



2 September 2021

## Utah Helium Acquisition

- **Strategy:** Binding agreement to acquire **100% of Kessel Resources Pty Ltd** ("Kessel"), a Utah-focused helium company, that provides Grand Gulf with:
  - Exposure to the burgeoning helium industry in a known helium producing area - drill-ready targets and proximal to dedicated infrastructure
  - 250,713 acre AMI with over 23,600 acres (private leases/Utah state leases) leased in drill-friendly Utah (the Red Helium Project) – leasing ongoing with objective of 35,000 acres
  - Structurally high to and 8 miles west of Doe Canyon Helium Field and Plant (Air Products Inc – market cap: US\$60B<sup>1</sup>)
  - 190 km's of 2D seismic across the AMI has been acquired and processed – drill targets established – trap identified is larger than the Doe Canyon Field
  - Historic wells with helium concentrations within and proximal to the AMI
  - 20 miles south and connected by pipeline to the operational Lisbon Helium Plant
  - Current helium pricing is approximately \$280/mcf<sup>2</sup>
- **ESG:** Potential for significant 45Q Tax Credit revenue through sequestering of produced CO<sub>2</sub>
- **High Quality Management Team:** Experienced Kessel oil and gas geologist Keith Martens to join the Board of Grand Gulf assisted by highly experienced partners and US-based operators, Four Corners Helium.
- **Liquidity and Financing:** GGE to undertake a capital raising of A\$3.3 million to fund the acquisition and provide working capital to drill and cover transaction costs.
- **Board & Shareholder support:** The respective boards and major shareholders of GGE and Kessel have approved the transaction with the deal expected to close in September 2021.

**Grand Gulf Energy Ltd (ASX:GGE) ("Grand Gulf" or the "Company")** is pleased to announce that it has entered into a binding agreement to acquire 100% of the issued share capital of Kessel Resources Pty Ltd ("**Kessel**"), a privately held Australian company which holds an interest in the Red Helium Project located in Utah ("**the Acquisition**").

The successful merger with Kessel will add a significant Helium exploration opportunity to Grand Gulf's existing cash flow positive oil and gas portfolio.

<sup>1</sup> <https://www.bloomberg.com/quote/APD:US>

<sup>2</sup> Edison Research Global Helium Market Update, May 2021



Experienced Kessel oil and gas geologist Keith Martens will join Grand Gulf as CEO and will be working closely with helium specialists and project partners Four Corners Helium.

