – 1919.
- Real Energy, 2014, Tamarama-1 petrophysical report, *Real Energy internal report*.
- Real Energy, 2019a, Windorah Gas Project ATP 927 initial development plan. *Real Energy internal report*.
- Real Energy, 2019b, Windorah Gas Project ATP 927 Windorah Trough, Cooper Basin. *Real Energy External presentation*
- Reynolds SD, Mildren SD, Hillis RR, Meyer JJ (2006) Constraining stress magnitudes using petroleum exploration data in the Cooper–Eromanga Basins, Australia. *Tectonophysics* 415, 123–140. doi: 10.1016/j.tecto.2005.12.005
- Richards, B. and Cote, A., 2018, Exploiting the Cooper Basin: conventional lessons and appropriate analogues to guide an unconventional future. *The APPEA Journal* 2018, 58, 339-366.
- Santos Ltd., 2016, Whanto West-1 Well Completion Report
- Schlumberger, 2018a, Tamarama-2 formation evaluation quick look, Real Energy Well completion report
- Schlumberger, 2018b, Tamarama-3 formation evaluation quick look, Real Energy Well completion report
- SPE 2018, *Petroleum Resource Management System*. Society of Petroleum Engineers



15. GLOSSARY

The following table lists, along with a brief definition, abbreviated terms that are commonly used in the oil and gas industry, some of which were used in this report.

Term	Definition
°C	Degrees Celsius
°F	Degrees Fahrenheit
1P	Denotes low estimate of Reserves (i.e. Proved Reserves) equal to P1.
1U	Denotes the un-risked Low estimate qualifying as Prospective Resources (P90)
2D	Two Dimensional
2P	Denotes the best estimate of Reserves. The sum of Proved plus Probable Reserves.
2Q	2nd Quarter
2U	Denotes the un-risked best estimate qualifying as Prospective Resources (P50)
3D	Three Dimensional
3P	Denotes high estimate of reserves. The sum of Proved, Probable and Possible Reserves.
3Q	3rd Quarter
3U	Denotes the un-risked High estimate qualifying as Prospective Resource (P10)
4D	Four Dimensional – time lapse 3D in relation to seismic surveys
4Q	4th Quarter
AFE	Authority for Expenditure
AfS	Available for Sale
Analogue	Method used in resources estimation in the exploration and early development stages (including improved recovery projects) when direct measurement is limited. Based on evaluator's assessment of similarities of the analogous reservoir(s) together with the development plan.
Associated Gas	A natural gas found in contact with or dissolved in crude oil in the reservoir. It can be further categorized as gas cap gas or solution gas.
Barrel of Oil Equivalent (boe)	The term allows for a single value to represent the sum of all the hydrocarbon products that are forecast as resources. Typically, condensate, oil, bitumen, and synthetic crude barrels are taken to be equal (1 bbl = 1 boe). Gas and NGL quantities are converted to an oil equivalent based on a conversion factor that is recommended to be based on a nominal heating content or calorific value equivalent to a barrel of oil.
Bbl	US Barrel
bbl/d	US Barrels per day
bGL	Below Ground level
Bscf	Billion (10 ⁹) standard cubic feet
Bcm	Billion (10 ⁹) cubic metres
boe	US barrels of oil equivalent (=5.8 million Btu=5883 cube feet)
BTU	British Thermal Units
Bwpd	Barrels of water per day
Capex	Capital expenditure
CGR	Condensate Gas Ratio – usually expressed as bbl/MM scf



Term	Definition
CiO	Consumed in Operation
Chance	Chance equals 1-risk. Generally synonymous with likelihood. (See Risk)
Chance of Development	The estimated probability that a known accumulation, once discovered, will be commercially developed.
Chance of Geologic Discovery	The estimated probability that exploration activities will confirm the existence of a significant accumulation of potentially recoverable petroleum.
Condensate	A mixture of hydrocarbons (mainly pentanes and heavier) that exist in the gaseous phase at original temperature and pressure of the reservoir, but when produced, are in the liquid phase at surface pressure and temperature conditions. Condensate differs from NGLs in two respects: (1) NGL is extracted and recovered in gas plants rather than lease separators or other lease facilities, and (2) NGL includes very light hydrocarbons (ethane, propane, or butanes) as well as the pentanes-plus that are the main constituents of condensate.
Contingent Resources	Those quantities of petroleum estimated, as of a given date, to be potentially recoverable from known accumulations by application of development projects, but which are not currently considered to be commercially recoverable owing to one or more contingencies.
CP	Centipoise (measure of viscosity)
CSG	Coal Seam Gas
deg	Degrees
Deterministic Method	An assessment method based on discrete estimate(s) made based on available geoscience, engineering, and economic data and corresponds to a given level of certainty.
Development Pending	A discovered accumulation where project activities are ongoing to justify commercial development in the foreseeable future. A project maturity sub-class of Contingent Resources.
Development Unclassified	A discovered accumulation where project activities are under evaluation and where justification as a commercial development is unknown based on available information. This sub-class requires appraisal or study and should not be maintained without a plan for future evaluation. The sub-class should reflect the actions required to move a project toward commercial maturity. A project maturity sub-class of Contingent Resources.
Discount Rate	The interest rate used to discount future cash flows into a dollar of a reference date
Discovered	A petroleum accumulation where one or several exploratory wells through testing, sampling, and/or logging have demonstrated the existence of a significant quantity of potentially recoverable hydrocarbons and thus have established a known accumulation. In this context, “significant” implies that there is evidence of a sufficient quantity of petroleum to justify estimating the in-place volume demonstrated by the well(s) and for evaluating the potential for commercial recovery.
Dry Gas	Natural gas remaining after hydrocarbon liquids have been removed before the reference point. It should be recognized that this is a resources assessment definition and not a phase behaviour definition. (Also called lean gas.)
DSA	Development Spacing Area



Term	Definition
DST	Drill stem test
Effective Date	Resource estimates of remaining quantities are “as of the given date” (effective date) of the evaluation. The evaluation must take into account all data related to the period before the “as of date.”
Eg	Gas expansion factor. Gas volume at standard (surface) conditions/gas volume at reservoir conditions (pressure and temperature)
EoFL	End of Field Life
Expex	Exploration expenditure
Exploration	Prospecting for undiscovered petroleum using various techniques, such as seismic surveys, geological studies, and exploratory drilling.
FDP	Field Development Plan
FEED	Front End Engineering and Design
FID	Final Investment Decision
Fm	Formation
FVF	Formation Volume Factor
FY	Financial Year
GIIP	Gas-Initially-In-Place
GJ	Giga (10 ⁹) joules
GL	(below) Ground Level
GRV	Gross Rock Volume
GSA	Gas sales agreement
GWC	Gas-Water Contact
H ₂ S	Hydrogen sulphide
HCT	Hydrocarbon-pore-thickness
HHV	Higher heating value
ID	Internal diameter
JV(P)	Joint Venture (Partners)
Kh	Horizontal permeability
km ²	Square kilometres
Known Accumulation	An accumulation that has been discovered.
kPa	Kilo (thousand) Pascals (measurement of pressure)
Lead	A project associated with a potential accumulation that is currently poorly defined and requires more data acquisition and/or evaluation to be classified as a Prospect. A project maturity sub-class of Prospective Resources.
Learning Curve	Demonstrated improvements over time in performance of a repetitive task that results in efficiencies in tasks to be realized and/or in reduced time to perform and ultimately in cost reductions.
m	Metres
m MSL	Metres Mean Sea Level



