

## Due Diligence and Valuation Report

Arrowhead Code:	06-12-01
Coverage reinitiated:	March 21, 2024
This document:	March 21, 2024
Fair share value bracket	AUD 0.27 – AUD 0.35
Share price (March 21, 2024):	AUD 0.073 <sup>i</sup>

### Analysts

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### Market Data<sup>ii</sup>

52-Week Range:	AUD 0.056 – AUD 0.15
Average Daily Volume (3M Avg.):	2,527,960
Market Cap (March 21, 2024):	AUD 82.7 million (mn)

### Company Overview:

Elixir Energy Limited (Elixir, EXR or the company) is an Australian-headquartered (and ASX-listed) gas exploration and development company, primarily focused on the exploration and appraisal of natural gas, specifically tight gas in Australia and coal-bed methane (CBM), also known as coal seam gas (CSG), in Mongolia.

Elixir has invested in three pivotal projects – a Queensland gas asset (Grandis Gas Project), a Mongolian gas project (Nomgon IX CBM PSC Project), and a Mongolian hydrogen and green energy project (Gobi H2 Project).

Elixir's flagship project is the Grandis Gas Project with a 100% interest in the petroleum exploration permit ATP 2044 in Queensland. It spans 1,000 km<sup>2</sup> near the Wallumbilla gas hub and holds a current contingent resource (2C) of 395 billion standard cubic feet of gas (bcf). The company drilled the Daydream-2 appraisal well in late 2023 and will stimulate and flow-test it in H1 2024 with a key aim to significantly expand the existing 395 bcf contingent resource.

The second project is in Mongolian gas, the Nomgon Project, which is the company's most advanced asset. Elixir possesses 100% ownership of the Nomgon IX Coal Bed Methane (CBM) Production Sharing Contract (PSC) project situated in the South Gobi region of Mongolia. Covering 30,000 km<sup>2</sup>, the risked recoverable resource in the expansive license area is estimated at 14.6 trillion cubic feet (tcf) in a best-case scenario.

The third key project is the Gobi H2 Project, which is a green hydrogen project located in the Gobi region of Mongolia. The project has been jointly advanced by Elixir and the Japanese firm Terras Energy (an 85% owned subsidiary of Toyota Tsusho Corp).

The company is listed on the Australian Securities Exchange (ASX) under the ticker 'EXR'.



Company:	Elixir Energy Limited
Ticker:	ASX: EXR
Headquarters:	Adelaide, Australia
Managing Director:	Neil Young
CFO:	Victoria Allinson
Website:	<a href="https://elixirenergy.com.au/">https://elixirenergy.com.au/</a>



**Key Highlights:** **(1)** Elixir successfully drilled its appraisal well, Daydream-2 in Q2 2024; recent laboratory analysis of cutting samples revealed the presence of clay coatings encircling quartz grains for the first time in Queensland at depths below 4,200 metres (m); **(2)** EXR acquired coal desorption samples from drill cuttings while drilling unconventional targets at Daydream-2 well, resulting in an increase in prospective resources in ATP 2044 to 3.6 Tcf (2U); these resources will be key targets in the upcoming stimulation and flow testing program; **(3)** A coiling tubing unit has been mobilized to clean out the Daydream-2 well as a precursor to the Diagnostic Fracture Integrity Tests (DFITs) that will commence soon; the results of this program will be used to optimize the stimulation and flow testing of Daydream-2; **(4)** Elixir has hired Halliburton as the lead contractor for the upcoming stimulation and flow testing program for the Daydream-2 well in Q2 2024; **(5)** In December 2023, EXR raised AUD 6.5 mn (before costs) through the issue of new shares via a placement to institutional and sophisticated investors for the Daydream-2 project; **(6)** EXR entered an information sharing agreement with Origin Energy Limited (Origin) in November 2023, wherein EXR provides Origin with information on Carbon Capture and Storage (CCS) garnered from the well; Origin has paid AUD 1mn for the same during 1H 2024 and will bear any incremental costs involved; **(7)** EXR received tax credits of AUD 415k in 2023 and has further credits of AUD 4.9 mn available from the Federal Government for the advancement of Daydream-2 well;

**Key Risks:** **(a)** Since EXR is in an exploration and appraisal stage, the discovery of economically viable resources is uncertain; **(b)** Future exploration and appraisal activities are capital-intensive and requires securing funding; delays in securing funding can pose challenges for the company; **(c)** Obtaining regulatory licenses and permits could be time-consuming and might take longer than anticipated;

**Valuation and Assumptions:** Given the due diligence and valuation estimates, Arrowhead believes that Elixir's fair market value per share is AUD 0.27 to AUD 0.35, derived using the Relative Valuation (RV) methodology.

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## 1. Investment Thesis

Arrowhead is initiating coverage on Elixir Energy Limited (ASX:EXR) with a fair value of AUD 0.27 per share in the low-bracket scenario and AUD 0.35 per share in the high-bracket scenario, derived using the RV methodology.

***Incorporated in 2004, Elixir Energy is a gas exploration company with its flagship project – the Grandis Gas Project – in proximity to the Wallumbilla gas hub in the Taroom Trough, a deep Permian gas-rich section of the Bowen Basin, Queensland. Elixir’s most advanced project is the Nomgon Project, under which it has exclusive ownership of the Nomgon IX Coal Bed Methane Production Sharing Contract which is positioned along the Mongolian-Chinese border, ~400 km north of China’s primary gas transmission grid. Both areas represent high-potential exploration/appraisal zones with excellent regional infrastructure. The company is also exploring opportunities in hydrogen and wind/solar renewable energy in Mongolia.***

### ***Promising momentum at Daydream-2 for contingent resources expansion***

Elixir is advancing its Grandis Gas Project through the Daydream-2 appraisal well to augment its existing 395 bcf 2C contingent resource. Having commenced drilling in November 2023, a total depth of 4,300 meters (m) was achieved. Achieving this depth not only allows measuring consistently elevated gas levels in the deep Permian era target section but also fortifies operational adaptability for future phases. In February 2024, the laboratory analysis of drill cuttings identified clay coatings (rims) around individual quartz grains. This is the first time that these clay rims have been identified in Queensland at these depths, which can significantly increase the productivity of the gas contingent resource of the deposit. Further, EXR acquired coal desorption samples from drill cuttings while drilling through the Permian targets at Daydream-2 well. The analysis of these samples resulted in an increase in total unrisks prospective resources in ATP 2044 to 3.6 Tcf (2U).

Recently, the company has mobilized a coiled tubing unit to clean up the Daydream-2 well and commence the DFITs shortly. The results of this DFIT program will be used to optimize the subsequent stimulation and flow testing phases of Daydream-2, which will run from April through to around June. Elixir has engaged with Halliburton to lead the extensive stimulation program, which will be followed by a series of flow tests in May and June 2024. Halliburton, a global leader in hydraulic fracturing, has expertise in enhancing fracture performance to maximize asset value, and this collaboration encompasses joint efforts in research and development. This partnership includes the stimulation of both sandstone and coal zones holding the potential to significantly increase contingent resources.

Additionally, Elixir and Origin Energy inked an information-sharing agreement for Daydream-2, with Origin paying AUD 1 mn in non-dilutive funding to bolster exploration efforts. Under this Agreement Origin also covered the incremental costs associated with information gathering. Elixir also has a Data Sharing Agreement with Santos in connection with well data from its neighboring license.

### ***Progressing the Nomgon Project towards commercialization***

The Nomgon Project, spanning an extensive 30,000 km<sup>2</sup>, has been a longer term venture for Elixir. Independently certified, the area boasts a significant CBM risked recoverable prospective resource of 14.6 tcf. Ongoing exploration in Mongolian CBM has revealed promising findings, indicating seam thickness, gas content, and composition conducive to CBM development. Replicable results, validated by additional drilling via pilot testing, aim to mitigate associated risks. In 2024, the focus has shifted to converting discovered resources into reserves, with plans to attract a new owner or partner, potentially from China. Positive outcomes will guide the pilot project towards a commercial viability determination.

### ***Capitalizing on exceptional regional infrastructure at Grandis and Nomgon***

Elixir Energy has a distinct tactical edge, with its projects strategically located in regions endowed with exceptional infrastructure. The Grandis Gas Project is situated near the Wallumbilla gas hub in Queensland, a well-established gas transmission infrastructure that connects to both domestic and international markets. The ready accessibility of well locations via road further enhances the overall infrastructure advantage. Similarly, the Nomgon Project is positioned along the Mongolian-Chinese border and leverages outstanding infrastructure assets, including power lines, roads, and a growing rail network. This location not only facilitates efficient transportation but also capitalizes on the potential to supply gas to the substantial flow of trucks transporting coal into China from the renowned Tavan Tolgoi mine, located within Elixir’s PSC boundaries. Rio’s Oyu Tolgoi mine also lies within the PSC and is a likely gas market for power in the future. The Nomgon project also enjoys robust support from the service sector and local workforce in the country and

from China in the medium term. Elixir is well-positioned to capitalize on the strategic advantages of the regional infrastructure, ensuring operational efficiency and sustained growth in the key local and adjacent energy markets.

***Elixir's strong growth prospects provide access to capital***

In CY 2023, the company secured AUD 15.2 mn from qualified institutional investors, affirming robust support for its gas exploration ventures. Complementing equity funding, Elixir obtained non-dilutive financing via a strategic information-sharing agreement with Origin, showcasing financial ingenuity and bolstering investor trust in its gas exploration endeavors. The Australian government's substantial backing, particularly in research and development for Daydream-2, significantly contributes to drilling expenses. The company has tax credit of AUD 4.9mn available (accounting for ~48.5% of total costs) through the R&D Tax Incentive mechanism of the Federal Government. This diversified backing positions Elixir as a formidable player with considerable growth potential in the gas exploration sector.

***Elixir's experienced leadership team instills confidence in stakeholders***

Elixir boasts a seasoned and capable management team that instills confidence among stakeholders. Since late 2018, Neil Young has served as the Managing Director and CEO, bringing nearly three decades of senior management experience in the energy sector, particularly in business development, new ventures, gas marketing, and commercial functions. With a proven track record, he founded Golden Horde Ltd in 2011, focusing on gas exploration along the Chinese border in Mongolia. Golden Horde was back-door listed into Elixir in late 2018. In 2019, Richard Cottee, with nearly forty years of energy sector experience, was appointed as Non-Executive Chairman. He previously oversaw Queensland Gas Company's growth from a small explorer to its AUD 5.7 billion acquisition by BG Group. Stephen Kelemen, with 38 years at Santos, joined as a Non-Executive Director in 2019, while Anna Sloboda, with over 20 years in corporate finance, became a Non-Executive Director in 2020. Victoria Allinson, Company Secretary and CFO, has over 30 years of accounting and auditing experience. This accomplished leadership team positions Elixir for sustained success, fostering confidence among stakeholders.

***However, certain risks could impede growth plans***

***Securing future funding for exploration activities***

Amid substantial spending, financial risks emerge. The significant investment in drilling accentuates the financing challenges inherent in the company's capital-intensive and non-revenue-generating nature. To cover the considerable costs of drilling and execute strategic initiatives, Elixir might have to explore additional funding avenues through equity or debt financing. Failing to secure adequate funds could potentially obstruct the company's growth trajectory, resulting in possible delays or even the cancellation of specific exploration activities or projects.

***Uncertainty and potential risks in contingent resource estimation***

The assessment of contingent resources introduces uncertainty, notably considering the substantial financial commitment to drilling future wells, etc. As these resources are extracted and processed, it's important to acknowledge that the quantity and quality of the gas are approximations, without guaranteed realization of the projected contingent resources. This uncertainty heightens the likelihood that, if the resources indicate insufficient economic viability, the company might contemplate withdrawing from the project, resulting in the loss of both drilling costs and the time invested in well drilling.

***Investment Thesis Conclusion***

We believe that Elixir Energy is presented with a compelling opportunity to investigate regions expected to contain significant gas resources and transform its discoveries into reserves. The company's flagship project in Queensland is in a region boasting substantial – but now declining – CBM production, and proximity to well-established infrastructure facilities, including LNG export facilities with growing spare capacity. Nevertheless, the potential funding challenges for its operations, coupled with exploration risks tied to fluctuations in gas prices, may pose a risk.