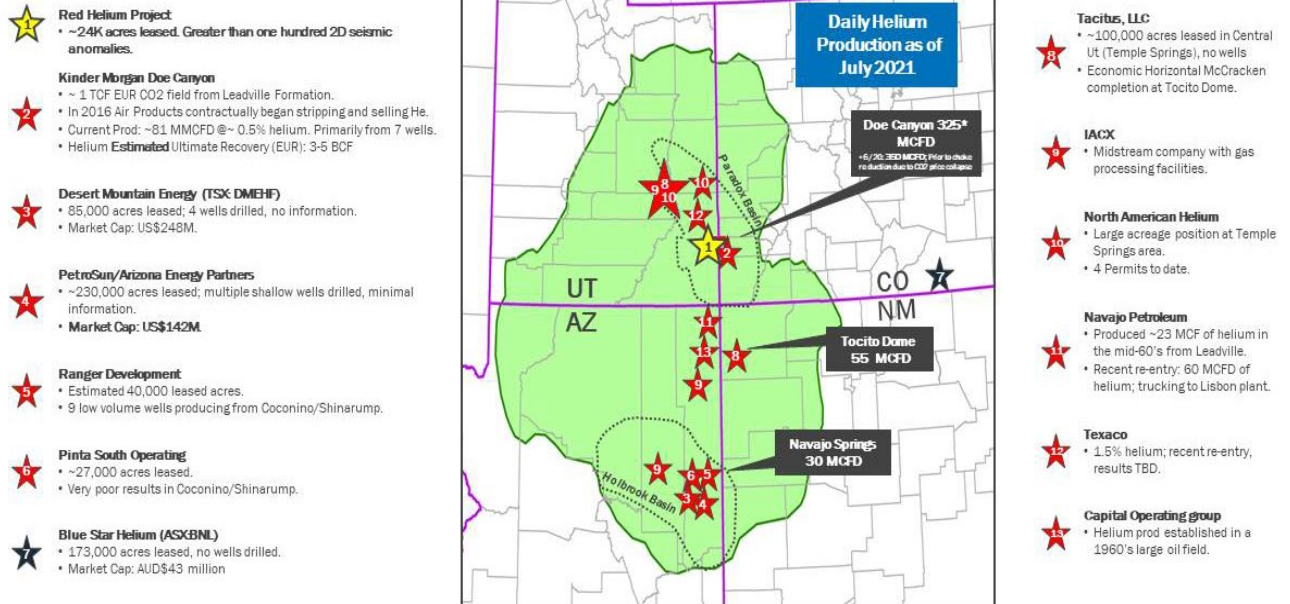


Figure 1: Red Helium Project Location

**Craig Burton, Grand Gulf's chairman commented**

*"The merger with Kessel creates an emerging helium exploration company with drill-ready prospects in a highly sought after helium-rich region. With helium prices in excess of US\$280/mcf Grand Gulf is well placed to take advantage of one of the world's most critically scarce commodities. We look forward to combining with the Kessel team and growing the Company for all shareholders going forward."*

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## Overview of the Red Helium Project

### Leases

Through incorporated JV company Valence, Kessel and its US partners Four Corners Helium LLC (FCH) and Red Dragon Exploration LLC (RDE) (see below for further information on these partners) control the Red Helium Project which is comprised of a 250,713 acre area of mutual interest (AMI) where Valence has already directly leased 23,600 acres prospective for helium. The Red Helium Project is located in the SE of Utah in the Four Corners area which is often described as the ‘Saudi Arabia of helium’ given the plethora of producing fields in the area.

Leasing to date has focused on private and Utah state land with state leases issued via an “other business arrangement” (OBA) with the School and Institutional Trust Lands Administration (SITLA). The award of the OBA resulted from Valence successfully demonstrating its helium exploration strategy and technical expertise/experience.