Term	Definition
m (B) GL	Metre below Ground Level
M scf	Thousand standard cubic feet
M stb	Thousand US stock tank barrels
M stb/d	Thousand Stock tank barrels per day
m TVD ss	Metres true vertical depth subsea
mD	Millidarcies (permeability)
MD	Measure depth
MDT	Modular Dynamic (formation) Tester
Mean	The sum of a set of numerical values divided by the number of values in the set.
MJ	Mega (10 ⁶) Joules
mIn	Million (finance e.g. \$)
MM bbl	Million US barrels
MM scf(d)	Million standard cubic feet (per day)
MM stb	Million US stock tank barrels
MOD	Money of the Day (nominal dollars) as opposed to money in Real Terms (RT)
MOU	Memorandum of Understanding
MPa	Mega (10 ⁶) pascal (measurement of pressure)
m ss	Metres subsea
MSV	Mean Success Volume
MW	Megawatt
Net Pay	The portion (after applying cut-offs) of the thickness of a reservoir from which petroleum can be produced or extracted. Value is referenced to a true vertical thickness measured.
Non-Hydrocarbon Gas	Associated gases such as nitrogen, carbon dioxide, hydrogen sulphide, and helium that are present in naturally occurring petroleum accumulations.
NTG	Net to Gross (ratio)
OB	Open Balance
OGIP/GIIP	Original Gas-In-Place/Gas-Initially-In-Place
Opex	Operating expenditure
p.u.	Porosity unit e.g. porosity of 20% +/-0.2 p.u. equals a porosity range of 18% to 22%
PBU	Pressure build-up
Pilot Project	A small-scale test or trial operation used to assess technology, including recovery processes, for commercial application in a specific reservoir.
PHIE	Effective porosity
PJ	Peta (10 ¹⁵) Joules
Play	A project associated with a prospective trend of potential prospects, but which requires more data acquisition and/or evaluation to define specific Leads or Prospects. A project maturity sub-class of Prospective Resources.



Term	Definition
POS	Probability of Success
Probability	The extent to which an event is likely to occur, measured by the ratio of the favourable cases to the whole number of cases possible. PRMS convention is to quote cumulative probability of exceeding or equalling a quantity where P90 is the small estimate and P10 is the large estimate. (See also Uncertainty.)
Probabilistic Method	The method of estimation of resources is called probabilistic when the known geoscience, engineering, and economic data are used to generate a continuous range of estimates and their associated probabilities.
Prospect	A project associated with an undrilled potential accumulation that is sufficiently well defined to represent a viable drilling target. A project maturity sub-class of Prospective Resources.
Prospective Resources	Those quantities of petroleum estimated, as of a given date, to be potentially recoverable from undiscovered accumulations by application of future development projects.
PSC	Production Sharing Contract
PSDM	Pre-Stack Depth Migration
psia	Pounds per square inch pressure absolute (conditions)
psig	Pounds per square inch
PVT	Pressure, Volume and Temperature
Range of Uncertainty	The range of uncertainty of the in-place, recoverable, and/or potentially recoverable quantities; may be represented by either deterministic estimates or by a probability distribution.
Real Terms (RT)	Real Terms (in the reference date dollars) as opposed to Nominal Terms of Money of the Day
RF	Recovery factor
RFT	Repeat Formation Test
Risk	The probability of loss or failure. Risk is not synonymous with uncertainty. Risk is generally associated with the negative outcome, the term “chance” is preferred for general usage to describe the probability of a discrete event occurring.
RT	Measured from Rotary Table or Real Terms, depending on context
s.u.	Fluid saturation unit. e.g. saturation of 80% +/- 10 s.u. equals a saturation range of 70% to 90%
scf	Standard cubic feet (measured at 60 degrees F and 14.7 psia)
Sg	Gas saturation
SPE	Society of Petroleum Engineers
SPEE	Society of Petroleum Evaluation Engineers
stb	(US) Stock tank barrels
Stochastic	Adjective defining a process involving or containing a random variable or variables or involving likelihood or probability, such as a stochastic simulation.



Term	Definition
S _w	Water saturation
S _{WE}	Effective water saturation
Tcf	Trillion (10 ¹²) cubic feet
TCM	Technical committee meeting
TJ	Tera (10 ¹²) Joules
TRSSV	Tubing retrievable subsurface safety valve
TVD	True vertical depth
US\$	United States dollar
v/v	Volume to volume
WHFP	Well Head Flowing Pressure
Working Interest	A company's equity interest in a project before reduction for royalties or production share owed to others under the applicable fiscal terms.



16. MOLYNEUX ADVISORS TECHNICAL/REVIEW TEAM

Hong Feng Wu

Director and Principal Petroleum Engineer; Perth, Australia

Overview

Hong Feng Wu is a Director at Molyneux Advisors in Perth. He has extensive experience in real-world management of oil and gas assets from exploration, through development, production, and abandonment. Hong Feng provides insight on the depleted fields from his knowledge of the Molyneux Advisors North Perth Basin project.

Professional experience

With 27-year career in the Oil and Gas industry, Hong Feng consults with clients in the global Oil and Gas ecosystem on commercial, regulatory, exploration, development, and production matters with a particular emphasis on the impact that integration across disciplines brings to value creation. Hong Feng has managed oil and gas assets through their lifecycle from exploration to divestment or abandonment from the China to Brunei, Australia, and Trinidad. He is well-versed in the multi-faceted decisions required during project management and re-invigoration of old fields.

Previously, Hong Feng held senior technical positions at Shell, BP and CNOOC.

Qualifications and Professional Memberships

1. MBA, Sun Yat-Sen University (MIT Sloan School of Business), China
2. M.S. Geology, University of Petroleum, China
3. B.S. Geology, Janghan Petroleum Institute, China
4. Member of SPE and SPEE

FengXu Jian

Principal Geoscience Advisor; Perth, Australia

Fengxu has spent over 30 years delivering top-tier and reliable solutions for a plethora of global oil and gas projects covering field appraisal, development, and production on conventional and unconventional assets in Australia/New Zealand, South-East Asia, United States, West Africa, United Kingdom, South America, and Middle East. FengXu holds a Ph.D. in sedimentology and stratigraphy and had worked in key senior technical leadership roles within Chevron for over 20 years.

William Walton

MA Principal Reserves/Resources Advisor; The Netherlands

Geoscientist, Project Leader and Resources Assurer with extensive global experience with BP and Shell Group companies (35+ years) covering field appraisal, development, and production roles on conventional and unconventional assets (Asia / Asia-Pacific, Americas, Middle East, Europe, North and sub-Saharan Africa). In-depth experience in Reserves and Resources assurance, coupled with opportunity evaluation, divestment and hydrocarbon maturation planning.

Qualifications and Professional Memberships

1. B. Sc (Hons) Geological Sciences, University of Aston in Birmingham (UK)



2. Ph. D on Integrated Sedimentary and Palynological Facies Analysis, University of Sheffield, (UK)
3. Member of SPE and SPEE





HopgoodGanim

LAWYERS

4 December 2025

The Board of Directors
Eastern Gas Corporation Ltd
119 Willoughby Road
Crowns Nest NSW 2065

Our ref: 2469054 – James Plumb

BRISBANE

Level 8, Waterfront Place
1 Eagle Street
Brisbane Qld 4000 Australia

PO Box 7822, Waterfront Place
Brisbane Qld 4001 Australia

ABN: 54 105 489 661

Dear Directors

Solicitor's Report on Tenements – Eastern Gas Corporation Ltd

This letter report (**Report**) has been prepared for Eastern Gas Corporation Ltd (ACN 692 331 838) (**Eastern Gas**).

Eastern Gas intends to lodge a prospectus in December 2025 in respect of two authorities to prospect (**ATP**) located in Queensland, which were granted under the *Petroleum and Gas (Production and Safety) Act 2004* (Qld) (**P&G Act**).