## 2. Business Overview

### 2.1 Background<sup>iii</sup>

Founded in 2004, Elixir Energy operates as a gas exploration and development company. It is headquartered in Adelaide, Australia, and primarily focused on the exploration and appraisal of natural gas, specifically tight gas in Australia and CBM in Mongolia. It has three key projects:

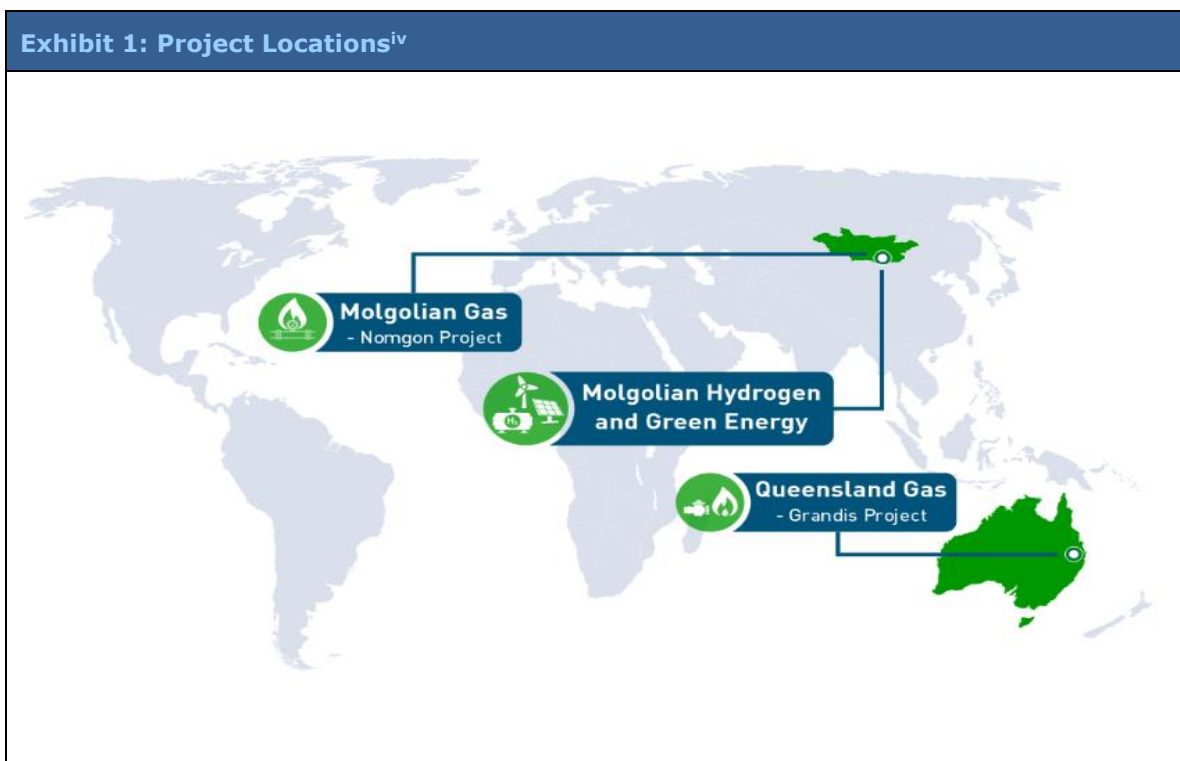
- Queensland gas asset – Grandis Gas Project
- Mongolian gas asset – Nomgon IX CBM PSC (Nomgon Project)
- Mongolia hydrogen and green energy project – Gobi H2 Project

Elixir acquired a 100% interest in petroleum exploration permit ATP 2044 in Queensland in August 2022, renaming it the Grandis Gas Project. This is the company's core project, which currently holds an initial contingent resource of 395 bcf. Located in the Permian era Taroom Trough, the project spans 1,000 km<sup>2</sup> near the Wallumbilla gas hub, providing convenient access to existing gas transmission infrastructure connected to domestic and international markets. Elixir has just drilled an appraisal well, Daydream-2, and will stimulate and flow test it in H1 2024, with a view to significantly expanding the existing contingent resource and putting the company on the path to a maiden reserve booking.

Further, Elixir holds 100% ownership of the Nomgon IX CBM PSC (Nomgon Project), located in the South Gobi region of Mongolia. This is Elixir's most mature asset and covers a vast area of 30,000 km<sup>2</sup>, equivalent to the size of Belgium. The area has been independently certified to hold a substantial CBM risked recoverable prospective resource of 14.6 tcf.

Lastly, Gobi H2 is Elixir's green hydrogen project that will use renewable electrical energy sources to produce hydrogen. The project has been jointly advanced by Elixir and the Japanese firm Terras Energy (an 85% owned subsidiary of Toyota Tsusho Corp). In early 2023, EXR concluded a pre-feasibility engineering study (PFS) for a 10 MW green hydrogen pilot project in collaboration with the global infrastructure consulting firm AECOM. The company's continuous efforts to gather high-quality wind and solar data are crucial for scaling production to the gigawatt level.

These three projects collectively emphasize Elixir's multi-faceted approach, encompassing advanced tight gas and CBM exploration, renewable energy ventures, and the strategic early acquisition of significant gas exploration permits.

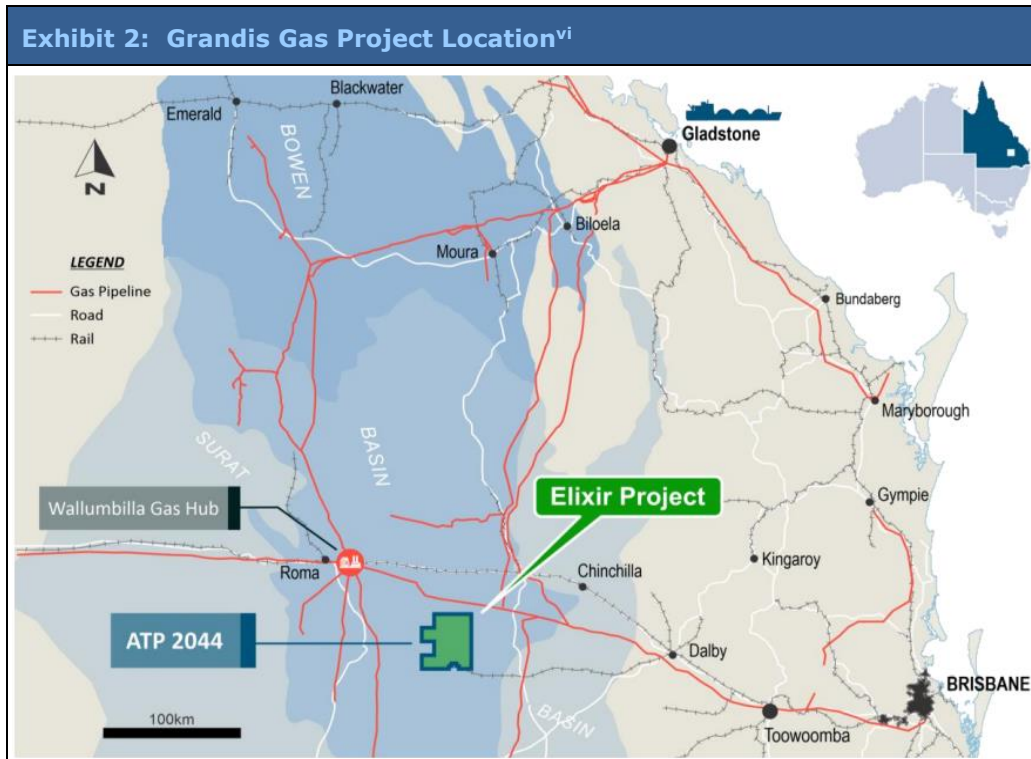


## 2.2 Projects

### 2.2.1 Queensland Gas Asset – Grandis Gas Project<sup>v</sup>

#### Overview and Geographic Presence

In August 2022, Elixir acquired a 100% interest in petroleum exploration permit ATP 2044 in Queensland, through the acquisition of the special-purpose vehicle EnergyCapture Pty Ltd. After the deal, the project was renamed the Grandis Gas Project. It is located in the Taroom Trough, a deep Permian gas-rich section of the Bowen Basin in Queensland, and holds an initial contingent resource (2C) of 395 bcf. The Grandis Gas Project spans 1,000 km<sup>2</sup> close to the Wallumbilla gas hub, providing convenient access to existing gas transmission infrastructure. The hub is connected to both domestic and international markets, and well locations are easily accessible by road.



ATP 2044, located in the Taroom Trough, is prospective for gas and condensate within conventional and unconventional sandstones and fractured coals. The Daydream-1 well, drilled around a decade ago by BG Group (now Shell) and positioned just 2 km west of the permit boundary, confirmed the presence of gassy reservoirs in this location. The well demonstrated gas-flow rates reaching up to 3.5 mn cubic feet per day. The primary target reservoirs include the Permian-aged Kianga Formation and Back Creek Group's sandstones and fractured coals within the Bowen Basin. The tenement is surrounded by significant players in the oil and gas industry such as Shell and Santos.

#### Resource assessment<sup>vii</sup>

Elixir has three primary targets in the Grandis Gas Project, namely:

- *Free flowing deep sandstones* – during the drilling of Daydream-2, Elixir encountered free flowing deep sandstones at ~4,200 metres and these will be a key target of the upcoming stimulation program. This is the first encounter of such permeable/porose sands at this depth in the play.
- *Tight unconventional sandstones* – ERC Equipoise Pte Ltd (ERCE), one of the largest petroleum reserves and resources auditors globally, assigns contingent resources specifically to tight sandstones of the Permian-aged Kianga Formation and Back Creek Group. The estimation of the contingent resources is based on the results of previous drilling in the same Taroom Trough play, immediately to the West, North and East of ATP 2044.

- **Fractured thermally mature coals** – Fractured thermally mature coals remain an exploration target, which is yet to be evaluated by ERCE. Achieving substantial flow rates from these coals is a primary goal for Daydream-2 drilling, as it can lead to a significant increase in contingent resources in the overall license area. Elixir’s Management has estimated a prospective resource range from this target.

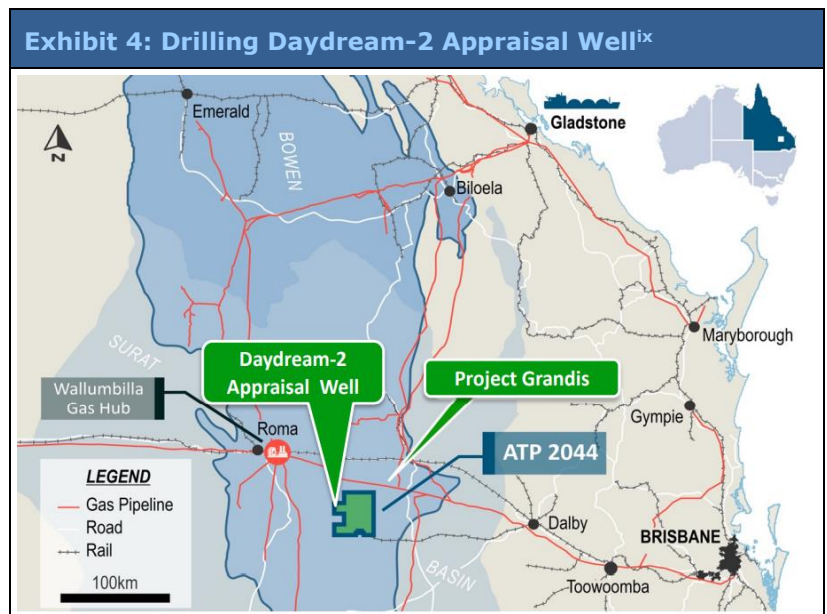
Exhibit 3: Contingent Resources <sup>viii</sup>				
	Units	1C	2C	3C
Gas Initially in Place	Bcf	2,128	7,007	22,699
Recoverable Gas	Bcf	93	395	1,493
Recoverable Condensate	MMbbl	0.7	3.6	17.3

*\*Tight sandstone reservoirs only*

Elixir's technical team conducted a comprehensive analysis, incorporating data from drilling, logging, and testing of wells. This in-depth assessment encompasses various methodologies such as seismic interpretation, core analysis, wireline petrophysics, chromatographic gas analysis, production test analysis, and gas sampling. ERCE has independently scrutinized and validated these interpretations.

**Daydream-2 Appraisal Well**

In November 2023, Elixir started drilling an appraisal well, Daydream-2, to significantly expand the existing 395 bcf contingent resource. The aim of the drilling was to conduct extensive stimulation and flow testing on Daydream-2 to substantiate its potential for achieving commercially viable flow rates. The drilling was conducted by a subsidiary of global oil field services – SLB (previously known as Schlumberger). The crew of the SLB 185 rig had successfully drilled two similar nearby wells. While the appraisal well was initially expected to be drilled to 4,200 m, it was finally successfully drilled to its total depth of 4,300 m. After the successful casing and well-head installation, the SLR 185 rig was demobilized from the location. Laboratory analysis was conducted on drill cuttings collected during the well's drilling, with results reported in recent months.



In December 2023, Elixir intersected a sandstone interval with significantly better than prognosed reservoir properties. Petrographical analysis of the interval showed three sandstone reservoirs in this section that were gas saturated. These sands had sharp bases and were fine upwards, showed good resistivity profile, and there were indications of gas producing reservoir sandstone given the cross-over of the neutron and density logs.

Following the intersection, these sands were included in the company’s extensive and novel stimulation testing regime. In February 2024, Elixir announced the discovery of clay coatings (rims) around individual quartz grains, following the petrographical analysis of cuttings samples from the sand interval – Sand 3. This was the first time that these clay rims were discovered in Queensland at depths below 4,200 m where primary porosities were preserved above 12%. This discovery can prove to be of great significance for the Grandis Gas Project, where low side cut-offs of gas contingent resource were restricted to 4,200 m.

Further, a photomicrograph of a quartz grain from Sand 3 in the Daydream-2 permeable zone clearly showed a clay rim. The clay rim encapsulates the quartz grain and inhibits post depositional cementation. When compared with photomicrograph of other wells such as Senecio3 (the Waitisia discovery well), Daydream-2 well intersected the

permeable sands between 4,200 m and 4,220 m, with reservoir pressure of pounds per square inch absolute/atmosphere (psia). Higher pressure may signify a materially higher ultimate gas recovery per well, all other things being equal.

During the drilling of the primary unconventional targets at Daydream-2, Elixir acquired coal desorption samples from drill cuttings. The cuttings were placed in traditional coal bed methane (CBM) desorption tubes and analyzed for gas content. The analysis showed that the gas adsorbed to the coals – in addition to the prospective resources already recognized by Elixir, which previously were solely in the coal fracture system. As a result, the total unrisks prospective resources at ATP 2044 have increased to 3.6 Tcf (2U).

<b>Exhibit 5: Unrisks Prospective Resources<sup>x</sup></b>				
Recoverable Gas	<b>1U</b>	<b>2U</b>	<b>Mean</b>	<b>3U</b>
Adsorbed Coal	755	2,316	3,702	8,497
Fractured Coal	401	1,287	1,841	4,135
<b>Total</b>	<b>1,156</b>	<b>3,603</b>	<b>5,543</b>	<b>12,632</b>

This prospective coal resource, combined with the permeable and tight sandstones recently logged in Daydream-2, will be one of the key targets of the upcoming stimulation and testing program, which is expected to commence in mid-April 2024. The company has already mobilized a coiled tubing unit to clean out the Daydream-2 well, which is a precursor to the DFITs that will commence shortly. The results of this DFIT program will then be used to optimize the subsequent stimulation and flow testing phases of Daydream-2, which will run from April through to around June.