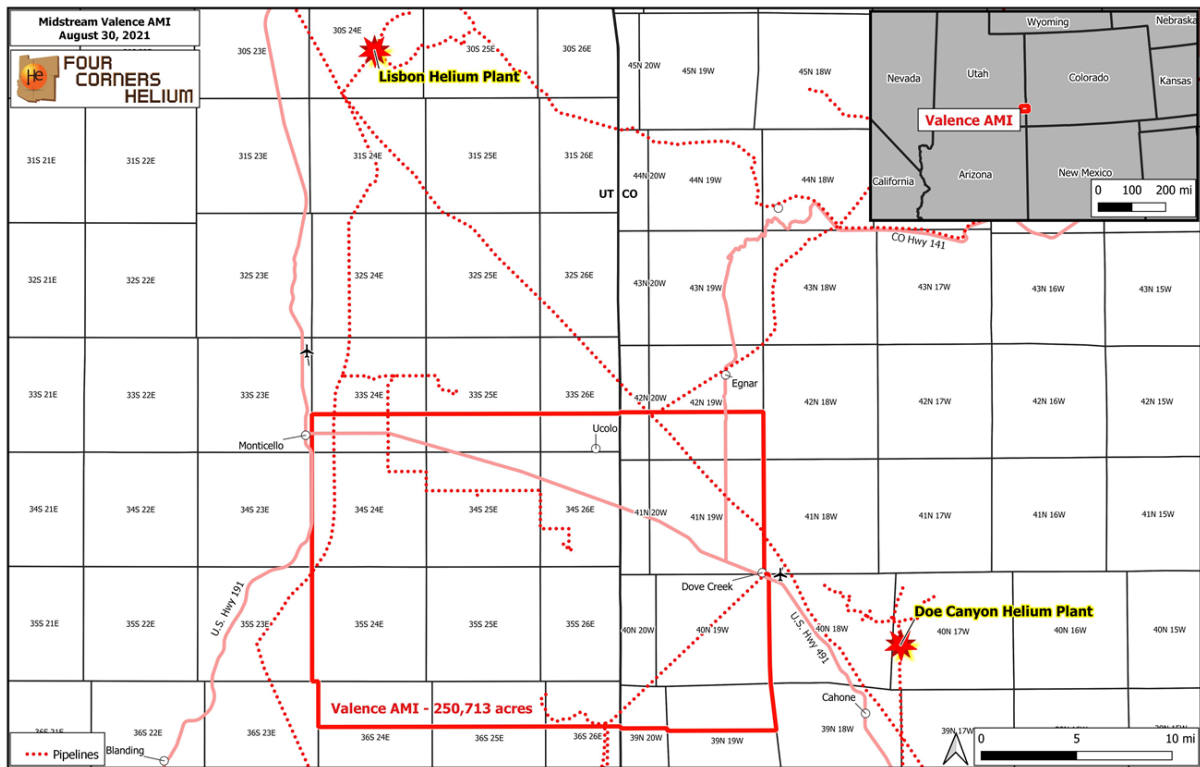


Figure 2: Red Helium Project acreage position and infrastructure

Utah is an excellent operational and commercial environment and the award of the OBA demonstrates Utah’s commitment to encourage and support helium exploration and production. Utah is regarded as permitting-friendly in comparison to Bureau of Land Management (BLM) federal land and other states with helium exploration and production.

All leases acquired are 2-year leases with an option to renew for a further 3 years.

### Geology and Analogue Fields

The Red Helium Project is located 8 miles west of the large producing Doe Canyon helium field and plant owned by Kinder Morgan with the helium facility run by Air Products Inc (market cap of US\$60



billion<sup>3</sup>). The Red Helium Project shares the same stratigraphy and lithologies as Doe Canyon including:

1. Source rock – Precambrian granite known to be the source of helium in the area.
2. Reservoir – The Leadville limestone/dolomite is the primary reservoir for helium with the McCracken sandstone a viable secondary target for oil and gas.
3. Seal - The 1,200-foot-thick salt layer (Molas formation) is the ideal seal and a vital component of the helium fields in the area.

The Doe Canyon helium field is regarded as an analogue field to the Red Helium Project and currently produces an average flow rate per well of roughly 18 million cubic feet per day (mmcfpd) of raw gas at an average grade of 0.5% helium<sup>4</sup>. Initial production (IP) flow rates from the Doe Canyon wells ranged from 37mmcfpd to 60mmcfpd with one of the wells testing 5% helium. Doe Canyon has an estimated ultimate recovery (EUR) of 3 – 5 billion cubic feet<sup>5</sup> of helium. Current helium pricing is approximately US\$280/mcf<sup>6</sup> (refer Appendix B).

These large flow rates are crucial to the highly commercial nature of Doe Canyon and are a function of the total depth of the Leadville Formation reservoir (approximately 10,000 feet as evident on seismic) and the impermeable salt seal.

20 miles to the north of the Red Helium Project is the Lisbon helium field and processing plant. The Lisbon gas processing facility is comprised of a 60 mmcfpd treating plant with a 45 mmcfpd cryogenic plant<sup>7</sup>. The Lisbon plant is connected by pipeline to the Red Helium Project.