This Report relates to the following ATPs:

1. ATP 2051; and
2. ATP 927.

The ATPs are collectively referred to in this Report as the **Tenements**.

1. Executive Summary

1.1 **Title:** The Tenements are held as follows:

- (a) ATP 2051, which is held by Pure Energy Corporation Pty Limited (50%) and Strata-X Australia Pty Ltd (50%); and
- (b) ATP 927, which is held by Real Energy Queensland Pty Ltd.

1.2 **Term:** The Tenements are due to expire as follows:

- (a) ATP 927: 30 September 2027;
- (b) ATP 2051: 22 March 2026.

1.3 **Encumbrances:** there are no encumbrances listed for the Tenements.

1.4 **Compliance:** the Queensland Department of Natural Resources and Mines, Manufacturing, and Regional and Rural Development (**DNRMMRRD**) has identified the following amounts of outstanding rent for the Tenements:

- (a) \$32.58 for ATP 927 owed by Real Energy Queensland Pty Ltd due 30 November 2025.

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- (b) \$12.34 for ATP 2051 owed by Strata-X Australia Pty Ltd due 30 November 2025.
- (c) \$12.34 for ATP 2051 owed by Pure Energy Corporation Pty Limited due 30 November 2025.

Separately, a security of \$12,000 is held for each of the Tenements. DNRMMRRD has advised they are unable to provide information about the annual reporting or expenditure reporting for the Tenements.

1.5 **Environment:**

- (a) Environmental authority (EA) EA0002074 is held by Pure Energy Corporation Pty Limited for ATP 2051.
- (b) EA EPPG0039513 is held by Real Energy Queensland Pty Ltd for ATP 927.
- (c) We have confirmed with the Department of the Environment, Tourism, Science and Innovation (**DETSI**) that:
 - (1) there are no outstanding annual fees or overdue annual returns in respect of these EAs; and
 - (2) there are no identified non-compliances for these EAs.
- (d) We have confirmed with Queensland Treasury that:
 - (1) EA0002074: no ERC decision has been made for ATP 2051, and no surety is held by under the scheme established by the *Mineral and Energy Resources (Financial Provisioning) Act 2018* (Qld) (**MERFP Act**).
 - (2) EPPG0039513: the ERC amount listed for this EA is \$204,882.90, and Queensland Treasury holds surety of \$72,882.90 and \$132,000.00 in bank guarantees.

Under the conditions of relevant EA, no activities may be undertaken until an ERC decision is in effect for the activity, and the Tenement holder has provided surety.

1.6 **Native title:**

- (a) ATP 2051 is assumed to have been validly granted with respect to native title with all land subject to native title excluded from the area of the Tenement. Planned activities under ATP 2051 may not be undertaken on any land which is subject to native title, without first addressing native title.
- (b) ATP 927 is assumed to have been validly granted with respect to native title under the RTN process, with section 31 agreements in place. The conditions of the Tenement also require that the conditions and clauses of the section 31 agreement between the State of Queensland, Drillsearch Energy Limited and the Boonthamurra People are complied with. We have reviewed the Boonthamurra People and Drillsearch Ancillary Agreement, dated 10 March 2011. This agreement was assigned to Real Energy Queensland Pty Ltd by way of Deed of Assignment and Assumption, dated 1 November 2013.

1.7 **Cultural Heritage:** Our cultural heritage searches show that there are 33 recorded cultural heritage sites over the Tenements, including artefact scatters, stone arrangements,



quarry(s), hearth/oven(s) and a scarred/carved tree. The holder of the Tenements will need to comply with the Aboriginal cultural heritage duty of care when undertaking activities over the Tenements.

- 1.8 **Land access:** We have been provided with conduct and compensation agreements relating to both ATP 2051 and ATP 927. Provided that the holder of the Tenements continues to meet obligations under these agreements, they will meet land access requirements under the *Mineral and Energy Resources (Common Provisions) Act 2014* (Qld) (**MERCP Act**).
- 1.9 **Regional Interest Development Approval:** ATP 2051 is within a Strategic Cropping Criteria Zone and Sub Zone (Western Cropping), and partially within a Strategic Cropping Trigger Area. In order to undertake operations in these areas, a regional interest development approval is required, unless an exemption applies. As a voluntary agreement with the relevant landowner, the Asplin CCA is an exemption under Part 2, Division 2 of the *Regional Planning Interests Act 2014* (Qld) (**RPI Act**).
- 1.10 Further details about the Tenements are set out in **Schedule 1**.
- 1.11 Further details about the EAs are set out in **Schedule 2**.

2. Scope

- 2.1 **Scope:** This Report deals with legal due diligence matters relating to the Tenements and has been prepared to:

- (a) confirm (or otherwise) the title to the Tenements;
- (b) where possible, confirm the good standing of the Tenements;
- (c) where possible, confirm that there has been no material non-compliance with the laws affecting the Tenements applicable as at the date of this Report;
- (d) where possible, confirm compliance with environmental obligations; land access obligations; reporting obligations and native title or cultural heritage requirements;
- (e) identify any encumbrances relating to the Tenements; and
- (f) identify any tenures that overlap the Tenements,

to the extent the searches set out in paragraph 3.1 provide such information, and subject to the qualifications and assumptions set out in paragraphs 4 and 5 (**the Scope**).

- 2.2 **Outside of Scope:** Paragraph 2.1 contains the Scope. No other matters form part of the Scope. HopgoodGanim Lawyers has not been instructed to, nor have we, concerned ourselves with business, financial, safety or technical due diligence or an assessment of the business, financial, technical, safety or regulatory risks, apart from those regulatory risks necessarily falling within the Scope.



3. Due diligence material

3.1 Searches

We have conducted and reviewed the results of the following searches for the Tenements:

- (a) Resource authority public reports obtained from the DNRMMRRD on 13 November 2025.
- (b) Searches of the GeoResGlobe database performed on 14 November 2025.
- (c) Environmentally sensitive area (**ESA**) maps obtained on 14 November 2025.
- (d) Cultural heritage searches obtained from the Queensland Department of Women, Aboriginal and Torres Strait Islander Partnerships and Multiculturalism (**DWATSIPM**) on 14 November 2025.
- (e) Search results provided by the National Native Title Tribunal (**NNTT**) on 18 November 2025.
- (f) Search results from the enforcement actions and temporary emissions licences registers maintained by Department of Environment, Tourism, Science and Innovation (**DETSI**) on 14 November 2025.
- (g) Search results from the EA register maintained by DESTI on 14 November 2025.
- (h) Search results of the EPBC Act referral portal maintained by the Department of Climate Change, Energy, the Environment and Water's (**DCCEEW**) website on 17 November 2025.
- (i) Information from the Financial Provisioning Scheme, Queensland Treasury provided by email on 17 November 2025.
- (j) Information from the DNRMMRRD, provided by email on 17 November 2025.
- (k) Information from DETSI, including matters relating to compliance with environmental authorities, provided by email on 17 November 2025.

3.2 Documents provided by Eastern Gas

We have reviewed the following documents provided by Eastern Gas:

- (a) Deed of Assignment and Assumption – Boonthamurra dated 18 November 2013.
- (b) Boonthamurra and Drillsearch Ancillary Agreement dated 10 March 2011.
- (c) CCA Plevna Downs dated 15 July 2014.
- (d) Plevna Downs CCA extension dated 22 December 2024.
- (e) CCA Asplin Venus 1 well dated 30 September 2020.
- (f) Asplin CCA extension dated 7 November 2025.