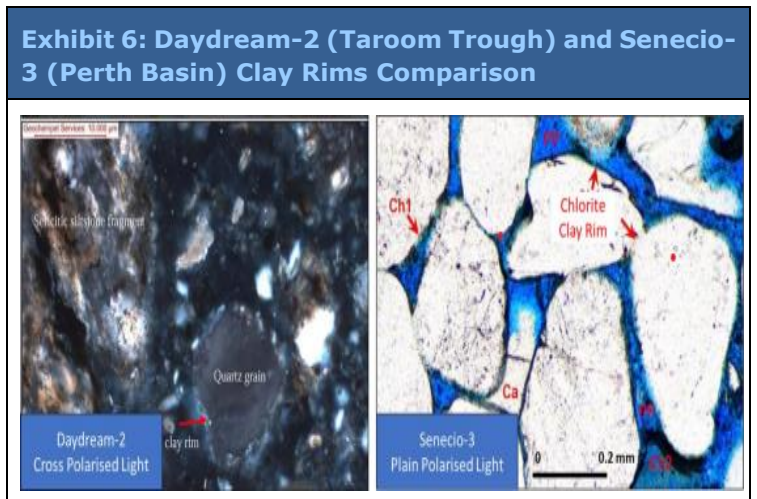
The detailed design of the stimulation and testing program has been finalized, with a total of 6 zones to be stimulated. The zones selected represent a cross-section of permeable sands, tight sands and coals and are guided by the key principle of maximizing useful data acquisition from an appraisal well. This will help in the designing of the future development wells.

Elixir has engaged with Halliburton, through a competitive tender process, to be the lead contractor for the upcoming stimulation program. As a global leader in hydraulic fracturing, Halliburton's expertise is crucial in enhancing fracture performance to maximize asset value. The collaboration extends beyond the stimulation program, encompassing joint efforts in R&D. Elixir and Halliburton aim to optimize outcomes at Daydream-2 by leveraging advancements in technology that have emerged in the last decade in the US. This partnership includes the stimulation of both sandstone and coal zones holding the potential to significantly increase contingent resources. The stimulation program will be followed by a series of flow tests in May and June 2024.

The Daydream-2 well is receiving substantial support for its R&D initiatives, with the Federal Government contributing 48.5% of the total costs through the R&D Tax Incentive mechanism. Elixir received AUD 415k of tax credits in 2023 from the Federal government and has further AUD 4.9mn worth of tax credits available for its R&D expenses related to the Daydream-2 well.

**Information Sharing Agreement with Origin Energy for AUD 1 mn**

Elixir signed a strategic information sharing agreement (ISA) with Origin Energy for the Daydream-2 well in November 2023. Under the agreement, Origin has paid AUD 1 mn in non-dilutive funding in 1H 2024, supporting EXR's exploration efforts. The agreement involves Elixir acquiring crucial data for Origin's greenhouse gas license, aligning with Origin's carbon capture and storage ("CCS") initiatives. Elixir's Daydream-2 well is strategically positioned for CCS exploration, which will provide Origin with essential information, eliminating the need for drilling the well on its own. Origin also





covered incremental costs incurred to gather the information apart from the AUD 1 mn. This collaboration is a mutually beneficial partnership, leveraging drilling expertise to secure financial backing for exploration activities.

**Project Timeline**

In November/December 2023, Elixir drilled the Daydream-2 appraisal well, with wireline logging conducted to assess the thickness of gross interval and gas saturation of the targeted formations. A post-drilling well analysis to revise the resource base has been completed, resulting in an increase in prospective resources in the coal sections in ATP 2044 to 3.6 Tcf (2U). The company has mobilized a coiled tubing unit to clean out Daydearm-2 well as a pre-cursor to the DFIT, which is expected to commence soon. DFIT directly measures formation stress, pore pressure and permeability and pre-stimulation testing. The design of stimulation and flow testing program has been finalized and is expected from April through to around June.

Elixir is working with Halliburton Global Technology Centre to finalize an optimal strategy for the stimulation of Daydream-2 reservoirs. The stimulation program for sandstone and coal reservoirs (up to 5 stages) will be completed by mid-May 2024, while the completion and production testing of initial flow rates from specific isolated intervals in coals and sandstones should be completed by June 2024.



**2.2.2 Mongolian Gas Project – Nomgon IX CBM PSC (Nomgon Project)**

**Overview and Geographic Presence <sup>xii</sup>**

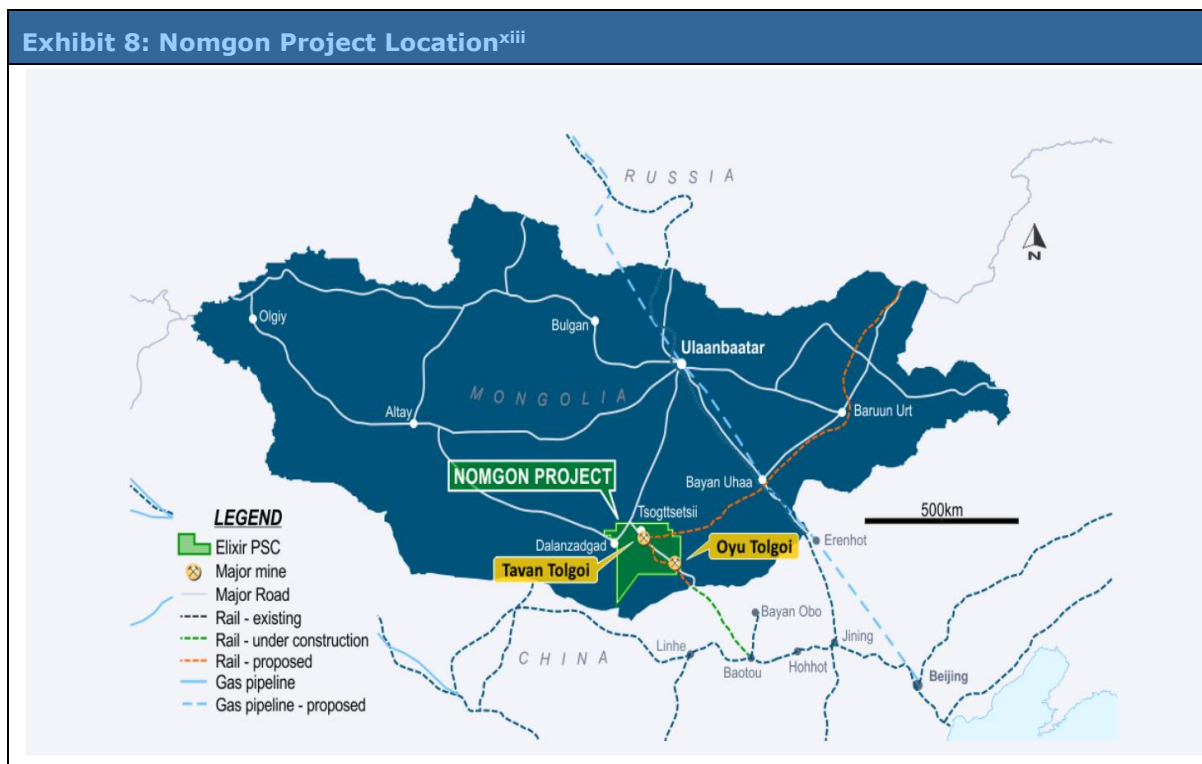
The Nomgon IX CBM PSC project is Elixir’s most mature asset and is wholly owned by the company. Situated in the South Gobi region of Mongolia, the Nomgon IX CBM PSC, also known as the Nomgon Project, is positioned along the Mongolian-Chinese border, ~400 km north of China's primary gas transmission grid. Spanning an expansive license area of approximately 30,000 km<sup>2</sup> (~7 mn acres), the Nomgon Project has received independent certification affirming its substantial CBM resources. The risked recoverable prospective resource of this vast area is estimated at 14.6 tcf in the best-case scenario.

The Nomgon Project boasts exceptional infrastructure advantages, with access to power lines, roads (including a sealed road connecting Ulaanbaatar through the PSC and into China), and a rail network. This strategic location facilitates transportation, benefiting from the numerous trucks transporting coal into China from the prominent Tavan Tolgoi mine, situated within Elixir's PSC boundaries. The project also benefits from robust support from the Mongolian and Chinese oil and gas service sectors. Moreover, it is well-connected to the electricity grids of both countries, offering substantial capacity for gas-to-power market options.

The project could also benefit from future projects in the region, including a planned pipeline from Russia through Mongolia to China – Gazprom's Power of Siberia 2 initiative. These infrastructure advantages position the Nomgon Project as an attractive and promising venture.

The coals in this region can achieve greater thickness than those in Australia, resulting in higher energy density per km<sup>2</sup> and lower cost per GJ produced. The presence of highly gas-saturated coal seams will result in lower water handling costs during the pilot and production stages. The low cost of drilling and strategic market positioning outweigh the challenges posed by geological complexity. While permeability has shown variability in the initial assessments, the

discovery of highly permeable sections emphasizes the project's promising potential. The area has operational accessibility throughout the year due to dry conditions, low population density and the absence of rivers.



**Contingent Resource<sup>xiv</sup>**

In FY 2023, Elixir's primary focus in the Nomgon Project was the long-term pilot production project. The objective is to achieve commercial gas flow rates, ultimately leading to the initial booking of reserves. This strategic aim builds upon the contingent resources previously recognized at the site during FY 2022 when Elixir announced its first contingent resource booking. ERC Equipoise, an independent entity, conducted the estimation of contingent resources at that time.

The contingent resources have been specifically booked for the initial selected gas supply area for a potential power project in the western part of the Nomgon sub-basin – in which the company drilled several wells starting in FY 2020 – with an initial 2C contingent resource assessment of 24 bcf. The company expects contingent resources to grow materially on the successful completion of the pilot program and further exploration and appraisal drilling.

**Exhibit 9: Nomgon Project – Contingent Resources (100% WI)<sup>xv</sup>**

(in bcf)	1C	2C	3C
Gas Initially in Place	13	60	242
Recoverable Gas	5	24	104

**Extended Pilot Production Program<sup>xvi</sup>**

In late 2022, the company initiated an extended pilot production program, following on from Elixir conducting comprehensive exploration and appraisal activities across the PSC, building on its efforts since late 2019. The pilot project involved the drilling of 2 pilot wells 100 m apart – Nomgon 8 and 9 – and installing surface facilities, and represented the development of the previous year's work, which had made Mongolia's first gas discovery in 2020. The program achieved a significant milestone in early 2023, surpassing 200,000 standard cubic feet per day (scfpd) of gas, with the Nomgon-9 well contributing over 150,000 scfpd. It also confirmed near 100% gas saturation and modest water production at 180 barrels per day.

Early outcomes were promising, achieving significant production milestones in the months after the initial flows. The pilot's gas output began robustly but later tapered off, a common occurrence in CBM pilots, especially in frontier areas.

Consequently, there was an expansion of the pilot project, incorporating an extended testing period and the addition of another well – Nomgon-10. The drilled Nomgon-10 pilot production well has been successfully completed and is now in production – water is flowing, with gas expected to follow. The entire process, from the start of drilling to the first water production, took 19 days, ahead of schedule and within the budget. To minimize the risks of any damage to the formation and shocks to the coal reservoir, the well was gradually brought into production.

Concurrently, exploration and appraisal efforts in 2023 were concentrated on extensive drilling in the southwestern section of the PSC, which has demonstrated, up to this point, to be promising. The PSC stipulates a mandatory exploration period of at least 10 years and a production period of 30 years, with the possibility of extension. The company’s CBM appraisal and development wells were drilled with a combination of chip-hole and coring drilling techniques. Appraisal wells are cored and desorbed for gas content, while exploration wells are generally logged using wireline.

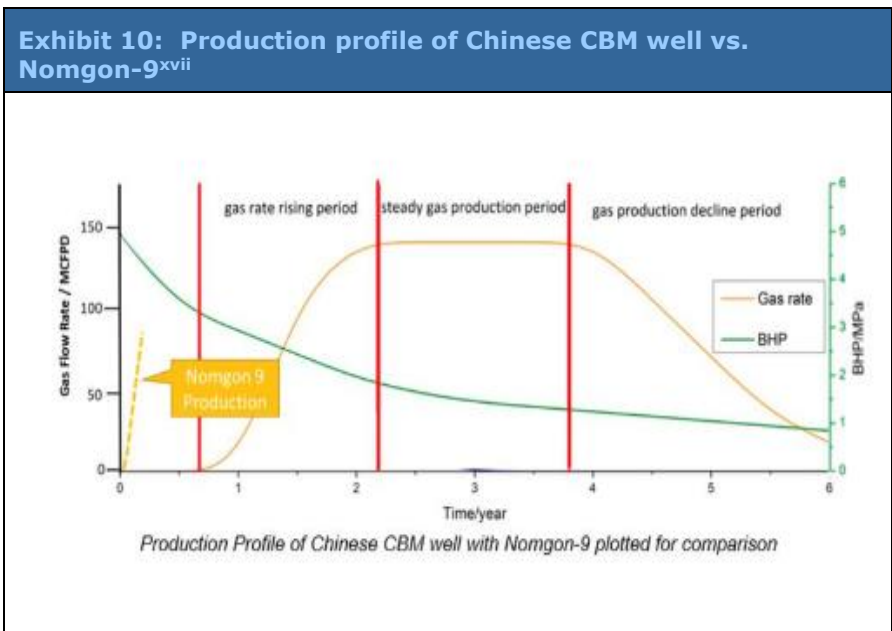
In CY 2023, the drilling operations were carried out in collaboration with two Mongolian-owned drilling subcontractors. For the first time, local expertise was complemented by an international firm – Major Drilling – that drilled the wells for the Nomgon Pilot Project.

**Pathway to Commercialization**

Elixir Energy is actively exploring various commercialization options, considering the promising flow rates and favorable economic conditions. In CY 2024, the company plans to focus on moving these discovered resources into reserves.

Key factors that are crucial for commercialization include:

- Nomgon-9's production profile surpassing that of a major producing Chinese field in the south, demonstrating favorable performance.
- The high East Asian gas prices, driven by imports via boat and extensive pipelines, present an advantageous economic environment.
- Mongolia's significantly lower well costs, in comparison to countries like Australia, enhance the project's economic viability.