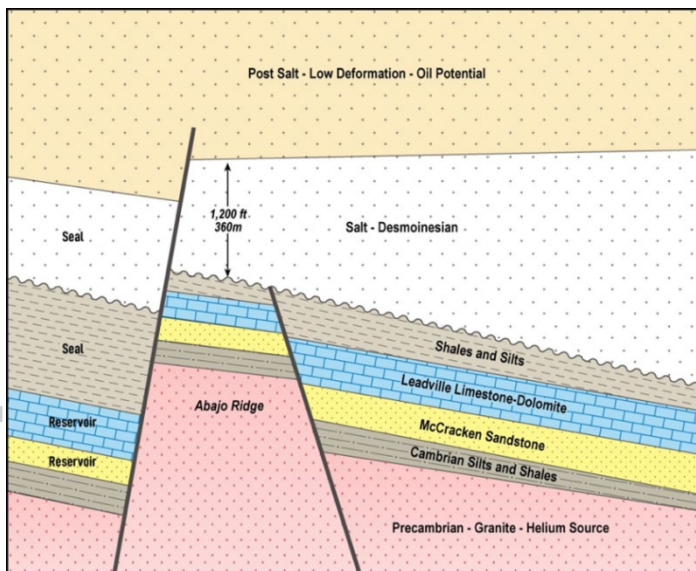


Figure 3: Red Helium Project Stratigraphy  
– Proven Helium Trap and Seal

<sup>3</sup> <https://www.bloomberg.com/quote/APD:US>

<sup>4</sup> Derived from historical Doe Canyon well production data

<sup>5</sup> EUR is estimated from the decline curves of the drilled Doe Canyon wells

<sup>6</sup> Edison Research Global Helium Market Update, May 2021

<sup>7</sup> <http://www.paradoxresources.com/operations/midstream/>





## Well Control and Seismic

Approximately 190 km's of 2D seismic has been acquired and reprocessed which has identified a host of helium leads and drill targets.

Old historic wells within and proximal to the AMI contain up to 0.4% helium in drill stem tests (DST) however it is well known that helium capture (gas storage vessels were unsuitable for helium containment) and testing was substandard in the 1950s and 1960s and in many cases led to the understatement of helium concentrations. In most instances helium was not tested as the focus was hydrocarbons in which case gas would be characterized as 'non-flammable'.