- (g) CCA Paraway and Real Energy dated 12 August 2014, Deed of Variation dated 11 August 2016 and extensions (combined document).

4. Qualifications

- 4.1 This Report relates only to the relevant laws in force as at the date of the Report and, except where expressly referenced, does not address or consider any future amendments or changes that may be made to any relevant laws.
- 4.2 The conclusions and opinions expressed in this Report are limited to our review and analysis of the results of the searches and documents identified in part 3 of this Report.
- 4.3 Where laws are mentioned, this Report does not purport to mention every requirement in respect of the relevant law and those that are referred to in many cases are not an exhaustive list. Accordingly, specific legal advice should be obtained for specific questions about individual laws.
- 4.4 Where we state in this Report that 'we are instructed' or 'we are advised', this indicates that we have relied on statements (whether written or oral) provided by Eastern Gas, employees of Eastern Gas, or a relevant Government department, respectively. We are unable to verify the accuracy of these statements as this verification is outside the scope of this Report.

5. Assumptions

- 5.1 We have made the following assumptions in the preparation of this Report:
- (a) Our investigations were confined to the searches set out in part 3 of this Report. We note that this Report is accurate and complete only to the extent that the reports extracted from the registers are correct as at the date the searches were conducted.
 - (b) There have been no material changes in the standing of the Tenements since the date of our searches.
 - (c) The Ministers administering the relevant Acts and each of their delegates have been validly appointed and have acted within the scope of their power, authority and discretion in granting the Tenements and are able and willing to grant any required consents and approvals under the relevant legislation.
 - (d) There are no defaults or contraventions under any agreement which have led or will lead to litigation or have other adverse consequences.

6. Title and standing

6.1 Governing legislation

- (a) The *Petroleum and Gas (Production and Safety) Act 2004* (Qld) (**P&G Act**) establishes a tenure regime that governs the exploration for and production of petroleum in Queensland.
- (b) An authority to prospect (**ATP**) may be granted under the competitive tender process in Part 1, Division 2 of the P&G Act (s 34 P&G Act). The process starts with the



Minister publishing a gazette notice, calling for tenders over an area (s 35 P&G Act). A tender must be lodged in the approved form, address the capability criteria, and include a proposed work program that complies with the initial work program requirements (s 37 P&G Act). The Minister may grant the ATP to one tenderer or refuse to grant any ATP (s 41 P&G Act).

- (c) The applicant for an ATP must address native title prior to grant of the tenure, in accordance with the provisions of the Native Title Act 1993 (Cth) (**NT Act**). This is detailed in part 12 of this report. Land access and compensation to undertake activities on the ATP must be addressed after the grant has been made. This is detailed in part 11 of this report.
- (d) Subject to the land access process and other legal requirements, the holder of the ATP has the right to explore for petroleum, test for petroleum production, evaluate the feasibility of petroleum production, and evaluate or test natural underground reservoirs for the storage of petroleum or a prescribed storage gas in the area of the authority (s 32(1) P&G Act).
- (e) The holder of an ATP can apply for a declaration by the Minister that all or a stated part of the area of the authority is a potential commercial area (**PCA**) (s 89 P&G Act). The Minister may declare an area a PCA only if satisfied that the area is no more than needed to cover the maximum extent of an identified natural underground reservoir, and that petroleum production or storage in the area is not, and will not soon be, commercially viable, but is likely to become viable within 15 years (s 90 P&G Act).
- (f) The holder of an ATP may apply for a petroleum lease (**PL**) over all or part of the area of the ATP (s 117 P&G Act). Where petroleum production in the area of an ATP is currently commercially viable or is likely to become commercially viable within two years, the Minister has power to cancel the ATP or remove an area from the ATP if the holder does not make an appropriate PL application (s 96 P&G Act).

6.2 Title and standing

- (a) The Tenements are held as follows:
 - (1) ATP 2051 is held by Pure Energy Corporation Pty Limited (50%) and Strata-X Australia Pty Ltd (50%); and
 - (2) ATP 927 is held by Real Energy Queensland Pty Ltd (100%).

6.3 Encumbrances

- (a) There are no encumbrances listed for the Tenements.

6.4 Renewal

- (a) The term of a renewed ATP cannot be more than 12 years from when the ATP originally took effect, except where any part of the renewed ATP is subject to a PCA declaration, in which case the ATP may be renewed for a longer period that ends when the PCA declaration ends (s 85 P&G Act).
- (b) As to the Tenements:



- (1) ATP 2051 was granted on 23 March 2020 for a term of 6 years, and expires on 22 March 2026. An application for renewal of the ATP may be made prior to expiry of the term.
- (2) ATP 927 was granted on 1 October 2013 for a period of 6 years. A renewal was granted on 4 December 2019 for a further period of 4 years, expiring on 30 September 2023. Following the grant of PCA 341 on 6 June 2025, a further renewal has been granted, expiring on 30 September 2027. A further application for renewal may be made before expiry of the term.
- (c) ATP 2051 was granted for a 6-year term, and therefore can be renewed for a further 6 year term, or for a longer period of time for any areas of the Tenement that are subject to a PCA declaration.
- (d) PCA 341, which has been granted over the area of ATP 927, has an expiry date of 5 June 2040, and will permit applications for extension of the term of ATP 927 for the term of the PCA.

6.5 Relinquishment

- (a) The P&G Act requires relinquishment of sub-blocks from an ATP in accordance with the relinquishment requirements of Chapter 2, Part 1, Division 4, Subdivision 2.
- (b) The resource authority reports for the Tenements show that:
 - (1) for ATP 2051:
 - (A) the original size of ATP 2051 was 50 graticular sub-blocks. The relinquishment obligations required that 25 sub-blocks be relinquished on 22 March 2024 (the end of year 4 of the Tenement). 25 sub-blocks were relinquished on 30 May 2024; and
 - (B) the Tenement is currently comprised of 25 sub-blocks;
 - (2) for ATP 927:
 - (A) the tenement is currently comprised of 159 sub-blocks;
 - (B) 208 sub-blocks were relinquished on 28 September 2019. The relinquishment obligations required that 186 sub-blocks be relinquished by 30 September 2019. Further voluntary relinquishments have occurred as follows:
 - (i) 175 sub-blocks were relinquished on 30 September 2023;
 - (ii) 15 sub-blocks were relinquished on 6 November 2024; and
 - (iii) 1 sub-block was relinquished on 12 November 2024.

6.6 Overlapping resource authorities

- (a) The following tenement interests overlap ATP 2051:
 - (1) Exploration Permit for Minerals (**EPM**) 27910, which is held by Bentonite Industries;



- (2) application for Exploration Permit Geothermal (**EPG**) 2048, which is held by Australis Energy Pty Ltd (overlaps 100% of ATP 2051).

Under the P&G Act, activities within the area of ATP 2051 that are overlapped by EPM 27910 or EPG 2048 may only be undertaken if they do not adversely affect the carrying out of an authorised activity for the EPM or EPG that have already commenced.

Any application for petroleum lease out of ATP 2051 over the areas overlapped by EPM 27910 or EPG 2048 will need to comply with additional requirements set out in the P&G Act.

- (b) The following tenement interests overlap ATP 927:
 - (1) two pipeline licences, one held by Australian Gasfields Limited (PPL 53), and one held by Real Energy Queensland Pty Ltd (PPL 2041). Activities may not be undertaken within “pipeline land” (as defined by s 399 of the P&G Act) without consent of the PPL holder;
 - (2) petroleum survey licence (**PSL**) 2065, held by APT Petroleum Pipelines Pty Limited (overlaps 100% of ATP 927). There are no restrictions on activities being undertaken within the area of a PSL.
- (c) Our searches of GeoResGlobe show that there are no other current resource authorities (coal, mineral, petroleum or geothermal) which overlap the Tenements.