**2.2.3 Mongolian Green Hydrogen – Gobi H2 Project**

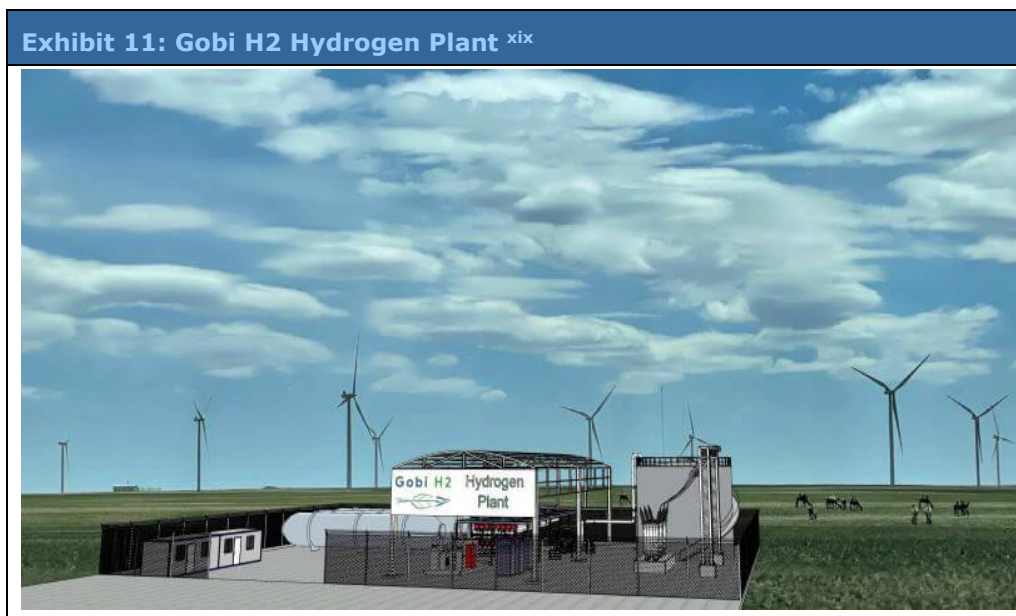
**Overview and History<sup>xviii</sup>**

Elixir acquired a Mongolian natural gas business through the acquisition of Golden Horde Ltd (GOH) in FY 2018. To explore new opportunities in Mongolia, the group established a new wholly-owned subsidiary, GOH Clean Energy LLC in February 2021 to pursue renewable energy ventures – green hydrogen and wind/solar.

To support the development of its green hydrogen production project, Elixir started the Gobi H2 project, in which hydrogen can be produced from renewable electrical energy sources. This Project is also situated in the Gobi region of Mongolia and is being jointly advanced by Elixir and the Japanese firm Terras Energy (an 85% owned subsidiary of Toyota Tsusho Corp). Initially, Elixir signed a MOU with the Japanese company SB Energy (owned by SoftBank). SoftBank subsequently sold an 85% interest to Toyota Tsusho Corporation in 2023. Toyota Tsusho Group is one of Japan’s largest renewable power generators, with 4,502 MW of wind and solar capacity, and is the 100 % owner of Eurus Energy, a global renewable energy company.

Elixir's pre-FID 50 MW solar project, named Solar Ilch, is also situated in the South Gobi region. It can be developed either as part of the Gobi H2 project or independently, serving as a renewable energy source for the Mongolian grid or sizable local mining operations, such as Rio's Oyu Tolgoi mine.

Leveraging Elixir's extensive experience in Mongolia's energy sector and stakeholder engagement, including various government levels, communities, and customers, provides a robust foundation for the Gobi H2 project. Green hydrogen infrastructure projects in neighboring China – including the development of a regional hydrogen pipeline transmission network – can ultimately be expanded north to capture the benefits of the Gobi's exceptional renewable resources.



### Renewable Resource Measurements

In FY 2023, Elixir obtained a PFS from the global consulting firm AECOM, to give the parties confidence to advance the project. Elixir and its partner, Terras Energy, have reliable access to high-quality renewable energy data in the Gobi region. They have made estimations regarding the combined capacity factor of the available solar and wind resources for the project.

Exhibit 12: Resource Measurement <sup>xx</sup>				
	Gobi Mongolia	Ordos China	Pibara Western Australia	H2 Magallanes Chile
Elevation (m)	1,121	1,462	9	37
Average temperature (° C)	8.5	7.4	26.4	5.3
Solar resource (W / m <sup>2</sup> )	203	174	228	164
Wind resource (W / m <sup>2</sup> )	347	154	180	1067
Solar utilization (%)	25	23	24	21
Wind "	64	31	27	76
Combined "	46	28	26	46
Solar peak capacity (MWDC)	75	108	142	91
Wind peak capacity (MWAC)	87	246	375	76
Electrolyzer peak cap. (MW)	73	98	132	75
<b>Electrolyzer util. (%)</b>	<b>85</b>	<b>64</b>	<b>48</b>	<b>83</b>

## Emerging Regional Hydrogen Infrastructure

The Gobi H2 location project provides ready access to rapidly growing Chinese H2 markets. Elixir commissioned a study from global energy consultants Rystad Energy, which concluded that the scale of ramp-up in Chinese H2 demand would likely open up imports from beneficial production sites like Elixir's. Additionally, regional H2 transmission infrastructure is already emerging with Sinopec's announcement in 2023 of a 400 km H2 pipeline in Inner Mongolia.

Elixir has identified seven requirements for the success of its hydrogen project, which include:

- *High-quality renewable resources:* the Gobi region boasts top-tier global renewable resources, making it an excellent fit for the project.
- *Costs of renewable energy installations:* The project benefits from favorable proximity to manufacturers in China and leverages the purchasing power of Terras.
- *Green certification:* Gobi H2 aligns with emerging global, including Chinese, standards for green H2 certification.
- *Proximity to market:* Positioned optimally, the project is well-suited to cater to the projected Chinese import requirements, being in a strategically advantageous immediately proximate location.
- *Operational skills:* Leveraging Terras' existing windfarm expertise in the Gobi and Elixir's proficiency in stakeholder engagement in the region ensures operational competence.
- *Access to capital:* Gobi H2 is well-advanced in engaging International Financial Institutions (IFIs) in Mongolia for project finance, ensuring access to necessary capital.
- *Scalability:* With abundant renewable resources in the Gobi, the project has the potential for significant scalability. This aligns with the long-term demand in China under its ambitious net-zero plans.

If Elixir manages to commercialize its Gobi H2 project, there could be significant upside potential for its shareholders. However, given its capital-intensive nature, regulatory requirements and the extensive time it takes to monetize, the project is currently not a focus area for the company.

## 2.3 Milestones

Exhibit 13: Company Milestones	
Year/Period	Events
2004	<ul style="list-style-type: none"> <li>• Listed on ASX as Elixir Petroleum (ASX: EXR) on July 19 through an AUD 3.3 mn initial public offering (IPO).</li> <li>• Raised AUD 2.75 mn in placement from UK-based institutional investors.</li> <li>• Opened a new office in London to manage the growing North Sea asset portfolio.</li> <li>• Acquired Hunter Petroleum Limited to acquire 100% interest in Hunter's North Sea block.</li> <li>• Appointed Mr. Angus MacAskill and Mr. Lain Knott as executive directors (EDs) of business development and exploration, respectively.</li> </ul>
2005	<ul style="list-style-type: none"> <li>• Listed on the Alternative Investment Market (AIM) as ELP on May 16 to raise AUD 16.3 mn.</li> <li>• Secured six new exploration licenses, expanding the company's North Sea portfolio.</li> </ul>
2006	<ul style="list-style-type: none"> <li>• Raised an additional AUD 2.6 mn in investor placement of 6.5 mn shares.</li> </ul>
2007	<ul style="list-style-type: none"> <li>• Announced the merger with Gawler Resource Limited (ASX:GRL) for a consideration of an 11.4% premium to GRL's shareholders on volume-weighted average price.</li> </ul>
2008	<ul style="list-style-type: none"> <li>• Raised capital of AUD 14.5 mn consisting of placement and underwritten entitlements.</li> </ul>
2009	<ul style="list-style-type: none"> <li>• Announced the cancellation of the company's shares on AIM due to the low volume of trading in AIM.</li> <li>• Sold the subsidiary Elixir Petroleum (UK) Limited (EP(UK)) to Prontinal Limited (Prontinal).</li> </ul>

2010	<ul style="list-style-type: none"> <li>Acquired the entire share capital of East Paris Petroleum Development Limited (EPPDL), the 100% interest holder and operator of Moselle Permit.</li> </ul>
2011	<ul style="list-style-type: none"> <li>Found significant conventional and non-conventional hydrocarbon potential in the Moselle Permit.</li> <li>Raised additional capital of AUD 1.1 mn to fund working capital and growth activities.</li> </ul>
2012	<ul style="list-style-type: none"> <li>New Standard Energy Limited (New Standard) acquired a 15% equity stake in Elixir for AUD 2.25 mn.</li> </ul>
2013	<ul style="list-style-type: none"> <li>Raised capital of AUD 1.85 mn through non-renounceable entitlements issue.</li> <li>New Standard made an additional investment of AUD 1 mn, increasing its stake to 28.2%.</li> </ul>
2014	<ul style="list-style-type: none"> <li>Announced share purchase plan (SPP), raising over AUD 3 mn for the acquisition of Project Petra in Colorado.</li> </ul>
2015	<ul style="list-style-type: none"> <li>Sundance Energy Australia Limited (ASX:SEA) acquired 11.4% of the equity stake in Elixir as its major shareholder.</li> <li>Raised AUD .26 mn in small placement and announced SPP of AUD .31 mn to fund the acquisition of 57.7% of working interest in Cliff Head Oil Field from AWE Limited (AWE).</li> </ul>
2016	<ul style="list-style-type: none"> <li>Announced the falling through of Elixir's proposed acquisition of 57.7% WI of Cliff Head Oil Field from AWE.</li> <li>Raised total commitment of AUD 2.23 mn through a non-renounceable entitlement issue of AUD 1.8 mn and commitments of AUD .2 mn and AUD .21 mn, utilizing the remaining 25% of placement capacity.</li> </ul>
2017	<ul style="list-style-type: none"> <li>Announced the commencement of drilling on the Rodwell 14-31 oil exploration well at Petra Project in Washington County, Colorado.</li> <li>Completed renewal of Moselle Permit second exploration period to January 20, 2019.</li> </ul>
2018	<ul style="list-style-type: none"> <li>Recommended exploration activities and farmout efforts for the Moselle Permit and application for a three-year extension of the second exploration period to January 20, 2022.</li> <li>Completed the acquisition of GOH for 79 mn Elixir shares. GOH owned 100% WI in Nomgon IX Coal-Based Methane (CBM) PSC (Nomgon CBM Project).</li> <li>Appointed Mr. Neil Young as Chief Executive Officer (CEO) and MD of Elixir.</li> <li>Announced the acquisition of 35.4K acres of prospective leases in Alaska.</li> <li>Announced a bonus issue of new shares for existing shareholders on a 1 for 6 basis.</li> </ul>
2019	<ul style="list-style-type: none"> <li>Appointed Mr. B. Byambasalkhan as a Mongolia-based strategic and financial advisor.</li> <li>Completed the sale of its subsidiary, Emerald House LLC, to Entek Energy Limited (ASX: ETE) for a consideration of 185 mn convertible preference shares and USD 0.85 mn in cash to Elixir.</li> <li>Appointed Mr. Richard Cottee as the non-executive chairman after the retirement of the incumbent chairman, Mr. Ray Barnes.</li> <li>Appointed Mr. Stephen Kelemen as the non-executive director.</li> <li>Raised AUD 3.6 mn through the placement of new shares to pursue growth activities.</li> <li>Changed the company name to Elixir Energy Limited (ASX:EXR).</li> <li>Commenced drilling at BO-CH-1 chip hole at Nomgon CBM Project.</li> </ul>
2020	<ul style="list-style-type: none"> <li>Raised AUD 1.65 mn in the placement of shares to qualified investors and AUD 1.65 mn in SPP.</li> <li>Found fully gas-saturated coal in key laboratory adsorption testing results of Nomgon-1.</li> <li>Mr. B. Byambasalkhan resigned as a strategic and financial advisor.</li> <li>Increased unrisks and risks prospective resources at Nomgon CBM Project according to an audit by ERCE.</li> <li>Appointed Ms. Anna Sloboda as a non-executive director.</li> </ul>

2021	<ul style="list-style-type: none"> <li>Executed an MoU with Mongolia’s Ministry of Energy (MME) to provide a framework to develop the gas-fired project in the South Gobi region.</li> <li>Entered an agreement with Clarke Energy to provide feasibility studies for a gas-fired project.</li> <li>Raised AUD 10 mn through the placement of shares to qualified investors and AUD 16.6 mn from SPP.</li> <li>Commenced a complementary hydrogen project in Mongolia.</li> <li>Entered an MoU with MME for the establishment of a new hydrogen industry in Mongolia.</li> <li>Acquired Solar ICh LLC through GOH subsidiary LLC for rights in a 50MW solar project in South Gobi.</li> <li>Drilled 17 exploration and appraisal wells with 65% intersected coal in CBM window.</li> </ul>
2022	<ul style="list-style-type: none"> <li>Entered an MoU with SB Energy Corp (SBE) for a green hydrogen project in Mongolia.</li> <li>Acquired 100% interest in petroleum permit ATP 2044 in Queensland Gas Asset (Grandis Gas Project) through SPV EnergyCapture Pty Ltd.</li> <li>Commenced pilot production program in Nomgon CBM Project with the spud of Nomgon-8 well.</li> <li>Sample from pilot production program at Nomgon CBM Project yielded 99% methane content.</li> </ul>
2023	<ul style="list-style-type: none"> <li>Combined production from Nomgon-8 and Nomgon-9 during the pilot program reached 200K standard cubic feet per day (scfcpd) of gas for the first time.</li> <li>Raised capital of AUD 7 mn through the placement of shares to qualified investors and AUD 1.7 mn through SPP for the Grandis gas project, Nomgan and Gobi H2 project.</li> <li>Entered into an information-sharing agreement with Origin Energy (Origin).</li> <li>Raised placement of AUD 6.5 mn (before costs) through the issue of new shares to institutional and sophisticated investors for the Daydream-2 project.</li> </ul>
2024	<ul style="list-style-type: none"> <li>Identified clay coating (rims) around individual quartz grains from petrographical analysis of cuttings samples of sand interval-Sand 3 from Daydream-2</li> <li>Desorption analysis conducted on coal cuttings from Daydream-2 resulted in significant increase in the prospective resources in ATP 2044 to 3.6 Tcf (2U)</li> </ul>