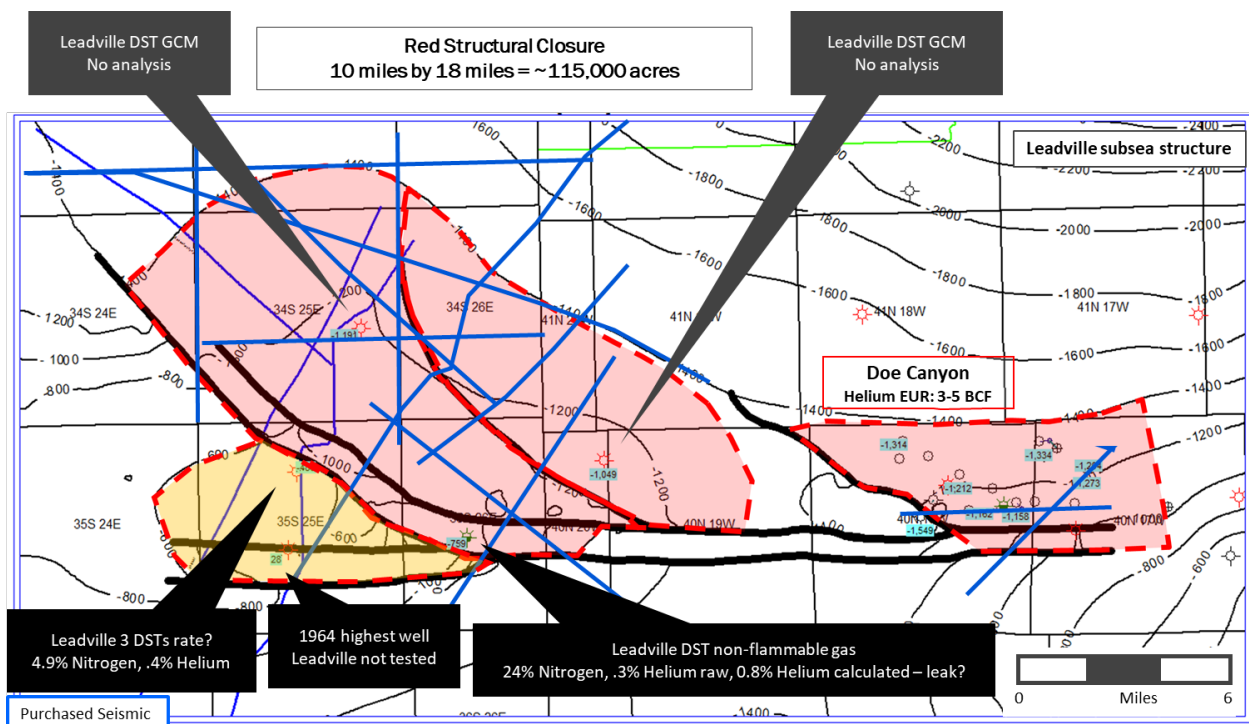


Figure 4: Red Helium Project Well Control and Seismic

## Helium Wells

The wells are relatively low risk, with drilling and completion to a total depth of approximately 10,000 feet expected to cost ~US\$1.5m per well. The first of three earn-in wells will take Grand Gulf's interest to 50% of Valence with the second and third well earning a further 12.5% each to take the total ownership in Valence to 75%.

Valence draws its technical expertise from the Four Corners Helium Team, which have a strong North American technical presence with the experienced personnel to draw upon and manage ongoing leasing and drilling programs (refer appendix A).



## ESG – Carbon Sequestration Potential

GGE is in the process of reviewing the potential of the Red Helium Project qualifying under Section 45Q of the US tax code for carbon sequestration (re-injection) of the associated anticipated CO<sub>2</sub> component of the raw gas stream. Key aspects of Section 45Q of the US tax code include:

- Section 45Q stipulates tax credits for carbon sequestration
- *The emissions must be from a factory, refinery, power plant or other fuel combustion source, fuel cell, pipeline or manufacturing process. If the carbon dioxide is underground, drawing it out counts as long as the commercial goal is to recover some other gas mixed with it.*<sup>8</sup>
- *Tax credits belong to the entity who owns the carbon capture equipment, which is defined as the equipment used to separate or capture, treat, process, dry, liquefy, pump or compress the CO<sub>2</sub> up to the point where it is transported for disposal.*<sup>9</sup>

GGE is assessing whether CO<sub>2</sub> produced as a by-product from the Red Helium Project is suitable for carbon sequestration and whether it qualifies, under Section 45Q of the US Tax Code and the various US Environmental Protection Agency stipulations, for tax credits. GGE understands there are specific CO<sub>2</sub> concentration thresholds and other technical requirements that need to be satisfied prior to qualification and that these details will only be known once a well has been drilled at the Red Helium Project and the resultant flow rates and gas concentrations are known. Accordingly, there is no guarantee that any tax credits will be available to the Company but the possibility of the same provides an additional potential upside to the economics of the Red Helium Project should they be available in the event of successful development of the Project.

## Key Terms of the Acquisition

The base consideration payable to Kessel shareholders, subject to shareholder approval, for 100% of Kessel is 450 million shares and 100 million performance shares. The milestone for the performance shares, resulting in the conversion of performance shares into ordinary shares, is gross sales of 4 million cubic feet (mmcf) of helium from the Red Helium Project. The vendors have agreed to voluntary escrow of 75% of their consideration shares for 3 months from completion. The acquisition is subject to a \$3.3m raise (firm commitments already received) at 1 cent each and 60 million options exercisable at 2.5 cents each.

Kessel has invested US\$650,000 in acquiring and developing its assets. Kessel has a 25% interest in an incorporated JV company, Valence Resources LLC (“Valence”), with a right to secure a further 50% interest (total of 75%) on the following terms:

Earning 75% of Valence Resources	Max Cost	Earning
Completion of Leasing Payments	US\$1.3M (\$650k already paid)	25%
Drilling first well prior to 30 September 2022	US\$1.5M	25%
Drilling second well prior to 30 September 2023	US\$1.5M	12.5%
Drilling third well prior to 30 September 2023	US\$1.5M	12.5%

<sup>8</sup> Norton Rose Fullbright - <https://www.projectfinance.law/publications/2021/february/tax-credits-for-carbon-capture/>

<sup>9</sup> Norton Rose Fullbright - <https://www.projectfinance.law/publications/2021/february/tax-credits-for-carbon-capture/>



Total Payments	US\$5.8M	75%
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The other shareholders of Valence are helium experts and project partners FCH (60%) and RDE (15%) (both diluting as a result of the above earn-in arrangements). Kessel currently controls the Valence board.

