



Red Helium Project Update

August 2022

GRANDGULF
ENERGY LIMITED

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Competent Person’s 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.

Red Helium Project

Pure-play Helium Exploration, with Potential for Near Immediate Monetisation of Commercial Success

Location

- Helium-Prolific Four Corners area
- Drill Friendly Utah
- Dominant Lease Position
- > 29,000 acres leased / 250,000 acre AMI



Midstream

- Proximal to dedicated infrastructure
 - 20 miles to 2 of 8 US helium plants
- Pipeline connected to Lisbon helium plant
 - Mar '22 Helium Offtake Agreement
 - Spot Prices >\$2000/mcf



Producing Analog

- Doe Canyon Analog, 15 miles to East
 - 3 - 5 bcf anticipated helium production
 - High rate gas wells: Avg. IP ~20mmcf/d
 - Avg. helium grade ~0.4%
 - = high helium flow rates (~80mcf/d)



Large Resource

- Known Geology, 315km quality 2D seismic
- Vintage wells within AMI proved non-flammable gas and working helium system
 - Dec'21 Maiden Helium Prospective Resource
 - Gross P50 unrisked 10.9bcf¹



Jesse Discovery

- Jesse#1A confirmed
 - Large gross gas column
 - Helium concentration up to 0.65%
 - High virgin bottomhole pressure

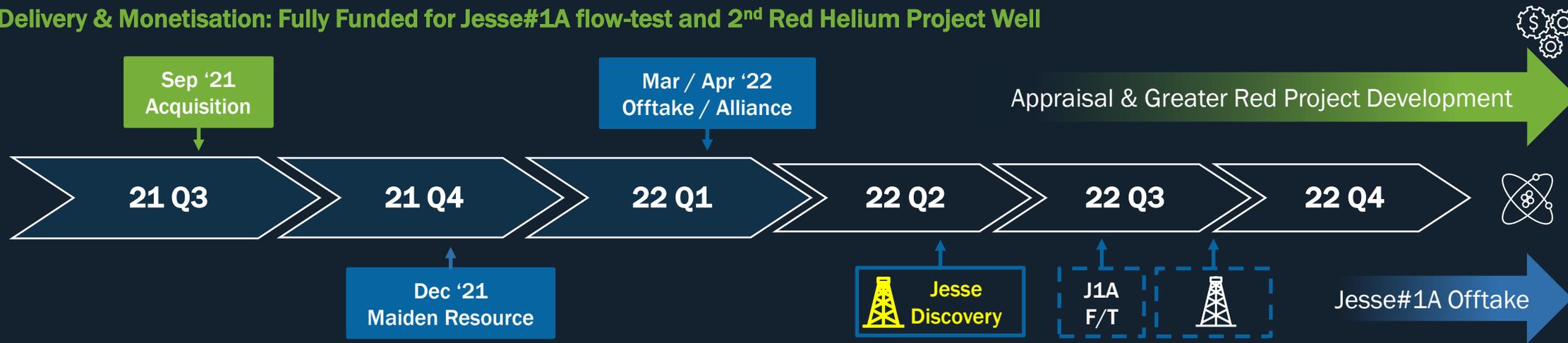


Project Development

- Jesse#1A flow-test imminent
 - Flow-rates / Representative gas sample
- 2nd Red helium project well Q3/Q4 2022



Project Delivery & Monetisation: Fully Funded for Jesse#1A flow-test and 2nd Red Helium Project Well



¹ ASX announcement 8 December 2021, Maiden Prospective Resource, based on Sproule Report, detailed in Slide 4. (Pre-drill Jesse#1A, resource update planned post flow test results)

US-Focused Helium Explorer

Financial Information

ASX Trading Symbol	GGE
Total Shares	1,546 million
Market Cap @ 2.6 c	A\$40.2 million
Net Cash @ 30 June 2022	A\$7.9 million
Performance Shares/Rights	165 million*
Options (3 years at 2.5 cents each)	60 million
Options (3 years at 7.0 cents each)	10 million*
Options (3 years at 8.0 cents each)	103 million*

* Options and 30 million performance rights

OTCQB Listing: North American (NA) Visibility

OTC enhance visibility / accessibility of the company to NA shareholders and media partners.