6.7 Regional Planning interests

- (a) Under the RPI Act, a resource activity can only be carried out in an area of regional interest:
 - (1) if the person holds a regional interests development approval; or
 - (2) an exemption under Part 2, Division 2 of the RPI Act applies.
- (b) Areas of regional interest are defined in section 7 of the RPI Act as:
 - (1) a priority agricultural area
 - (2) a priority living area;
 - (3) the strategic cropping area;
 - (4) a strategic environmental area.
- (c) ATP 2051 is within the Strategic Cropping Criteria Zone and Sub Zone (Western Cropping), and partially within a Strategic Cropping Trigger Area.
- (d) The Asplin CCA between Pure Energy Corporation Pty Limited, Strata-X Australia Pty Ltd and John Kenneth Asplin and Margaret Rose Asplin (**Landholders**) is a relevant exemption under section 22 of the RPI Act, and will permit activities being undertaken on the relevant property under ATP 2051.



7. Tenement obligations

7.1 Rent

- (a) An ATP holder must pay annual rent for the ATP under s 75(1)(b) of the P&G Act. The annual rent for an ATP is \$3.00 per sub-block (Schedule 4, Part 1, item 1 Petroleum and Gas (General Provisions) Regulation 2017). If the ATP holder has failed to pay the rent payable by the due date, the ATP holder must also pay the State a civil penalty (s 76 P&G Act).
- (b) An ATP holder must pay a petroleum royalty in respect of any petroleum that is produced (s 75(1)(a) and s 590 P&G Act).
- (c) Rental obligations are outstanding for all Tenements as follows:
 - (1) \$32.58 for ATP 927 owed by Real Energy Queensland Pty Ltd due 30 November 2025.
 - (2) \$12.34 for ATP 2051 owed by Strata-X Australia Pty Ltd due 30 November 2025.
 - (3) \$12.34 for ATP 2051 owed by Pure Energy Corporation Pty Limited due 30 November 2025.
- (d) In addition to the outstanding rent, the ATP holder must also pay a civil penalty of 15% for each outstanding amount (s 76(2) P&G Act).

7.2 Security

- (a) The Minister can require the holder of a petroleum authority to provide security for the petroleum authority, which may be used to meet liabilities and unpaid amounts under the P&G Act (ss 487, 488 P&G Act).
- (b) The prescribed amount of security for an ATP is \$12,000 (s 71(2)(a) Petroleum and Gas (General Provisions) Regulation 2017).
- (c) The prescribed amount of security is held by DNRMMRRD for the Tenements.

7.3 Work programs and expenditure

- (a) The holder of an ATP must have a work program for the authority (s 77 P&G Act). It is a mandatory condition of each ATP that the ATP holder carry out the activities proposed in the work program (s 78 P&G Act).
- (b) We have not been provided with any details regarding compliance with work program and expenditure from DNRMMRRD, as such we cannot confirm whether these requirements have been met for the Tenements.



8. Environment

8.1 Environmental Authority

- (a) The *Environmental Protection Act 1994* (Qld) (**EP Act**) regulates “environmentally relevant activities” (**ERA**), which include petroleum activities (ss 18 and 107 of the EP Act).
- (b) A person must apply for an EA to carry out ERAs (s 116 EP Act).
- (c) A separate environmental authority has been granted for each of the Tenements (the **EAs**):
 - (1) EA0002074 is held for ATP 2051;
 - (2) EPPG00396513 is held for ATP 927.
- (d) There are three types of applications for an EA:
 - (1) “standard applications” apply where the EA is to be subject to the standard conditions for the ERA (**Standard Conditions**);
 - (2) “variation applications” apply when the application seeks to change the standard conditions; and
 - (3) “site specific applications” apply if any of the proposed ERAs for the EA are ineligible ERA.
- (e) The EA for ATP 2051 has been granted on the Standard Conditions.
- (f) The EA for ATP 927 has been granted on the conditions that are included in the EA.

8.2 Compliance with the EA

- (a) There are no enforcement actions current in respect of either EA.
- (b) The rent and annual returns for each of the EAs are up to date.

8.3 Financial provisioning

- (a) It is a condition of the EAs that activities cannot be carried out under an EA, unless:
 - (1) an estimated rehabilitation cost (**ERC**) decision is in effect for the Tenements, in respect of the estimated cost of:
 - (A) rehabilitating the land on which activities under the Tenements are carried out; and
 - (B) preventing or minimising environmental harm, or rehabilitating or restoring the environment, in relation to the Tenements; and
 - (2) the holder of the EA has given surety under the MERFP Act (s 297 EP Act).
- (b) The EA for ATP 2051 (EA00020704) is not contained within the Financial Provisioning Scheme’s database, and there is no ERC decision currently in effect for ATP 2051.



- (c) The EA for ATP 927 has received an ERC decision of \$204,882.90, and the Financial Provisioning Scheme holds surety of \$72,882.90 and \$132,000.00 in bank guarantees.

8.4 **Environmentally Sensitive Areas**

- (a) ATP 2051 is subject to the following ESAs:

Category B

- (1) Endangered Regional Ecosystems – regrowth and remnant (Biodiversity Status);

Category C

- (2) Of Concern Regional Ecosystems;
- (3) Essential Habitat; and
- (4) State Forests.

- (b) ATP 927 is subject to the Of Concern Regional Ecosystems (Category C) ESA.

- (c) The EA for ATP 2051 is subject to the standard conditions (Version 2), which state the following (relevant to the applicable ESAs):

- (1) only low impact activities are allowed to be undertaken within Category B ESAs or Category C ESAs (other than state forests or timber reserves);
- (2) only essential petroleum activities can be undertaken in:
 - (A) the primary protection zone of Category B ESAs or Category C ESAs other than state forests or timber reserves; and
 - (B) the secondary protection zone (within 100 metres from the boundary of the primary protection zone) of Category A ESAs or Category B ESAs.

- (d) The EA for ATP 927 places the following restriction on what activities can be undertaken within a Category C ESA:

- (1) the holder of the EA must not conduct petroleum activities in a Category C ESA unless there is a written agreement to enter those areas with the relevant administering authority.

We have not been provided with any evidence of such an agreement.

9. Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act)

- 9.1 Commonwealth government approval under the EPBC Act, focussing on whether proposed activities will or are likely to impact on Matters of National Environmental Significance



(MNES), is required where proposed actions are 'controlled actions'. Under section 74(3) of the EPBC Act, proposed actions are open for comment for ten business days.

- 9.2 On 17 November 2025, we conducted a search of the EPBC Act referral portal maintained by the DCCEE's website. We have not identified any referrals of potentially controlled actions made in connection with the Tenements.

10. Restricted land

- 10.1 A person must not enter restricted land for an ATP, to carry out a prescribed activity for the ATP, unless each relevant owner or occupier for the restricted land has given written consent to the resource authority holder to carry out the activity (s 70 MERC Act).

- 10.2 Restricted land is defined in section 68 of the MERC Act as:

- (a) land within 200m laterally of any of the following—
 - (1) a permanent building used for any of the following purposes—
 - (A) a residence;
 - (B) a childcare centre, hospital or library;
 - (C) a community, sporting or recreational purpose or as a place of worship;
 - (D) a business;
 - (2) an area used for any of the following purposes—
 - (A) a school;
 - (B) a prescribed ERA, under the EP Act, that is aquaculture, intensive animal feed lotting, pig keeping or poultry farming;
 - (3) an area, building or structure prescribed by regulation; or
- (b) land within 50m laterally of any of the following—
 - (1) an area used for any of the following purposes—
 - (A) an artesian well, bore, dam or water storage facility;
 - (B) a principal stockyard;
 - (C) a cemetery or burial place;
 - (2) an area, building or structure prescribed by regulation.