A 20% royalty on all commercial production from the leases is payable to the land owners (lessors) and is inclusive of an overriding royalty interest payable to FCH, RDE and several of the project vendors.

Completion of the acquisition is conditional on the satisfaction (or waiver) of a number of conditions including receipt of shareholder and other regulatory approvals, due diligence and firm commitments for the capital raising being received. The acquisition agreement also includes standard and customary warranties and limits of liability for an agreement of this nature.

### Capital Raising

Grand Gulf has engaged CPS Capital Group Pty Ltd (“CPS”) for the purpose of a capital raising. The minimum raise required to complete the acquisition of Kessel is A\$3.3 million (being the issue of 330m shares at 1c each), which will comprise a placement to institutional and sophisticated investors. The capital raising will be completed in two tranches with \$950,000 committed and to be undertaken immediately under ASX LR7.1 and 7.1A and the balance being subject to shareholder approval. CPS will be paid a 6% fee on the capital raised which will be paid in shares subject to shareholder approval.

In addition, CPS, various other parties involved in the capital raising and several of the vendors will be issued 60,000,000 unlisted options exercisable at 2.5c on or before 3 years of issue.

### Indicative Capital Structure

The indicative capital structure of Grand Gulf following completion of the Acquisition and Capital Raising is set out in the table below:

	Shares	Options	Performance Shares
Current	383,749,748	-	-
Capital Raising	330,000,000	60,000,000 <sup>1</sup>	-
Capital Raising Fee	19,800,000		
Consideration for Proposed Acquisition	450,000,000	-	100,000,000 <sup>2</sup>
Executive performance shares			55,000,000 <sup>3</sup>
Total	1,183,549,748	60,000,000	155,000,000

- Options exercisable at \$0.025 expiring 3 years from grant to be issued to the Sellers and advisers to the Capital Raising.
- The performance shares vest upon the sale of the first 4MMCF gross helium produced from the leases; each Performance Share will convert on a one for one basis into a Share.
- 55,000,000 performance rights subject to shareholder approval.



## Indicative Use of Funds – Working Capital Program

The below table sets out the development program during the 12-month period following completion of the Acquisition.

Activity	\$US
Remaining Leasing Costs	\$650,000
Initial earn-in well	\$1,500,000
Total USD	\$2,150,000
Total AUD	\$2,981,000

## Indicative Timetable

Announcement released to ASX	2 September 2021
Notice of Meeting despatched to Shareholders	6 September 2021
Grand Gulf General Meeting	6 October 2021
Completion of Acquisition and Placement	Early October 2021

\*Note, this timetable is indicative only and may be subject to change.

## Board Appointments

Upon completion Keith Martens will join the Board of the Company as Chief Executive Officer and Chris Bath will resign.

### Keith Martens - B.Sc. (Geophysics-Geology) University of British Columbia 1976

Keith has over 40 years' experience as an oil finder. Keith's career began in Calgary with Hudson Bay O&G, Home Oil and Marathon Petroleum where he worked as a Geophysicist and Explorationist. Moving to Australia with SANTOS in 1980 he was promoted to Principal Explorationist and was responsible for exploration and development for a variety of basins both on and offshore. In late 2000, he joined Tap Oil as Exploration Manager and in 2005 he joined the newly listed Bow Energy as Exploration Manager where he oversaw extensive exploration in the Cooper-Eromanga and Surat-Bowen basins.

He was the lead explorationist for Victoria Petroleum/Senex and discovered the Growler/Snatcher Oil Fields in central Australia and the NE Akkar and West Zhetybai Oil Fields in Kazakhstan (Jupiter Energy). Keith was the Technical Director of Sacgasco exploring in California and also consulted to Rey Resources and Buru working on their Canning Basin interests.

## Executive and Board Incentive Securities

Mark Freeman will be participating in the fundraising and has committed to \$100,000 subject to shareholder approval.