## 2.4 Company Premiums<sup>xxii</sup>

- a) Access to excellent regional infrastructure:** The company enjoys a strategic advantage with its projects situated in regions boasting excellent infrastructure. The Grandis Gas Project, positioned near the Wallumbilla gas hub in Queensland, offers convenient access to established gas transmission infrastructure, connecting both domestic and international markets. The accessibility of well locations via road adds to the overall infrastructure benefit. Furthermore, the Nomgon Project, located along the Mongolia-China border, capitalizes on the exceptional infrastructure, including power lines, roads, and a rail network.
- b) High potential exploration/appraisal zones:** Elixir’s gas projects operate in regions with substantial potential for proving up valuable resources. Elixir’s Grandis Project is situated in the Taroom Trough, a deep Permian gas-rich section within the Bowen Basin. Notably, this area underwent extensive drilling efforts by BG Group (now Shell) around a decade ago. Shell is now back drilling in the play again in 2024. Leveraging the historical significance of the Taroom Trough as a well-established oil and gas province, the project benefits significantly from the expansion of contingent resources, currently 395 bcf, enhancing its overall potential. Additionally, the Nomgon project spans an expansive license area of approx. 30,000 km<sup>2</sup>, estimating a risked recoverable prospective resource of 14.6 tcf. With an initial 2C contingent resource assessment of 24 bcf, the company expects contingent resources to grow materially on the back of further work in the expansive license area.
- c) Government support:** Elixir has obtained significant backing from the Australian government for its Daydream-2 well, particularly in the realm of R&D initiatives. A substantial contribution of 48.5% of the total costs has been promised by the government through the R&D Tax Incentive mechanism. This support plays a crucial role in facilitating Elixir’s efforts to cover the expenses associated with drilling the well and reduces the need to raise funds by equity dilution.
- d) Access to capital:** The company successfully raised AUD 15.2 mn in CY 2023 from qualified institutional investors. This significant investment reflects strong support for the company’s gas exploration endeavors. Additionally, a non-

dilutive source of finance was secured through an information sharing contract with Origin. Under this agreement, Origin has paid AUD 1 mn, along with incremental costs, for gathering crucial data related to Origin's greenhouse gas license. This further showcases the company's ability to explore innovative financial opportunities and highlights investor confidence in its gas exploration projects.

## 2.5 Company Risks<sup>xxiii</sup>

- a) Exploration risk:** There is a level of uncertainty associated with the estimation of contingent resources in the gas sector. As contingent resources are extracted and processed, the quantity of gas and its quality must be regarded solely as approximations, and there is no guarantee that the projected contingent resources will be achieved. Consequently, there is a possibility that the company could potentially opt out of the project if the resources indicate insufficient economic viability, resulting in loss of drilling cost. The inherent uncertainty in estimating contingent resources underscores the need for careful consideration and ongoing evaluation to manage the associated risks effectively.
- b) Funding risk:** As Elixir is an early-stage gas exploration/appraisal company, the inherent nature of operations often necessitates securing additional funds to sustain future activities. The substantial costs associated with drilling wells emphasize the importance of securing funding. An inability to secure funding can adversely impact the company's ability to conduct crucial exploration and appraisal initiatives, potentially jeopardizing its overall operational sustainability and growth prospects. To mitigate funding risk, the company can further explore non-equity funding alternatives in which they can exchange crucial data derived from drilling the wells for funds.
- c) Regulatory risk:** The governments of Mongolia and Australia may intervene with key players to ensure smooth exploration and appraisal activities. Loss of licenses due to non-compliance with permit obligations or government obstruction to progressing exploration and development activities can heavily impact the company's operations. Therefore, the company needs to carefully manage regulatory challenges to minimize the impact of government interventions and ensure the integrity of its licenses and ongoing operational success.
- d) Fluctuation in gas prices:** Gas prices can be highly volatile and are influenced by factors such as geopolitical events, supply and demand dynamics, and changes in global economic conditions. Fluctuations in the availability of gas resources, whether due to geopolitical disruptions or changes in extraction capabilities, directly affect gas prices. Constant fluctuations in gas prices can impact a company's commercialization plans.

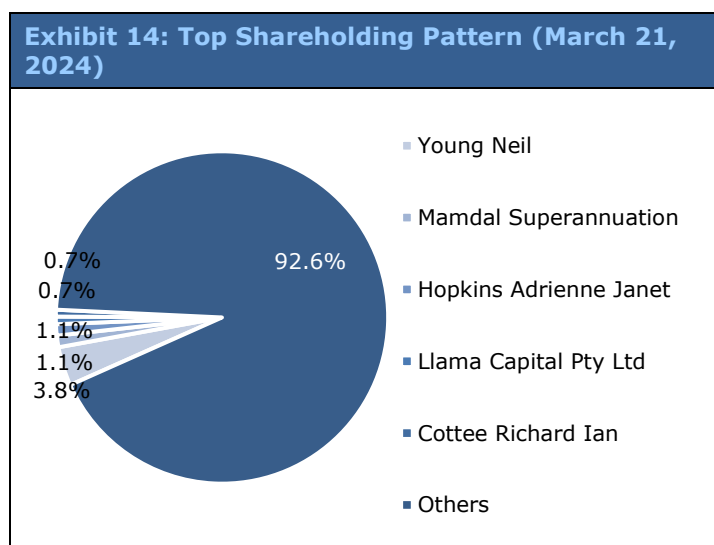
## 2.6 Financials

During H1 2024, Elixir recorded a net loss from continuing operations after tax of AUD 397k, lower compared to a net loss of AUD 1.1 mn during H1 2023. This was mainly due to the data sharing income of AUD 1mn received from Origin for the advancement of Daydream 2 well of Project Grandis. At the end of H1 2024, Elixir's cash and cash equivalents stood at AUD 11.2 mn, up from AUD 9.55 mn at the end of FY 2023. The company does not have any debt on its books, while its lease liabilities stood at AUD 122k at the end of December 2023. EXR raised ~AUD 14.2 mn as proceeds from share issue during H1 2024.



## 2.7 Shareholding Pattern<sup>xxiv</sup>

The company had 1,132,650,295 shares of common stock issued and outstanding on March 21, 2024. The shareholding pattern is as follows:



**Exhibit 15: Top Shareholding Pattern (March 21, 2024)**

Shareholders	Shares outstanding
Young Neil	42,989,367
Mamdal Superannuation	12,752,240
Hopkins Adrienne Janet	12,442,000
Llama Capital Pty Ltd	8,301,541
Cottee Richard Ian	7,500,000
Others	1,032,908,612
<b>Total</b>	<b>1,132,650,295</b>

## 2.8 Listing and Contact Details

Elixir Energy Limited is publicly listed on the Australian Stock Exchange (ASX) and is traded under the symbol 'EXR'.

### Company Contacts

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### 3. News<sup>xxv</sup>

- **Significant increase in prospective resources:** On February 21, 2024, Elixir announced that it acquired coal desorption samples from drill cuttings that were placed in traditional CBM desorption tubes and analyzed for gas content. The analysis identified that the samples had high gas contents, much higher than prior expectations. This has resulted in significant increase in prospective resources in ATP 2044 to 3.6 tcf (2U). This prospective coal resource will be a key target in the upcoming stimulation and testing program, which will commence in mid-April 2024.
- **Daydream-2 laboratory results:** On February 6, 2024, Elixir announced that petrographical analysis of cutting samples from the sand interval had identified clay coatings (rims) around individual quartz grains. These clay coatings (rims) assist in the preservation of primary porosity at greater depths by reducing the post-depositional cementation. Additionally, this is the first time these clay rims have been identified in Queensland at depths below 4,200 m. Therefore, this discovery has great significance for the Grandis Gas Project. Further, the company also announced that Diagnostic Fracture Injection Testing and stimulation simulation of the deep permeable zone, in addition to the overlying coals and tighter sand zones, would commence shortly.
- **Permeable sands intersected at Daydream-2:** On January 18, 2024, the company announced that petrophysical log information intersected the permeable sands between 4,200 m and 4,220 m, from which gas flowed without stimulation. Further, petrophysical log analysis and the recovery of gas had shown the existence of three sandstone reservoirs in this section that were gas-saturated, and the gross thickness of these sands extended over 12 meters. These sands would now be included in Elixir's extensive and novel stimulation testing regime.
- **Grandis Gas Project moves to stimulation and testing phase:** On December 20, 2023, the company announced the commencement of the stimulation and testing phase of the Grandis Gas Project, following positive drilling results at Daydream-2. The company also entered into an agreement with Halliburton Company for Halliburton to be the lead contractor in the upcoming stimulation program planned for the Daydream-2 appraisal well in 2024. Elixir and Halliburton would also engage in research and development (R&D) aspects, focusing on stimulation outcomes at Daydream-2.
- **Logging analysis at Daydream-2 interprets 154 meters of net gas pay:** On December 14, 2023, the company announced that the logging program had interpreted 154 m of net gas pay comprising net gas pay of 78 m at Kianga Formation and 76 m at Back Creek Group. Various laboratory analyses were underway and their results would assist, optimize and de-risk the planning for upcoming stages of the project.
- **Share placement for Daydream-2:** On December 13, 2023, the company announced the share placement of AUD 6.5 mn from institutional and sophisticated investors for multiple-stage stimulation and flow testing at the Daydream-2 well.
- **Drilling at Daydream-2 intersected Kianga Formation:** On November 30, 2023, the company announced that drilling at Daydream-2 intersected the target formation at 3,694 meters, several days ahead of schedule. Upon the intersection, the gas increased from 20 units to 777 units, representing a 38-times increase. The well would be drilled to its planned depth of 4,200 meters, after which wireline logs would be run and a petrophysical evaluation would be undertaken.
- **Daydream-2 well drilling update:** On November 23, 2023, the company announced that the intermediate hole section of the Daydream-2 appraisal well had been drilled to 2,915 meters. Elixir also obtained wireline logs for Origin (at its cost) as per the information sharing agreement with Origin.
- **Daydream-2 well drilling update:** On November 16, 2023, the company announced that the top-hole section of the Daydream-2 appraisal well had been drilled to 856 meters and cased and cemented. The intermediate hole section would be drilled to 2,950 meters and logs would be obtained as per the information-sharing agreement with Origin.
- **Daydream-2 well spudded:** On November 10, 2023, the company announced that the Daydream-2 well had spudded. Daydream-2 was located around 5 km from the Daydream-1 well drilled by BG Group (Shell), which intersected a thick gas-bearing column in the Permian section. It would take around a month for the well to be drilled to its planned depth of 4,200 meters.
- **Information sharing agreement with Origin:** On November 6, 2023, the company announced that it entered information sharing agreements with Origin for the Grandis Gas Project. As per the agreement, Elixir would provide Origin with information on carbon capture and storage (CCS) in the area. Origin would compensate Elixir by paying incremental costs in gathering the information and paying non-dilutive funding of AUD 1 mn for Daydream-2.
- **Update on Grandis Gas Project:** On November 2, 2023, EXR announced that contracted rig SLR 185 had been released by its current operator. The drilling unit and camp were being mobilized and, following the acceptance testing, the well would be spud early next week.

- **Update on Grandis Gas Project:** On October 24, 2023, Elixir completed construction of the well pad and upgradation of pre-existing access roads for Daydream-2. The drilling of an on-site water well had also been completed, allowing Daydream-2's surface conductor to be installed in the concrete cellar at the well pad before the arrival of the rig, saving 2-3 days of rig time and associated spread rate costs.
- **Closure of a round of SPP:** On October 10, 2023, the company announced that it received SPP applications worth AUD 1.7 mn, taking the total amount raised in placement and SPP to AUD 8.7 mn. The placement would be used for completion, stimulation and flow testing of the Daydream-2 appraisal well and for ongoing pilot, appraisal and exploration drilling programs in the Nomgon CBM Project and Gobi H2 project in Mongolia.
- **Research & Development (R&D) lodged and funding arrangement in place:** On October 3, 2023, the company announced it had lodged an R&D rebate of AUD 0.4 mn and entered a term sheet with Radium Capital that provided a plain-vanilla debt facility against this rebate.
- **Update on Nomgon CBM Project:** On September 27, 2023, Elixir announced that Nomgon-10, an additional pilot well, was successfully drilled and would be connected to the Nomgon pilot production plant. The Nomgon-8 and 9 pilot wells would remain suspended during the monitoring of pressure communication between the wells. Elixir also performed a Drill Stem Test (DST) over 269-282 meters on the Yangir West-2 well that yielded permeability of 2 mD (milliDarcies), showing CBM discovery according to Petroleum Resources Management System (PRMS) guidelines. Big Slope West-1 was successfully drilled to a depth of 620 meters and intersected over 27 meters of coal.
- **Update on preparations of Daydream-2 well spud:** On September 21, 2023, the company announced that preparations for Daydream-2 well sup were underway with the construction of the well pad and upgrade of access roads. Drilling of water wells that would provide for water needs for drilling and stimulation programs was also in progress.
- **SPP launched:** On September 14, 2023, Elixir launched SPP to raise up to AUD 3.5 mn. The SPP would give eligible shareholders an opportunity to apply for up to \$30,000 worth of new shares (SPP shares) at an issue price of 7 cents per SPP share. The placement would be used for the drilling, completion, stimulation and flow testing of the Daydream-2 appraisal well as part of the Grandis Gas Project, the ongoing Nomgon Project pilot and appraisal and exploration drilling programs and expenditures in relation to Elixir's Gobi H2 Project in Mongolia.
- **Data sharing agreement with Santos Group Company (Santos):** On September 13, 2023, the company announced that it entered into a data sharing agreement with Santos about the Grandis Gas Project. The agreement would allow both companies to exchange technical data on planned wells in ATP 2044 (owned by Elixir) and ATP 2056 (owned by Santos) exploration permits located in the Taroom Trough.
- **Discovery of CBM at Nomgon CBM Project:** On September 7, 2023, the company announced that coring, desorption and testing at Big Slope coal deposits had found CBM gas under the Petroleum Resources Management System (PRMS) guidelines. Big Slope Shallow-1 was drilled 321 meters deep and intersected 37 meters of coal, and measured permeability of 0.8 mD. The company also announced that it had spudded Nomgon-10, an additional pilot well that would be connected to the Nomgon pilot production plant.
- **Placement and SPP to fund Daydream-2 and Nomgon:** On August 29, 2023, Elixir announced it had received a share placement of AUD 7 mn from institutional and sophisticated investors and it would offer SPP to existing shareholders with target gross proceeds of AUD 3.5 mn. The placement would be used for completion, stimulation and flow testing of the Daydream-2 appraisal well and for ongoing pilot, appraisal and exploration drilling programs in the Nomgon CBM and Gobi H2 project in Mongolia.
- **Update on Nomgon CBM project:** On August 17, 2023, the company announced that an additional pilot well, Nomgon-10, would be spud at the end of the month. Drilling of Big Slope -7 was completed. The well was drilled to a depth of 666 meters and intersected 35 meters of coal and 7 meters of silty coal. Pilot plants for the Nomgon pilot production project returned to managed gas production.
- **Update on expected spud date Daydream-2 well:** On August 16, 2023, Elixir announced the expected drill date of the Daydream-2 well as the last week of October 2023. The company had contracted with oil-field services company Schlumberger (SLB) for the use of the SLR 185 to drill the Daydream-2 well. SLB notified that the rig would be mobilized for drilling by mid-October.
- **Update on Nomgon CBM Project:** On July 17, 2023, the company announced that the Big Slope-7 well, spudded recently, intersected gaseous coal and the well would be undergoing Injection Fall Off Testing (IFOT) to measure permeability in this section. Additionally, the Bluebill-1 well also intersected gaseous coal, with drilling continuing.