- 10.3 We have not been instructed as to whether any restricted land exists within the Tenements. Groundwater bores exist within the areas of the Tenements. We have not considered any



other areas of restricted land within the Tenements and cannot confirm whether or not the current tenement holders have met all requirements for restricted land under the Tenements.

11. Land access

- 11.1 The MERCP Act governs access to land to conduct activities under an ATP.
- 11.2 The MERCP Act makes a distinction between “preliminary activities” and “advanced activities”.
- 11.3 A preliminary activity is an authorised activity for the ATP that will have no impact, or only a minor impact, on the business or land use activities of any owner or occupier of the land on which the activity is to be carried out. Examples given in section 15B(1) of the MERCP Act are:
- (a) walking the area of the ATP;
 - (b) driving along existing roads or tracks;
 - (c) taking soil or water samples;
 - (d) geophysical surveying not involving site preparation;
 - (e) aerial, electrical or environmental surveying; and
 - (f) survey pegging.
- 11.4 An activity will not be a preliminary activity if it is carried out on land that is less than 100ha and is being used for intensive farming or broadacre agriculture, or if it is an activity that affects the lawful carrying out of an organic or bio-organic farming system (s 15B(2) MERCP Act).
- 11.5 An advanced activity is an activity authorised for the ATP other than a preliminary activity (s 15A MERCP Act).
- 11.6 A person must not enter private land to carry out an authorised activity (both preliminary activities and advanced activities) for a resource authority, or cross or gain entry to access land for a resource authority unless the resource authority holder has given each owner and occupier of the land an entry notice about the entry at least 10 business days before the entry (s 39 MERCP Act).
- 11.7 When accessing the land, the person must comply with the mandatory conditions relating to land access in Schedule 1 of the Mineral and Energy Resources (Common Provisions) Regulation (**MERC Regulation**) and with the best practice guidelines in parts 1 and 2 of the Land Access Code (s 16 MERC Regulation).
- 11.8 A person must not enter private land to carry out an advanced activity for a resource authority (s 43 MERC Act) unless each owner and occupier of the land:
- (a) is a party to a conduct and compensation agreement (**CCA**) about the advanced activity and its effects;
 - (b) is a party to a deferral agreement;



- (c) has elected to opt out from entering into a CCA or deferral agreement; or
- (d) is an applicant or respondent to an application relating to the land made to the Land Court or for relevant arbitration.

11.9 We have been provided with the following CCA's for the Tenements:

- (a) Asplin CCA dated 30 September 2020.
- (b) Mackenzie and Real Energy CCA dated 15 July 2014.
- (c) Paraway and Real Energy CCA dated 12 August 2014.

11.10 Provided that the Tenement holder continues to comply with obligations under these agreements, then land access requirements under the MERCP Act will be met for activities on the properties the subject of each CCA.

11.11 We are not aware of any activities which have occurred on the Tenements, and we cannot confirm whether the holders have met any or all obligations required for such activities.

12. Native title

12.1 The NT Act prescribes a regime by which persons claiming to hold native title may lodge a claim to that effect for determination.

12.2 The existence of a native title claim over an area of land is not evidence for the existence or otherwise of native title. The existence of native title is a question of fact to be determined by an assessment of the extent to which native title has been adversely affected or extinguished by adverse government action. A claim is an expression of interest by a native title group, which is subject to a detailed assessment by the government and ultimately the Federal Court. A native title group whose claim meets the registration requirements set out in the NT Act and determined native title holders will receive a procedural right to negotiate in relation to land the subject of their native title claim where the grant of a mining tenement is proposed by the State.

12.3 A small percentage (<1%) of ATP 2051 is within the Iman People #4 determination, and the remainder of the ATP is within the area of the Iman People #4 application that has not yet been determined.

12.4 ATP 927 is within the Wongkumara People and Boonthamurra People determination areas.

12.5 The NT Act provides that:

- (a) grants, including mining and petroleum tenements granted before 1 January 1994 have been validated as "past acts". This means that the granting of such tenements was fully effective and valid, notwithstanding that native title rights were not taken into account;
- (b) grants, including mining and petroleum tenements granted between 1 January 1994 to 23 December 1996 can be "intermediate period acts" where the grant was made covering land where any of the land was subject to a grant of freehold or lease or public work. Intermediate period acts have been validated, notwithstanding that native title rights were not taken into account at the time; and



-
- (c) grants, including mining and petroleum tenements granted or renewed after 23 December 1996 are subject to the "future act" regime, which provides a process which must be complied with before a proposed future act which has the potential to impact native title rights can be validly undertaken.
- 12.6 Each of the Tenements were granted after 23 December 1996 and are subject to the future act regime.
- 12.7 For a petroleum tenement, the future act procedure could be either:
- (a) the 'expedited procedure', as described below;
 - (b) right to negotiate (**RTN**) under Subdivision P, Division 3, Part 2 of the NT Act, resulting in a section 31 deed and ancillary agreement; or
 - (c) an indigenous land use agreement (**ILUA**), which is a voluntary agreement between a native title claimant group and others about the use and management of land and waters.
- 12.8 The RTN process begins with the State issuing a notice under section 29, indicating that it proposes to grant the tenement. The State must indicate:
- (a) if the RTN procedure applies, in which case the parties must enter into the RTN process under the NT Act; or
 - (b) if the State considers the act attracts the expedited procedure. An act will attract the expedited procedure if:
 - (1) the act is not likely to interfere directly with the carrying on of the community or social activities of the persons who are the native title holders;
 - (2) the act is not likely to interfere with areas or sites of particular significance of the native title holders; and
 - (3) the act is not likely to involve major disturbance to any lands or waters (s 237 NT Act).
- 12.9 Where the State indicates that the expedited procedure applies, the tenement may be granted provided no native title parties lodge an objection to the NNTT within four months after the notification date.
- 12.10 If a registered native title group objects to the application of the expedited procedure, the applicant for the tenement and the registered native title group may either:
- (a) seek a determination from the NNTT as to whether the grant of the tenement is an act attracting the 'expedited procedure';
 - (b) enter into an agreement which provides for the withdrawal of the objection and a protocol for the protection of Aboriginal cultural heritage; or
 - (c) enter the RTN procedure resulting in a section 31 deed and ancillary agreement.
- 12.11 In Queensland, tenements granted under the expedited procedure will be granted subject to the standard NTPCs. The NTPCs identify what exploration tenement holders and native title



parties must do before and during any exploration and what happens when parties don't meet specified time frames.

12.12 The DNRMMRRD has an operational policy for excluding land subject to native title from grant of a permit. This policy provides that:

(a) the future act provisions in the NT Act will not be required to be met where a permit application is received for areas where:

- (1) native title has been extinguished over part of the area; and
- (2) for non-exclusive land tenures (which includes an ATP), where native title may still exist over parts of the permit area but is excluded from the grant.

(b) where an application is made for an ATP over an area where:

- (1) less than or equal to 10% of the area applied for is subject to native title; and
- (2) the area subject to native title does not include a whole sub-block,

the ATP can be granted, with the area subject to native title being excluded from the area of the permit at the time of grant.

12.13 The resource authority public reports confirm that:

- (a) ATP 2051 was granted as predominately exclusive land, with areas of land that are subject to native title being excluded from the permit area; and
- (b) ATP 927 was granted under the RTN process, and no registered native title claimants responded in respect of the process.