The Board has resolved to issue 55,000,000 performance rights to Management, subject to shareholder approval. Comprising 27,500,000 Class A performance rights and 27,500,000 Class B performance rights to be issued under a new Grand Gulf Employee Incentive Securities Plan. Performance Rights will be issued to Keith Martens (30 million), Mark Freeman (20 million) and Craig Burton (5 million). If within 5 years of issue, subject to continued engagement with the Company for 6





months, the below vesting conditions are met then the performance rights may be converted to shares:

- Class A performance rights vesting condition - the VWAP of the Company shares trading on the ASX being at least 3 cents over 20 consecutive trading days (on which shares have actually traded); and
- Class B performance rights will vest upon sale of the first 4MMCF gross helium produced from the Leases; each Performance Share will convert on a one for one basis into a share.

### ASX Listing Rule 11.1.2

ASX Listing Rule empowers ASX to require a listed company to obtain the approval of its shareholders to a significant change to the nature or scale of its activities. The acquisition of Kessel will result in a change in the scale of the Company's activities for these purposes and ASX requires the Company in accordance with ASX Listing Rule 11.1.2, to obtain Shareholder approval for that acquisition.

The ASX has confirmed that the transaction can proceed subject to shareholder approval for the issue of the consideration securities under Listing Rule 11.1.2. Investors should take account of these uncertainties in deciding whether or not to buy or sell the Company's shares.

The ASX takes no responsibility for the contents of this announcement and the Company confirms that it is in compliance with its disclosure requirements obligations under Listing Rule 3.1.

This release has been approved by the Board.

For further information visit [www.grandgulfenergy.com](http://www.grandgulfenergy.com)



## Forward Looking Statements

This release may contain forward-looking statements. These statements relate to the Company's expectations, beliefs, intentions or strategies regarding the future. These statements can be identified by the use of words like "anticipate", "believe", "intend", "estimate", "expect", "may", "plan", "project", "will", "should", "seek" and similar words or expressions containing same. These forward-looking statements reflect the Company's views and assumptions with respect to future events as of the date of this release and are subject to a variety of unpredictable risks, uncertainties, and other unknowns. Actual and future results and trends could differ materially from those set forth in such statements due to various factors, many of which are beyond our ability to control or predict. These include, but are not limited to, risks or uncertainties associated with the discovery and development of oil and natural gas reserves, cash flows and liquidity, business and financial strategy, budget, projections and operating results, oil and natural gas prices, amount, nature and timing of capital expenditures, including future development costs, availability and terms of capital and general economic and business conditions. Given these uncertainties, no one should place undue reliance on any forward-looking statements attributable to Grand Gulf, or any of its affiliates or persons acting on its behalf. Although every effort has been made to ensure this release sets forth a fair and accurate view, we do not undertake any obligation to update or revise any forward-looking statements, whether as a result of new information, future events or otherwise.

## Competent Persons Statement

The information in this report is based on information compiled or reviewed by Mr Keith Martens, consulting geologist/geophysicist to Kessel Resources. Mr Martens is a qualified oil and gas geologist/geophysicist with over 45 years of Australian, North American and other international executive oil and gas experience in both onshore and offshore environments. He has extensive experience of oil and gas exploration, appraisal, strategy development and reserve/resource estimation. Mr Martens has a BSc. (Dual Major) in geology and geophysics from The University of British Columbia, Vancouver, Canada.

## Oil and Gas Glossary

B or b	Prefix - Billions	BBL, BO, bbl or bo	Barrel of oil
MM or mm	Prefix - Millions	BOE or boe	Barrel of oil equivalent (1 bbl = 6 mscf)
M or m	Prefix - Thousands	CF or cf	Standard cubic feet
/ D	Suffix - per day	BCF or bcf	Billion cubic feet
G	Gas	O or o	Oil
Pj	Petajoule	E or e	Equivalent
EUR	Estimated Ultimate recovery	C	Contingent Resources - 1C/2C/3C - low/most likely/high
WI	Working Interest	NRI	Net Revenue Interest (after royalty)
PDP	Proved Developed Producing	1P	Proved reserves
PUD	Proved Undeveloped Producing	2P	Proved plus Probable reserves
IP24	The peak oil rate over 24 hrs	3P	Proved plus Probable plus Possible reserves
WTI	West Texas Intermediate	OCF	Operating Cash Flow, ex Capex
E	Estimate	YE	Year End 31 December
CY	Calendar Year	tCO <sub>2</sub>	Tonnes of Carbon Dioxide



## Appendix A: Four Corners Helium Executive team

### Tim Rynott - CEO, Exploration Geologist

- 40 years of oil and gas experience
- Has generated or endorsed discoveries with a gross net worth of almost US\$1Bn
- Has held key leadership positions on numerous national and regional Boards, including AAPG, GCAGS, and LOGA.