#### 4. Management and Governance<sup>xxvi</sup>

Exhibit 16: Management and Governance		
Name	Position	Experience
Neil Young	Managing Director and Chief Executive Officer	<ul style="list-style-type: none"> <li>Nearly 20 years of experience in the upstream and downstream parts of the energy sector.</li> <li>Held senior roles in EY, Tarong Energy, Santos, co-founded GOH and developed ventures in Kazakhstan, Japan and the US.</li> <li>Qualifications include MA (Honors) in Economics/Politics, University of Edinburgh.</li> </ul>
Richard Cottee	Non-Executive Chairman	<ul style="list-style-type: none"> <li>Around 40 years of experience in the energy sector.</li> <li>Held senior roles in CS Energy, NRG Europe, Central Petroleum, Nexus Energy, and Queensland Gas Company (QGC).</li> <li>Appointed in April 2019 as Non-Executive Chairman of the company.</li> </ul>
Stephen Kelemen	Non-Executive Director	<ul style="list-style-type: none"> <li>Worked at Santos, leading its coal seam gas team, for over 38 years in multiple technical and leadership roles.</li> <li>Serves as a non-executive director of the Boards of Galilee Energy Ltd (ASX: GLL) and Advent Energy Ltd and is an Adjunct Professor at the University of Queensland.</li> </ul>
Anna Sloboda	Non-Executive Director	<ul style="list-style-type: none"> <li>Over 20 years of experience in corporate finance and developing junior resource companies.</li> <li>Acts as an executive director of Red Citadel Resources Pty Ltd and an Advisory Committee Member of the Western Australian Museum.</li> <li>Co-founder of Trans-Tasman Resources Ltd, with experience in dealing with Chinese off-takers and partners.</li> </ul>
Victoria Allinson	Company Secretary & Chief Financial Officer	<ul style="list-style-type: none"> <li>More than 30 years of experience in senior accounting and auditing positions.</li> <li>Held senior roles in several listed companies, including Kiland Ltd, Safety Medical Products Ltd, Marmota Ltd, Centrex Metals Ltd, Adelaide Energy Ltd, Enterprise Energy NL and Island Sky Australia Ltd.</li> <li>Fellow of The Association of Certified Chartered Accountants, Governance Institute of Australia and NSX Nominated Advisor.</li> </ul>

## 5. Industry Overview

### 5.1 The Natural Gas Market<sup>xxvii</sup>

Natural gas, primarily composed of methane (CH<sub>4</sub>), originates from organic matter that is millions of years old and buried deep underground. Intense pressure and heat drive chemical reactions within this organic matter, breaking down complex molecules into thermogenic methane – the foundation of natural gas deposits. These deposits often share space with oil, generally with shallower layers holding more oil and deeper ones favoring gas.

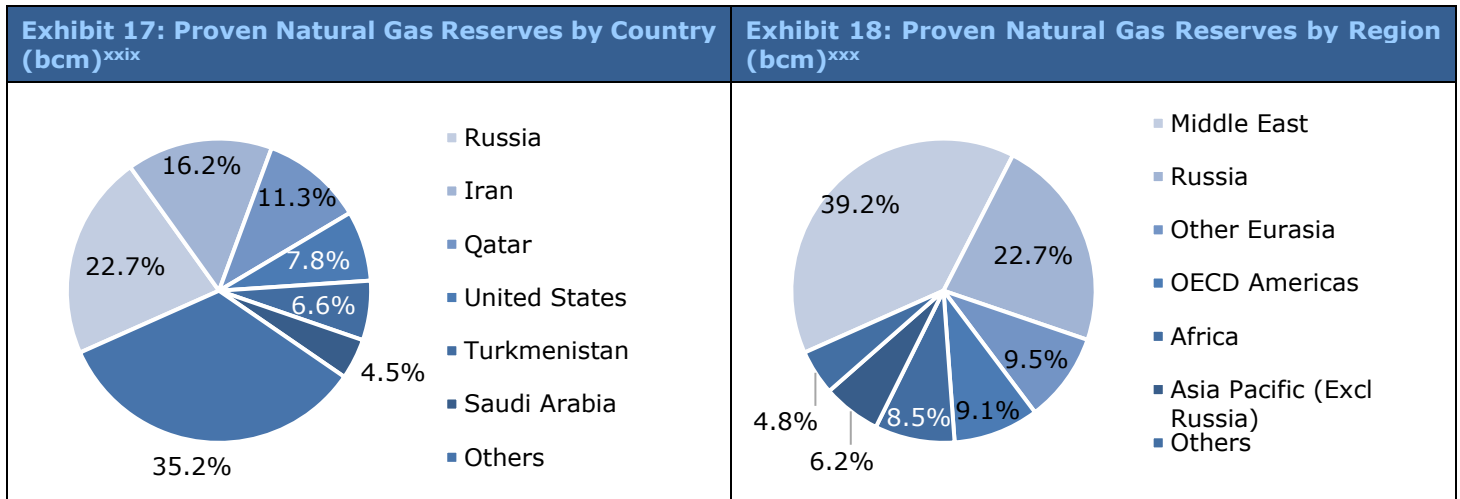
World natural gas production is poised for steady growth, slated to rise by 36% from 4,025 bcm in 2021 to 5,460 bcm by 2050. This translates to an average annual increase of 1.1%. While North America, currently the top producer, will retain its crown, its share will dip from 28% to 26% by 2050 due to slower growth compared to other regions. The Middle East, however, will experience a surge, with production nearly doubling and its global share climbing to 22%, making it the second-largest gas producer.

This shift is driven by regional variations in growth projections. Africa and North America will contribute significantly, but the Middle East will witness the most dramatic rise, accounting for one-third of the total increase. This region's projected output jump of 520 bcm, reaching 1,190 bcm by 2050, reflects its vast potential and growing role in the global gas market.

The versatility of natural gas defines its importance. Beyond its use as a potent energy source for power generation, it thrives as a critical feedstock in the chemicals industry. Transportation typically occurs through extensive networks of pipelines, although liquefaction allows for international reach via tanker vessels. This liquified form is known as liquified natural gas or LNG. LNG is produced by cooling natural gas to -161°C, shrinking its volume to 1/600th.

### 5.2 Global Natural Gas Reserves<sup>xxviii</sup>

As of FY 2022, the world boasted proven natural gas reserves of 210,063 bcm. A noteworthy statistic arises from this figure: a mere three countries – Russia, Iran, and Qatar – hold approximately half of these reserves. This stark concentration highlights the geopolitical implications of natural gas distribution. Regionally, the Middle East dominates with 82,338 bcm, roughly 39% of the global total.

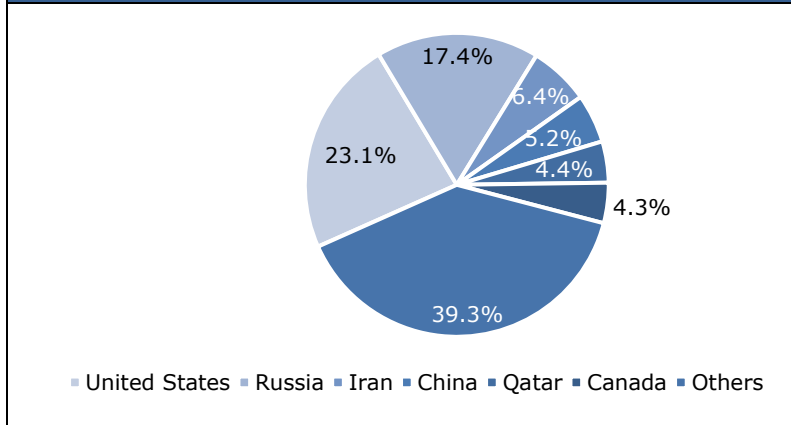


In comparison to the rest of the world, Australia holds 2,587 bcm, which is less than 2% of the total proven global reserves. Determining the potential of this natural gas resource hinges on the concept of proven reserves. This rigorously assessed measure, established through exploratory drilling and linked to known reservoirs, provides an estimate of recoverable volumes. The story of natural gas reserves since 1960 is one of the most remarkable growth stories, exceeding a tenfold increase and culminating in a record high of 210 trillion cubic meters in 2022. Notably, the Middle East emerges as the primary custodian of this resource, its abundant reserves shaping the global gas landscape.

### 5.3 Global Natural Gas Production<sup>xxxii</sup>

In FY 2021, world natural gas production reached 4,036.9 bcm, with the US maintaining its reign as the top producer since 2011. The US contributed a significant 23.1% to global output, followed by Russia (17.4%), Iran (6.4%), China (5.2%), Qatar (4.4%), Canada (4.3%), and Australia (3.6%, 147.2 bcm). An interesting point to note is China's impressive position as the fourth-largest producer despite holding only 1.5% of the world's proven gas reserves. This highlights the dynamism of the natural gas landscape and the potential for rapid production growth, even with seemingly limited reserves.

**Exhibit 19: Global Natural Gas Production in FY 2021 by Country (bcm)** <sup>xxxii</sup>



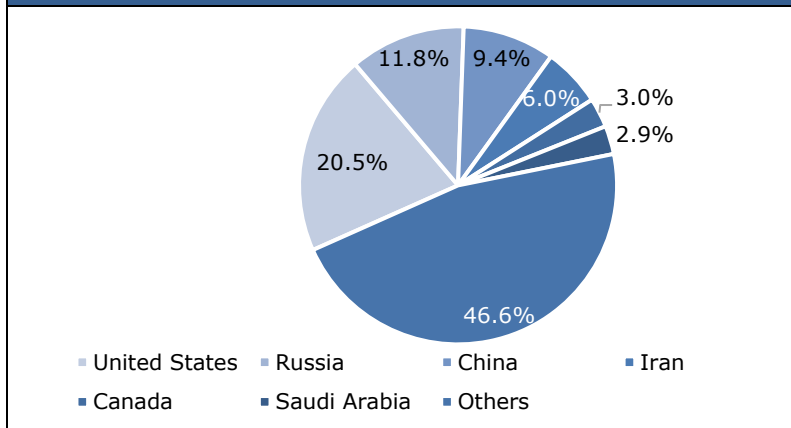
### 5.4 Global Natural Gas Consumption<sup>xxxiii</sup>

In FY 2021, world natural gas consumption mirrored production at 4,047.5 bcm, highlighting a near-perfect equilibrium between supply and demand. While the US held the crown for both production (23.1%) and consumption (20.5%), other major players emerged in both spheres. Russia consumed 11.8% of the global total, followed by China (9.4%), Iran (6.0%), Canada (3.0%), and Saudi Arabia (2.9%). Australia's consumption of natural gas stood at 39.4 bcm for 2021.

A striking contrast appears when comparing production and consumption figures for Qatar. Despite producing 4% of the world's gas, it consumed a mere 1%, effectively exporting a staggering four times its own consumption. This

underscores the crucial role of international trade in balancing regional energy needs and optimizing resource utilization.

**Exhibit 20: Global Natural Gas Consumption in FY 2021 by Country (bcm)** <sup>xxxiv</sup>



### 5.5 Global Liquefied Natural Gas Trade<sup>xxxv</sup>

Transportation of natural gas occurs through a network of pipelines, and liquefaction (LNG) allows for international reach via tanker vessels. In 2021, out of total global imports of 516.2 bcm, China was the largest importer of LNG with 21.2% of the total. It was followed by Japan (19.6%), South Korea (12.4%), India (6.5%) and Taiwan (5.2%). Between 2011 to 2020, Japan was the largest importer of LNG. Until 2016, Japan imported more than 30% of all global LNG imports.