13. Aboriginal cultural heritage

13.1 Protection of Aboriginal cultural heritage

- (a) The *Aboriginal Cultural Heritage Act 2003 (Qld)* (**ACH Act**) aims to protect Aboriginal areas and objects of cultural significance irrespective of the underlying tenure of the land (ss 4 and 5 ACH Act). The existence of Aboriginal cultural heritage is in no way an indication that native title exists in an area (section 1.3 of the *Aboriginal Cultural Heritage Act 2003 Duty of Care Guidelines* (**ACH Guidelines**)).
- (b) The ACH Act defines Aboriginal cultural heritage as:
 - (1) a significant Aboriginal area in Queensland;
 - (2) a significant Aboriginal object; or
 - (3) evidence of archaeological or historic significance of Aboriginal occupation of an area of Queensland (s 8 ACH Act).
- (c) Whether or not an area or object is a significant Aboriginal area or object is determined by reference to:



- (1) Aboriginal tradition, that is the body of traditions, observances, customs and beliefs of Aboriginal people generally or of a particular community or group of Aboriginal people and includes any such traditions, observances, customs and beliefs relating to particular persons, areas, objects or relationships; and
 - (2) the history, including contemporary history, of any Aboriginal party of the relevant area (ss 9 and 10 ACH Act).
- (d) A significant Aboriginal area does not need to contain markings or other physical evidence indicating Aboriginal occupation, and these areas may include ceremonial, birthing and burial places, and sites of massacre (s 12 ACH Act).
- (e) When carrying out an activity a person will owe a duty of care to not cause harm to an area or object of Aboriginal cultural heritage (s 23(1) ACH Act) (the Aboriginal cultural heritage duty of care). A person is required to exercise due diligence and reasonable precaution before undertaking an activity that may cause harm (1.10 ACH Guidelines). When carrying out an activity a person must take all reasonable and practical measures to avoid harm to ACH (s 23(1) ACH Act).
- (f) The ACH Act does not operate using a permit or licensing system. Instead, when undertaking activities in an area, a person must meet the Aboriginal cultural heritage duty of care by complying with the ACH Guidelines, by complying with an approved cultural heritage management plan, or by entering into a native title agreement or another agreement with the Aboriginal party for the area.
- (g) The Chief Executive or Minister of DWATSIPM has a duty to record all ACH sites (s 48 ACH Act) and the information may be obtained from DWATSIPM's Cultural Heritage Unit (4.11, 5.12 and 5.21 ACH Guidelines). However, the ACH Guidelines warn that the information contained on the Aboriginal Cultural Heritage Register should not be solely relied upon to the exclusion of other searches (8.3 ACH Guidelines). The ACH Act requires persons to take all reasonable and practical measures to ensure an activity does not cause harm to Aboriginal cultural heritage where a person knows or ought to reasonably know that it is ACH (s 24 ACH Act). In most cases, this will require proponents to undertake a cultural heritage survey involving the Aboriginal party for the area.

13.2 Aboriginal cultural heritage over the Tenements

- (a) Our searches show that:
- (1) The Aboriginal Parties for the Tenements are as follows:
 - (A) for ATP 2051: Iman People #4 Part A;
 - (B) for ATP 927: Wongkumara People and Boonthamurra People; and
 - (2) There are 33 recorded cultural heritage sites across the Tenements (artefact scatters, stone arrangements, quarry(s), hearth/oven(s) and scarred/carved tree), as outlined in Schedule 1. The majority of these sites are located on ATP 927, where there are 32 sites. There is only one site (an artefact scatter) recorded on ATP 2051.
- (b) We have not received any further detail as to whether the appropriate cultural heritage clearances have been undertaken over the Tenements. Further, the extent of any cultural heritage surveys relating to the specific activities that are undertaken



by the Tenement holders should not be relied upon for any future activity. The holder of the Tenements must comply with the Aboriginal cultural duty of care for any proposed future activities.

14. Consent

- 14.1 This Report is given solely for the benefit of Eastern Gas in connection with the prospectus to be lodged. This Report is not to be relied upon by, or disclosed to, any other person or used for any other purpose or quoted or referred to in any public document or filed with any government body or other person without our prior written consent.

Yours faithfully

HopgoodGanim Lawyers

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Schedule 1 – Tenement Schedule

Permit number	Permit status	Grant date	Expiry date	Authorised holder name	Conditions	Overlaps / restrictions	Encumbrances	Security and rent	Native title category	Native title claims	Aboriginal cultural heritage	Area
ATP 2051	Granted	23 March 2020	22 March 2026	Pure Energy Corporation Pty Limited (50%) Strata-X Australia Pty Ltd (50%)	No application to transfer ATP 2051 will be considered in the first four years of the term of the ATP. No amendment to the initial work program will be permitted.	Environmentally Sensitive Areas: Endangered Regional Ecosystems – regrowth and remnant (Biodiversity Status) (Category B) Of Concern Regional Ecosystems (Category C) Essential Habitat (Category C) State Forests (Category C) Overlaps EPM 27910 held by Bentonite Industries Australia Pty Ltd (24%) EPG 2048 held by Australis Energy Pty Ltd (100%) Strategic Cropping Criteria Zone and Sub Zone – Western Cropping (100%) Strategic Cropping Trigger Area (11.85%) <u>Boreholes:</u> 1 x Water bores 1 x petroleum wells 1 x core or cuttings held by QLD Gov 5 x Coal seam gas wells	There are no encumbrances listed.	Security: \$12,000 Rent: \$12.34 outstanding to Strata-X and \$12.34 outstanding to Pure Energy Corporation Pty Limited	Process: Predominately Exclusive Land Outcome: Land subject to Native Title is excluded from the permit area	Determinations: Iman People #4 (QCD2024/015; QUD413/2017) (0.87%) Applications: Iman People #4 (QC2017/008; QUD413/2017) (100%) ILUA: Barunggam, Cobble Cobble, Jarowair, Western Wakka Wakka, Yiman and QGC ILUA (QI2010/006) (100%)	Cultural Heritage Party: Iman People #4 Part A (QCD2024/015 DET; QUD413/2017) Cultural Heritage Sites: Artefact Scatter (JC-0878-1) Cultural Heritage Management Plans (CHMP): APLNG Project CHMP between Origin Energy and Barunggam People (registered 7 February 2011) APLNG Project CHMP between Origin Energy and Western Wakka Wakka People (registered 24 March 2010) Columboola – Wandoan South Project CHMP between Powerlink Queensland and Barunggam People (registered 10 October 2011) Gas Projects CHMP between Origin Energy Upstream Operator Pty Ltd and Iman People #4 (registered 27 March 2020)	25 sub-blocks
ATP 927	Granted	1 October 2013	30 September 2027	Real Energy Queensland Pty Ltd (100%)	Conditions and clauses within the section 31 Agreement between the State of Queensland and Drillsearch Energy Limited and	Environmentally Sensitive Areas: Of Concern Regional Ecosystems (Category C) Overlaps	There are no encumbrances listed.	Security: \$12,000 Rent: \$34.58 outstanding to Real Energy	Process: Right to Negotiate Outcome: Section 31 Agreements	Determinations: Boonthamurra People (QCD2015/008; QUD435/2006) (97.72%)	Cultural Heritage Party: Wongkumara People (QC2008/003; QUD851/2018)	159 sub-blocks