### Eric Cummins - Vice President, Exploration and Production

- 30yrs experience in exploration and as production geologist
- Ex Geological Manager for Apache – instrumental in reaching goal of 150,000 BOPD in the Permian.

### Scott Reed - Reservoir Engineer

- >17 years' experience in oil and gas industry.
- Ex W.D. Von Gonten & Co., Apache
- Responsible for leading multi-disciplinary teams as they developed unconventional assets in the Southern Midland Basin.

### David McCarver - COO, Contracts/Land

- >46 years' experience in oil and gas
- Ex State and Federal basins in Texas and Louisiana Gulf Coast, Ark-La-Tex, Mid-Continent, Permian, Rockies and the Gulf of Mexico
- Leased and directed the leasing of >200 drilling prospects, managed E&P programs, created joint ventures, raised capital from direct investors and promoted industry partners.

### Sabina Kraushaar - Partner, Petrophysicist, Structural Geologist

- Geoscientist with expertise mapping subsurface geology utilizing Petra software.
- Manages a database with >100,000 wells, 17,000 geologic tops and >10,000 digital logs.

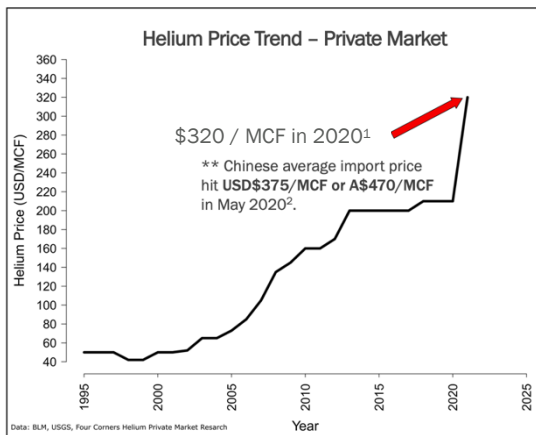
### Jake Cammack – Partner, Geochemist, Specialist in Geographic Information Systems (GIS)

- Created a database with >17,000 gas-composition and helium analyses - comprises the most complete gas geochemistry dataset ever assembled for Utah, Colorado, New Mexico and Arizona.



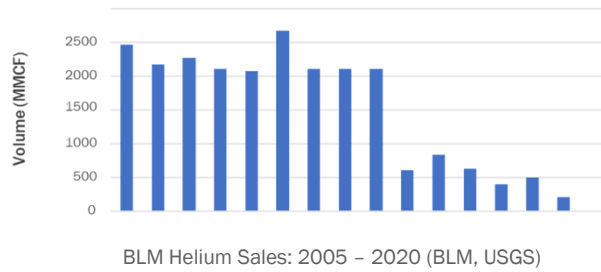
## Appendix B: Helium Pricing US\$

The price of helium has seen a rapid expansion in both spot public auctions and longer term negotiated private contracts. During the last period of oversupply (2013–16), which peaked in 2013–14, BLM conservation (private sector) prices were \$80–90/mcf for crude helium, 30% below the FY18 auction price (\$119/mcf) and 70% below the final BLM auction price in FY19 (\$280/mcf).<sup>10</sup>



<sup>1</sup> Edison Research Global Helium Market Update, May 2021  
<sup>2</sup> Hannam and Partners Research Report - 'Helium' 14 December 2020

The market saw a sustainable price rise as a result of BLM mandated sales of 2,100 MMCF per annum ceasing after the enactment of the 2013 Helium Stewardship Act, brought in to help mitigate a helium shortage.



<sup>10</sup> Edison Research Global Helium Market Update, May 2021

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