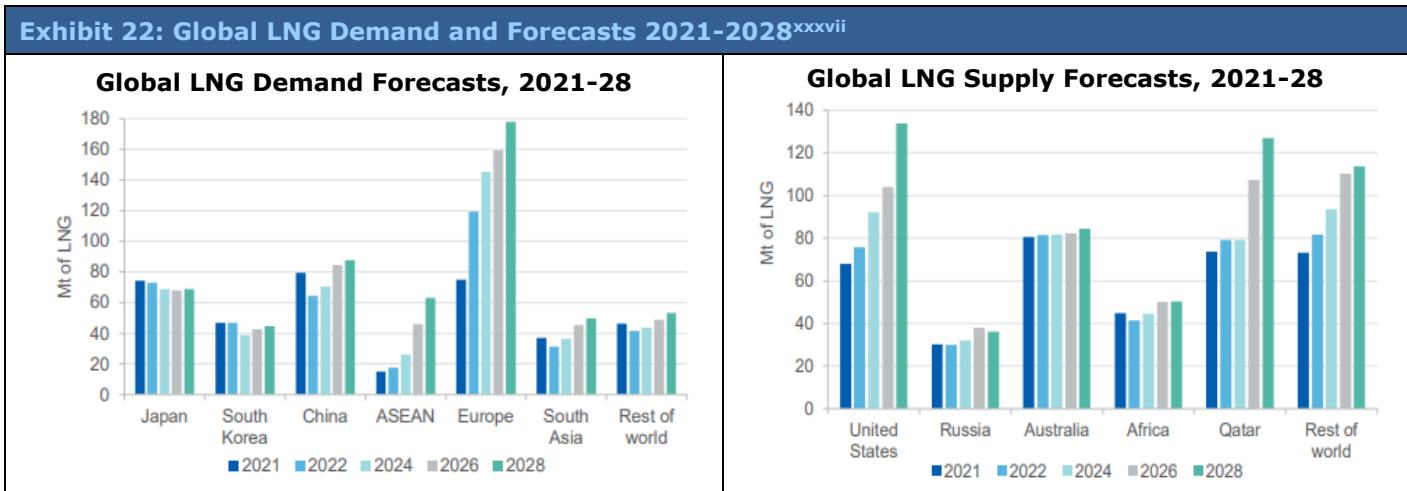
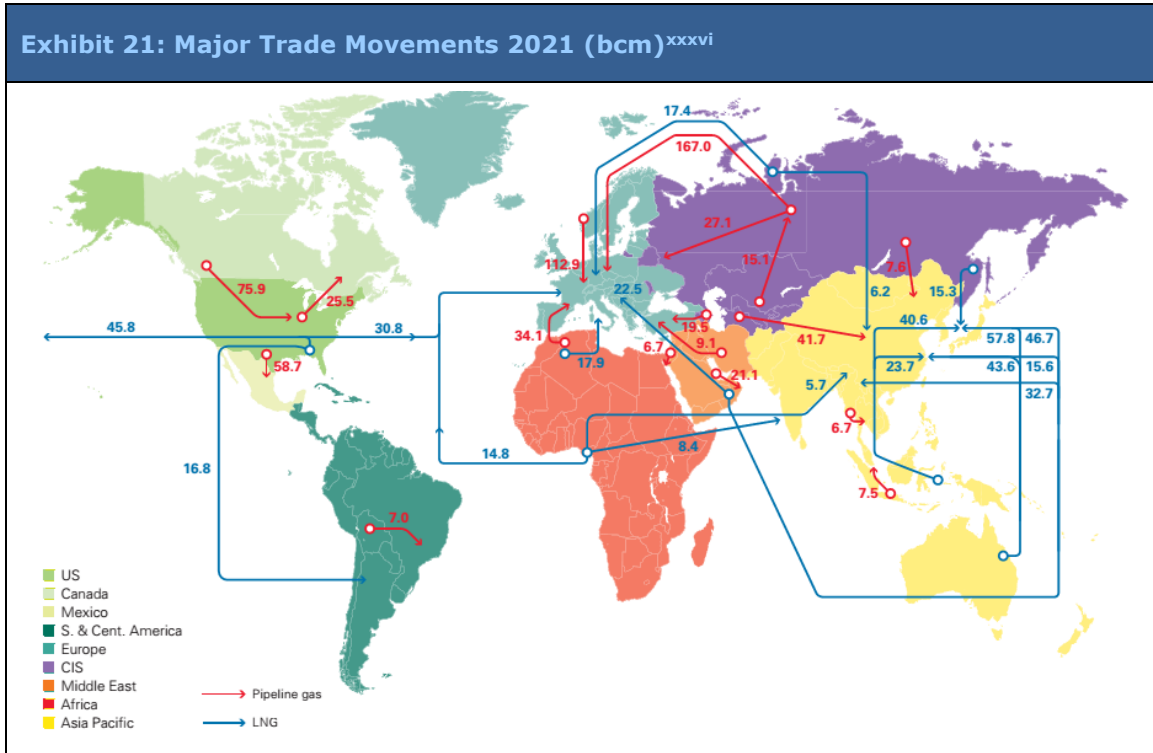
In 2021, the largest exporter of LNG globally was Australia, closely followed by Qatar. Global LNG exports in 2021 totaled 516.2 bcm. Historically, Qatar has been the largest exporter of LNG, and it was only in 2021 that Australia (108.1 bcm) marginally surpassed it (106.8 bcm). The US has

only been a major exporter of LNG since 2017. The top five exporters of LNG in 2021 were Australia, Qatar, the US (95.0 bcm), Russia (39.6 bcm), and Malaysia (33.5 bcm).

The global natural gas trade is expected to increase by 36% (almost one-third of current global gas demand) between 2021 and 2050, reaching 1,700 bcm. LNG trade could overtake long-distance pipeline trade by 2026, and is expected to more than double by 2050 to reach 850 Mt. Liquefaction capacity will top 1 billion tonnes per year by 2050, with utilization expected to reach 80%.

The global energy crisis, fueled by the post-pandemic rebound and the Russia-Ukraine conflict, has thrust Europe's energy trilemma of security, sustainability, and affordability into stark relief. Disrupted pipeline exports from Russia have forced a policy pivot, with the REPowerEU plan aiming to slash gas demand and phase out Russian gas by 2027.

LNG has become the savior, with surging imports, expanded regasification capacity, and eased infrastructure bottlenecks. This crisis has not only benefited global LNG producers and ignited new projects worldwide, but also transformed the market at its core, prompting a rapid shift towards a more diversified and future-proof energy landscape.



**5.5.1 Australia’s position in the global LNG trade market <sup>xxxviii</sup>**

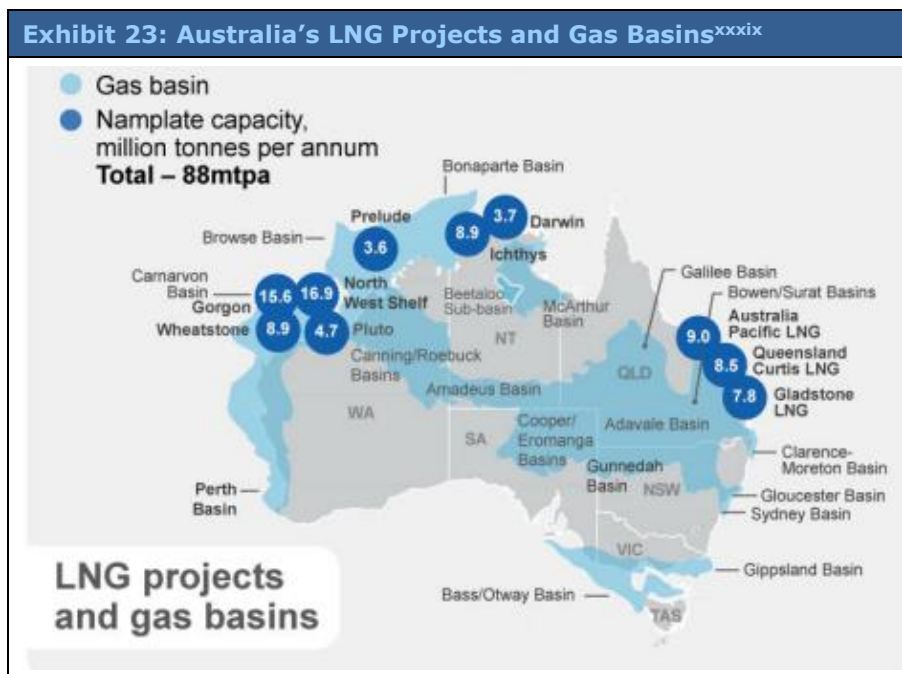
Australia, the former widely recognized leader, might see a change in its position. While it currently holds the top spot, ambitious expansion plans in Qatar and the US threaten to outpace its output. Unlike these competitors, Australia’s growth is predicted to remain consistent at around 88 Mtpa, due to a combination of factors. The North-West Shelf, the country’s largest venture, has been pumping since 1989 and is facing a natural decline in its feed gas. Meanwhile, new project development remains slow, except for backfilling ventures like Santos’ Barossa and Woodside’s Scarborough

and Pluto Train 2. These projects primarily aim to extend the lifespan of existing facilities and backfill dwindling supply, offering minimal net growth. As a result, Australia's grip on the top exporter title is loosening, setting the stage for a shift in the global LNG landscape.

In FY 2022, Australia's LNG sector exported 82 Mt, valued at AUD 91 bn. Three out of four sales in this sector were long-term contracts. Australia is expected to achieve LNG export revenues of AUD 91 bn in the fiscal year 2022-23, driven by record-high global energy prices and a weaker Australian dollar. However, as global energy markets undergo restructuring, projections indicate a gradual decline in earnings (in real terms) to AUD 45 bn by the fiscal year 2027-28.

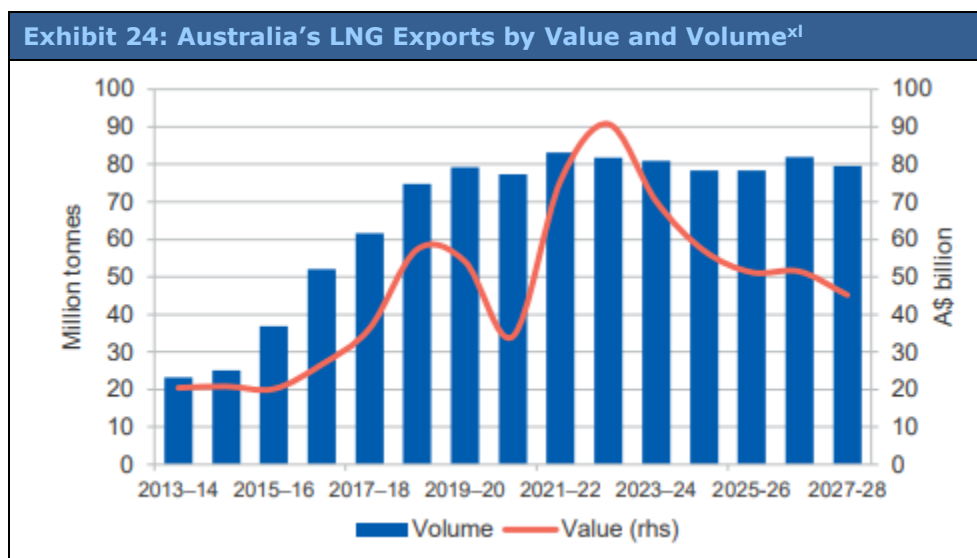
The surge in LNG prices following the Russian invasion of Ukraine has undergone a complete reversal. Forecasts suggest that spot prices for Asian LNG will average USD 21 per Metric Million British Thermal Unit (MMBtu) in 2023 and 2024 as global gas markets adjust to the reduction of Russian pipeline gas supply to Europe. Subsequently, prices are anticipated to ease to AUD 16/MMBtu after 2026, coinciding with the commencement of operations at new facilities in the United States and Qatar. Following a peak of 83 Mt in the fiscal year 2021-22, Australia's LNG export volumes are predicted to stabilize at 80 Mt. This stability is attributed to the output from Pluto LNG train two compensating for the decline in production from the Northwest Shelf.

The Taroom Trough is home to several major oil and gas companies and hosts material discovered and potential gas resources. The area is currently being explored by Shell, Santos, Omega and Elixir. Shell, currently drilling in this area, estimates that recoverable hydrocarbons in this reservoir across ATP 645 in the area covered by PCA 305, on an un-risked P50 basis, is 3.0 tcf sales gas and 252 MBOE (million barrels of oil equivalent) NGLs (natural gas liquids) and condensate. Multiple operators are investing substantially and experimenting with different approaches in search of proven reserves. This would help Australia bolster its production in the years to come and provide for regions with high expected demand, such as China, Europe and ASEAN countries.



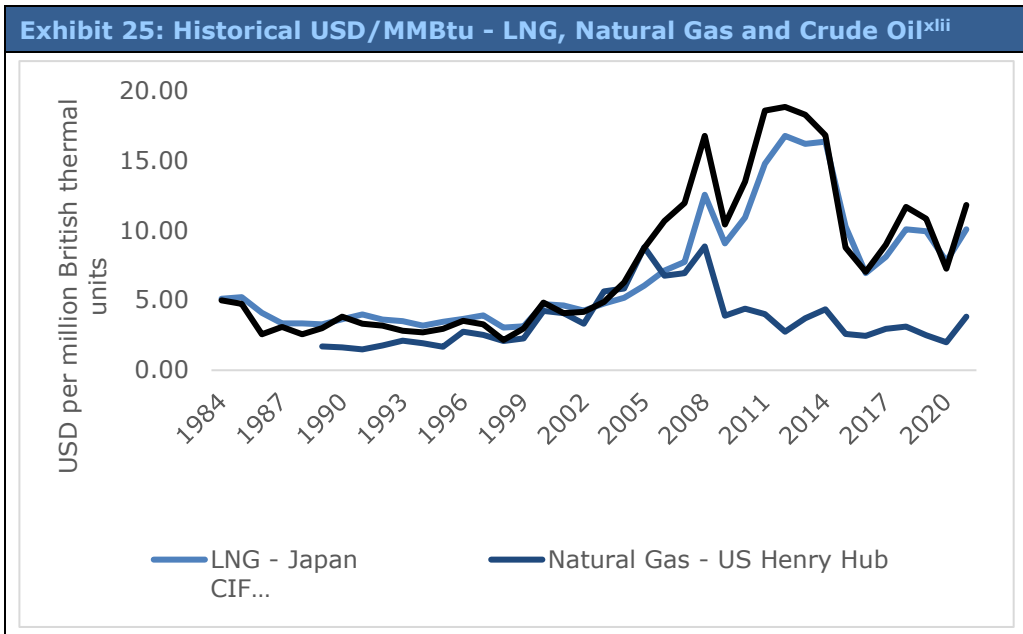
Australia's income from LNG is expected to significantly stabilize post the fiscal year 2024-25, contingent upon further restructuring in global energy markets resulting from the aftermath of Russia's invasion of Ukraine. Projections suggest a decline to USD 57 bn in the fiscal year 2024-25, followed by a gradual decrease to USD 45 bn in the fiscal year 2027-28 (in real terms). The forecast is subject to uncertainties, including the sales portfolio mix of spot and contract sales among Australian exporters, variations in demand due to seasonal fluctuations that may impact spot sale earnings across different financial years, and the long-term status of stranded Russian gas.