Permit number	Permit status	Grant date	Expiry date	Authorised holder name	Conditions	Overlaps / restrictions	Encumbrances	Security and rent	Native title category	Native title claims	Aboriginal cultural heritage	Area
					Boonthamurra People and Wongkumara People (dated 24 April 2012). A report must be lodged for each geological and geophysical study that is undertaken to comply with the initial work program. The report must contain: (a) a description of the study area; (b) a geological summary of the area the studies relates to; (c) a statement describing the purpose of the studies; (d) a description of all study activities completed; (e) a description and explanation of interpretations and results; (f) a statement disclosing expenditure incurred for the studies. The report must be lodged within 2 months of the anniversary date for the tenement for year in which the study was approved.	PCA 341 held by Real Energy Queensland(100%) PPL 53 held by Australian Gasfields Limited PPL 2041 held by Real Energy Queensland Pty Ltd PSL 2065 held by APT Petroleum Pipelines Pty Limited <u>Boreholes:</u> • 2 x Water bores • 4 x petroleum wells • 4 core or cuttings held by Qld Gov		Queensland Pty Ltd		Wongkumara People – Queensland Part A Area (QCD2024/003; QUD851/2018) (1.41%) ILUA: Santos-Wongkumara People ILUA (QI2012/073) (1.41%) Ergon Energy and Boonthamurra People ILUA (QI2015/019) (98.59%) Boonthamurra People and Local Government ILUA (QI2015/021) (98.59%) Boonthamurra People / Keeroongooloo ILUA (QI2015/052) (21.35%) Boonthamurra People / Plevna Downs ILUA (QI2015/058) (4.08%) Boonthamurra People / Malagarga and Mt Howitt ILUA (QI2015/065) (72.29%)	Boonthamurra People (QCD2015/008; QUD435/2006) Cultural Heritage Sites: <i>Wonkumara People</i> Artefact Scatter(s) (x1) Stone Arrangement(s) (x2) <i>Boonthamurra People</i> Artefact Scatter(s) (x20) Stone Arrangement(s) (x2) Quarry(s) (x2) Hearth/Oven(s) (x5) Scarred / Carved Tree (x1) Cultural Heritage Management Plans (CHMP): Santos Wongkumara Project CHMP between Santos and Wongkumara People QC08/3 (registered 27 February 2017)	

Schedule 2 – EA schedule

EA	Holder	Tenements	Category/conditions	Annual fee	Annual return	Compliance	ERC	Surety
EA0002074	Pure Energy Corporation Pty Limited	ATP 2051	Compliance with the Eligibility criteria and standard conditions Petroleum exploration activities (version 2)	No outstanding rent	No outstanding annual returns	No enforcement actions identified	No ERC Decisions.	This EA is not in the Financial Provisioning Scheme's database. No surety information is held with respect to this EA.
EPPG00396513	Real Energy Queensland Pty Ltd	ATP 927	Compliance with the conditions listed in the EA, including a requirement for Petroleum Activities not to be carried out in River Trust Asset Areas without the approval of the relevant River Trust.	No outstanding rent	No outstanding annual returns	No enforcement actions identified	ERC amount is \$204,882.90.48	FPS holds surety of \$72,882.90 and \$132,000.00 in bank guarantees





A D Danieli Audit Pty Ltd

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12 December 2025

The Directors

Eastern Gas Corporation Limited

119 Willoughby Road

CROWS NEST NSW 2065

Dear Sirs,

INVESTIGATING ACCOUNTANT'S REPORT ON EASTERN GAS CORPORATION LIMITED PRO-FORMA FINANCIAL INFORMATION

A D Danieli Audit Pty Ltd ("ADDA") have been engaged by Eastern Gas Corporation Limited ("Eastern Gas" or "the Company") to report on the Pro-Forma Financial Information of Eastern Gas (the responsible party) for an Annexure to the Prospectus dated on or about 4th December 2025 and relating to the offer by the Company of 27,500,000 shares at \$0.20 per share to raise a minimum of \$5,500,000 ("Prospectus").

The expressions and terms defined in the Prospectus have the same meaning in this Report.

Pro-Forma Financial Information

You have requested ADDA to prepare the following Pro-Forma Financial Information of Eastern Gas included in the Prospectus being the Pro-Forma Statement of Financial Position as at 31 October 2025 showing the impact of the pro-forma adjustments as if they had occurred at 31 October 2025.

Hereafter referred to as "*The Pro-Forma Financial Information*".

The Pro-Forma Financial Information has been derived from the financial information of Eastern Gas after adjusting for the effects of the Pro-Forma Transactions described in Section 6.2 of the Prospectus. The stated basis of preparation is the recognition and measurement principles contained in Australian Accounting Standards applied to the Financial Information and the events or transactions to which the Pro-Forma Transactions relate, as described in Section 6.2 of the Prospectus, as if those events or transactions had occurred as at the date of the Financial Information. Due to its nature, the Pro-Forma Financial Information does not represent the Company's actual or prospective financial position.

This Report has been prepared for inclusion in the Prospectus. We disclaim any assumption of responsibility for any reliance on this Report or on the Pro-Forma Statements of Financial Position to which it relates, for any purpose other than that for which it was prepared.

Directors' responsibility

The Directors of Eastern Gas are responsible for the preparation and presentation of the Financial Information and Pro-Forma Financial Information, including the selection and determination of the Pro-Forma Transactions made to the Financial Information and included in the Pro-Forma Financial Information. This includes responsibility for such internal controls as the Directors determine are necessary to enable the preparation of Financial Information and Pro-Forma Historical Financial Information that are free from material misstatement, whether due to fraud or error.

Our responsibility

Our responsibility is to express a limited assurance conclusion on the financial information based on the procedures performed and evidence we have obtained. We have conducted our engagement in accordance with the Standard on Assurance Engagement *ASAE 3450 Assurance Engagements involving Corporate Fundraising and/or Prospective Financial Information*.

Conclusion

Pro-Forma Financial Information

Nothing has come to our attention that causes us to believe that the Pro-Forma Financial Information, as described in Sections 6.2 and 6.3 of the Prospectus, and comprising the Pro-Forma Statement of Financial Position as at 31 October 2025 showing the impact of the Pro-Forma Transactions as if they had occurred as at 31 October 2025, are not presented fairly in all material respects, in accordance with the stated basis of preparation as described in Section 6.3 of the Prospectus.

Restriction on use

We draw attention to Section 6.1 of the Prospectus, which describes the purpose of the financial information, being for inclusion in the Prospectus. As a result, the financial information may not be suitable for use for another purpose.

Consent

A D Danieli Audit Pty Ltd has consented to the inclusion of this Investigating Accountant's report in the Prospectus in the form and context in which it is included.

Liability

The liability of A D Danieli Audit Pty Ltd is limited to the inclusion of this report in the Prospectus. A D Danieli Audit Pty Ltd makes no representation regarding, and takes no responsibility for, any other statements, or material in, or omissions from, the Prospectus.

General Advice Warning

This Report has been prepared, and included in the Prospectus, to provide Investors with general information only and does not take into account the objectives, financial situation or needs of any specific investor. It is not intended to take the place of professional advice and investors should not make specific investment decisions in reliance on information contained in this report. Before acting or relying on any information, an investor should consider whether it is appropriate for their circumstances having regard to their objectives, financial situation or needs.

Independence or Disclosure of Interest

A D Danieli Audit Pty Ltd does not have any interest in the outcome of the proposed listing, or any other interest that could reasonably be regarded as being capable of affecting its ability to give an unbiased conclusion in this matter. A D Danieli Audit Pty Ltd will receive normal professional fees for the preparation of this report.

Yours sincerely,

A D Danieli Audit Pty Ltd



Sam Danieli

Director

GENERAL OFFER APPLICATION FORM

<https://apply.automic.com.au/EasternGasAUTOMIC2025>

PURE OFFER APPLICATION FORM

<https://apply.automic.com.au/EasternGasPureOfferAUTOMIC2025>



EASTERN GAS