## 5.6 Pricing<sup>xii</sup>

- Russia sends global gas prices to historic levels:** Over the past two years, global LNG prices have experienced substantial fluctuations. In the latter half of 2021, a post-COVID surge in global gas demand coincided with Russian limitations on pipeline exports to Europe, leading to reduced European gas inventories. This prompted a sharp rise in LNG prices, surging by over 192% from June to October 2021. The volatility escalated after Russia's invasion of Ukraine in 2022, with prices peaking at USD 54/MMBtu in August. However, consistent LNG imports from the United States and warm winter temperatures have bolstered European gas inventories, mitigated immediate shortages and eased LNG price pressures.
- Prices to remain volatile until 2025:** Prices are anticipated to stay high and volatile until 2025 due to the tightness in LNG markets caused by the stranding of Russian pipeline gas supply intended for Europe. Europe will rely on US LNG imports to compensate for the lost Russian volumes, with Chinese companies reselling contracted US volumes to the bloc. This dependence, coupled with the seasonality of European gas demand and uncertainty in Chinese LNG demand, poses future challenges. While operating LNG plants at full capacity is crucial, it may limit flexibility in managing seasonal demand spikes, leading to heightened buyer competition during peak demand periods. However, if Europe successfully replenishes its inventories, spot LNG demand may temporarily decrease, resulting in significant cargo discounts. Subsequently, market conditions are expected to ease as the US' Golden Pass and Plaquemine's LNG projects ramp up in 2025, and Qatar's North Field East comes online in 2026.
- High oil prices continue to support LNG earnings:** Approximately 80-90% of Australia's LNG exports operate under long-term contracts, correlating LNG prices with the Japanese Customs Crude (JCC) oil price with a lag of 3-6 months, depending on the contractual terms. For the December quarter of 2022, LNG contract prices were influenced by higher Brent oil prices in the June (USD 113 per barrel) and September (USD 89 per barrel) quarters compared to the same periods in 2021. Uncertainties related to Chinese oil demand and sanctions on Russian crude pose potential upside risks to the oil price forecast for 2023, providing support for Australian LNG export earnings. Consequently, oil-linked LNG contract prices are projected to average USD 13/MMBtu from 2023 to 2024. Prices are anticipated to gradually decrease to USD 12/MMBtu in 2025, followed by an average of approximately USD 11/MMBtu for the remainder of the outlook period.



## 6. Valuation

The fair market value for the company's shares stood between AUD 301.9 mn and AUD 391.2 mn on March 21, 2024. The fair market value for one of the company's publicly traded shares stood between AUD 0.27 and AUD 0.35 on March 21, 2024. The valuation approach followed is the Relative Valuation method.

### 6.1 Relative Valuation Method

Company Name	Ticker	Market Capitalization (AUD mn)	Total Enterprise Value (AUD mn)	Total 2C Contingent Resource (Bcf)	EV/Contingent Resource
Beach Energy Limited	ASX:BPT	4,003.7	4,248.7	1,094.8	3.9
Botala Energy Limited	ASX:BTE	16.5	14.6	222.0	0.1
Cooper Energy Limited	ASX:COE	528.0	640.5	175.0	3.7
Jade Gas Holdings Limited	ASX:JGH	100.9	93.6	148.0	0.6
Kinetiko Energy Limited	ASX:KKO	95.7	93.2	6,031.4	0.0
State Gas Limited	ASX:GAS	34.3	33.8	504.0	0.1
Tlou Energy Limited	ASX:TOU	45.7	57.0	41.0	1.4
TMK Energy Limited	ASX:TMK	30.6	25.4	1,214.0	0.0
Omega Oil & Gas Limited	ASX:OMA	38.3	36.2	0.0	NA
Comet Ridge Limited	ASX:COI	226.3	226.1	211.0	1.1
Empire Energy Group Limited	ASX:EEG	143.1	139.6	1,906.1	0.1
Blue Energy Limited	ASX:BLU	27.8	25.4	1,617.0	0.0
<b>Average</b>					<b>0.99</b>
<b>Median</b>					<b>0.07</b>

(Source: Bloomberg, March 21, 2024)

#### Average EV/Contingent Resource (2C) Multiple

Summary	Units	High Case	Low Case
Average EV/Contingent Resource (2C) Multiple		0.99	0.99
Arrowhead's Premium/(Discount)	%	0.0%	0.0%
Elixir's Contingent Resource (2C)	Bcf	395.0	395.0
Elixir's EV	AUD mn	<b>391.2</b>	<b>301.9</b>
Elixir's EV/share	AUD	0.35	0.27
Upside	%	373.1%	265.1%

	Contingent Resource 2C (in Bcf)					
	391.2	355.0	375.0	395.0	415.0	435.0
Average EV/ Contingent Resource (2C) (Comparable)	<b>0.85</b>	301.9	318.9	335.9	352.9	369.9
	<b>0.92</b>	326.7	345.1	363.5	381.9	400.3
	<b>0.99</b>	351.6	371.4	<b>391.2</b>	411.0	430.8
	<b>1.06</b>	376.4	397.6	418.8	440.0	461.2
	<b>1.13</b>	401.3	423.9	446.5	469.1	491.7
	<b>1.20</b>	426.1	450.1	474.1	498.1	522.1

## **Important information on Arrowhead methodology**

The principles of the valuation methodology employed by Arrowhead BID are variable to a certain extent depending on the subsectors in which the research is conducted, but all Arrowhead valuation research possesses an underlying set of common principles and a generally common quantitative process.

With Arrowhead Commercial and Technical Due Diligence, Arrowhead extensively researches the fundamentals, assets and liabilities of a Company, and builds solid estimates for revenue and expenditure over a coherently determined forecast period.

Elements of past performance, such as price/earnings ratios, indicated as applicable, are present mainly for reference purposes. Still, elements of real-world past performance enter the valuation through their impact on the commercial and technical due diligence.

Elements of comparison, such as multiple analyses may be to some limited extent integrated in the valuation on a project-by-project or asset-by-asset basis. In the case of this Elixir Energy Limited report, there are no multiple analyses integrated in the valuation.

## **Arrowhead BID fair market value bracket**

The Arrowhead Fair Market Value is given as a bracket. This is based on quantitative key variable analysis, such as key price analysis for revenue and cost drivers or analysis and discounts on revenue estimates for projects, especially relevant to those projects estimated to provide revenue near the end of the chosen forecast period. Low and high estimates for key variables are produced as a tool for valuation. The high-bracket NPV valuation is derived from the high-bracket key variables, while the low-bracket NPV valuation is based on the low-bracket key variables.

In principle, an investor who is comfortable with the high-brackets of our key variable analysis will align with the high-bracket in the Arrowhead Fair Value Bracket, and likewise in terms of low estimates. The investor will also take into account the Company intangibles – as presented in the first few pages of this document in the analysis of strengths and weaknesses and other essential Company information. These intangibles serve as supplementary decision factors for adding or subtracting a premium in the investor's own analysis. The bracket should be understood as a tool provided by Arrowhead BID for the reader of this report and the reader should not solely rely on this information to make his decision on any particular security. The reader must also understand that on one hand, global capital markets contain inefficiencies, especially in terms of information, and that on the other hand, corporations and their commercial and technical positions evolve rapidly: this present edition of the Arrowhead valuation is for a short to medium-term alignment analysis (one to twelve months). The reader should refer to important disclosures on page 29 of this report.

## 7. Analyst Certifications

I, Sumit Wadhwa, certify that all the views expressed in this research report accurately reflect my personal views about the subject security and the subject Company, based on the collection and analysis of public information and public Company disclosures.

I, Ayushi Saraswat, certify that all the views expressed in this research report accurately reflect my personal views about the subject security and the subject Company, based on the collection and analysis of public information and public Company disclosures.

### Important disclosures

Arrowhead Business and Investment Decisions, LLC has received fees in 2024 and will receive further fees in 2024 from Elixir Energy Limited for researching and drafting this report and for a series of other services to Elixir Energy Limited, including distribution of this report and networking services. Neither Arrowhead BID nor any of its principals or employees own any long or short positions in Elixir Energy Limited. Arrowhead BID's principals intend to seek a mandate for investment banking services from Elixir Energy Limited in 2024 or beyond and intend to receive compensation for investment banking activities from Elixir Energy Limited in 2024 or beyond.

Aside from certain reports published on a periodic basis, the large majority of reports are published by Arrowhead BID at irregular intervals as appropriate in the analyst's judgment.

Any opinions expressed in this report are statements of Arrowhead BID's judgment to this date and are subject to change without notice.

This report was prepared for general circulation and does not provide investment recommendations specific to individual investors. As such, any of the financial or other money-management instruments linked to the company and company valuation described in this report, hereafter referred to as "the securities," may not be suitable for all investors.

Investors must make their own investment decisions based upon their specific investment objectives and financial situation utilizing their own financial advisors as they deem necessary.

Investors are advised to gather and consult multiple sources of information while preparing their investment decisions. Recipients of this report are strongly advised to read the Information on Arrowhead Methodology section of this report to understand if and how the Arrowhead Due Diligence and Arrowhead Fair Value Bracket integrates alongside the rest of their stream of information and within their decision-making process. Past performance of securities described directly or

indirectly in this report should not be taken as an indication or guarantee of future results. The price, value of, and income from any of the financial securities described in this report may rise as well as fall and may be affected by simple and complex changes in economic, financial and political factors.

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Arrowhead Business and Investment Decisions, LLC is not responsible for any loss, financial or other, directly or indirectly linked to any price movement or absence of price movement of the securities described in this report.

## 8. Notes and References

- <sup>i</sup> Source: Bloomberg as on March 21, 2024  
<sup>ii</sup> Source: Bloomberg as on March 21, 2024  
<sup>iii</sup> Source: Company website  
<sup>iv</sup> Source: Company website  
<sup>v</sup> Source: Annual Report 2023, Press Release, Company website, Investor Presentation – 17 Nov 2023  
<sup>vi</sup> Source: Company website  
<sup>vii</sup> Source: Investor Presentation – 17 Nov 2023  
<sup>viii</sup> Source: Company website  
<sup>ix</sup> Source: Investor Presentation – 17 Nov 2023  
<sup>x</sup> Source: Company website  
<sup>xi</sup> Source: Company website  
<sup>xii</sup> Source: Company website, Annual Report and Investor Presentation – 17 Nov 2023  
<sup>xiii</sup> Source: Company website  
<sup>xiv</sup> Source: Company website and Annual Report 2023  
<sup>xv</sup> Source: Annual Report 2023  
<sup>xvi</sup> Company website, Annual Report and Investor Presentation – 17 Nov 2023  
<sup>xvii</sup> Source: Company website  
<sup>xviii</sup> Source: Company website, Annual Report and Investor Presentation – 11 May 2023  
<sup>xix</sup> Source: Annual Report  
<sup>xx</sup> Source: Annual Report  
<sup>xxi</sup> Source: Investor Presentation – 11 May 2023  
<sup>xxii</sup> Source: Company website, Annual Report and Investor Presentations  
<sup>xxiii</sup> Source: Company website, Annual Report and Investor Presentations  
<sup>xxiv</sup> Source: Bloomberg as on April 03, 2023  
<sup>xxv</sup> Source: [Historical announcements \(asx.com.au\)](#)  
<sup>xxvi</sup> Source: Annual Report 2021, Company Website  
<sup>xxvii</sup> Source: [National Geographic – Natural Gas, Statista](#)  
<sup>xxviii</sup> Source: [Gas Exporting Countries Forum – Global Gas Outlook 2050 Synopsis, Statista](#)  
<sup>xxix</sup> Source: [Gas Exporting Countries Forum – Global Gas Outlook 2050 Synopsis](#)  
<sup>xxx</sup> Source: [Gas Exporting Countries Forum – Global Gas Outlook 2050 Synopsis](#)  
<sup>xxxi</sup> Source: [British Petroleum - Statistical Review of World Energy](#)  
<sup>xxxii</sup> Source: [British Petroleum - Statistical Review of World Energy](#)  
<sup>xxxiii</sup> Source: [British Petroleum - Statistical Review of World Energy](#)  
<sup>xxxiv</sup> Source: [British Petroleum - Statistical Review of World Energy](#)  
<sup>xxxv</sup> Source: [Gas Exporting Countries Forum – Global Gas Outlook 2050 Synopsis,](#)  
<sup>xxxvi</sup> Source: [British Petroleum - Statistical Review of World Energy](#)  
<sup>xxxvii</sup> Source: [Department of Industry, Science and Resourced, Australian Government - Resources and Energy Quarterly – March 2023](#)  
<sup>xxxviii</sup> Source: [Gas Exporting Countries Forum – Global Gas Outlook 2050 Synopsis, Department of Industry, Science and Resourced, Australian Government - Resources and Energy Quarterly – March 2023, Noosa Mining Conference Presentation by Elixir](#)  
<sup>xxxix</sup> Source: [Department of Industry, Science and Resourced, Australian Government - Resources and Energy Quarterly – March 2023](#)  
<sup>xl</sup> Source: [Department of Industry, Science and Resourced, Australian Government - Resources and Energy Quarterly – March 2023](#)  
<sup>xli</sup> Source: [Department of Industry, Science and Resourced, Australian Government - Resources and Energy Quarterly – March 2023](#)  
<sup>xlii</sup> Source: [British Petroleum - Statistical Review of World Energy](#)