Red Helium: Earning 85% of Valence¹

	Earning	WI	Max Earn-in Cost \$US
Current Interest		70%	
Drilling second well	7.5%	77.5%	\$1.5M
Drilling third well	7.5%	85%	\$1.5M
Total Payments Remaining			\$3.0M

¹ Well cost overrun shared at earned WI split.

Recoverable Helium (bcf)²

	P90 (1U)	P50 (2U)	P10 (3U)
Gross to Valence (28,046 gross acres)	7.6	10.9	12.9
Net to Valence (18,959 net acres)	5.2	7.4	8.5
Net to GGE (earning 85% of Valence)	4.4	6.3	7.2
Red Project Total	7.9	20.8	57.6

The estimated quantities of helium that may potentially be recovered by the application of a future development project relate to undiscovered accumulations. These estimates have both an associated risk of discovery and a risk of development. Further exploration appraisal is required to determine the existence of a significant quantity of potentially moveable helium.



De-risked asset base

Assets have existing wells with Helium present and extensive 2D seismic



Low-cost exploration

Multiple Drill Ready Targets:
Future wells ~US\$3.3m



Carbon market exposure

45Q Tax Credit upside through CO₂ sequestration potential



Robust netbacks

Low breakeven and low production costs with high torque to commodity prices



Skilled executive team

Management brings track record of North American asset development



Access to capital

ASX/**OTCQB** listing expands investor base, provides exposure to international capital
DTC application in process

² ASX announcement 8 December 2021, Maiden Prospective Resource, based on Sproule Report. The Company is not aware of any new information or data that materially affects the information included in the referenced ASX announcement and confirms that all material assumptions and technical parameters underpinning the estimates in the relevant market announcement continue to apply and have not materially changed. (Pre-drill Jesse#1A, resource update planned post flow test results)

Helium: Critical Path Irreplaceable Technological Enabler

Major growth predicted in most usage areas, particularly: Space, Medical, Semiconductor and Fibre Optics



Inert

Doesn't react with other elements and non-flammable unlike hydrogen



Non-toxic

Can be used in many applications without posing health or wellness risks



Lighter than air

Ability to lift or float. Atmospheric molecules escape to space



Boiling point -269°C

Liquid at ultra cool temperatures enables superconductivity



High Thermal Conductivity

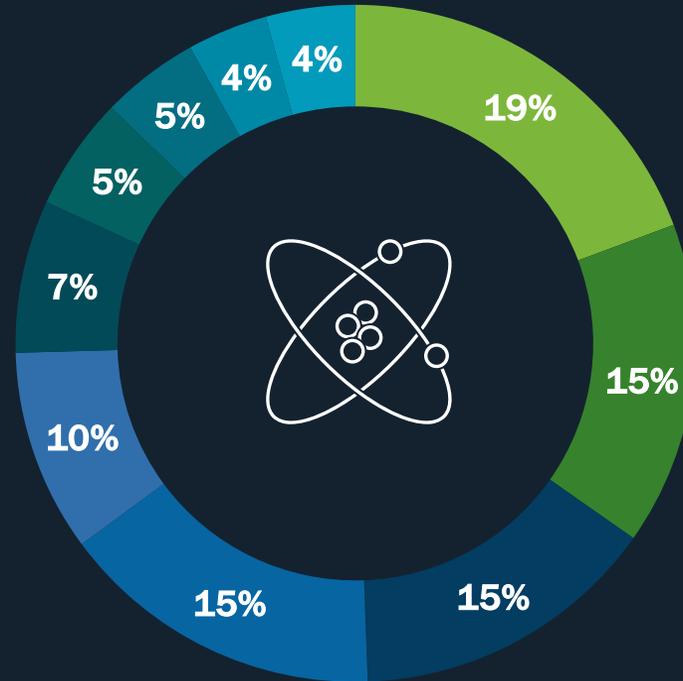
Removes heat in space applications and electronics manufacturing



Small molecular size

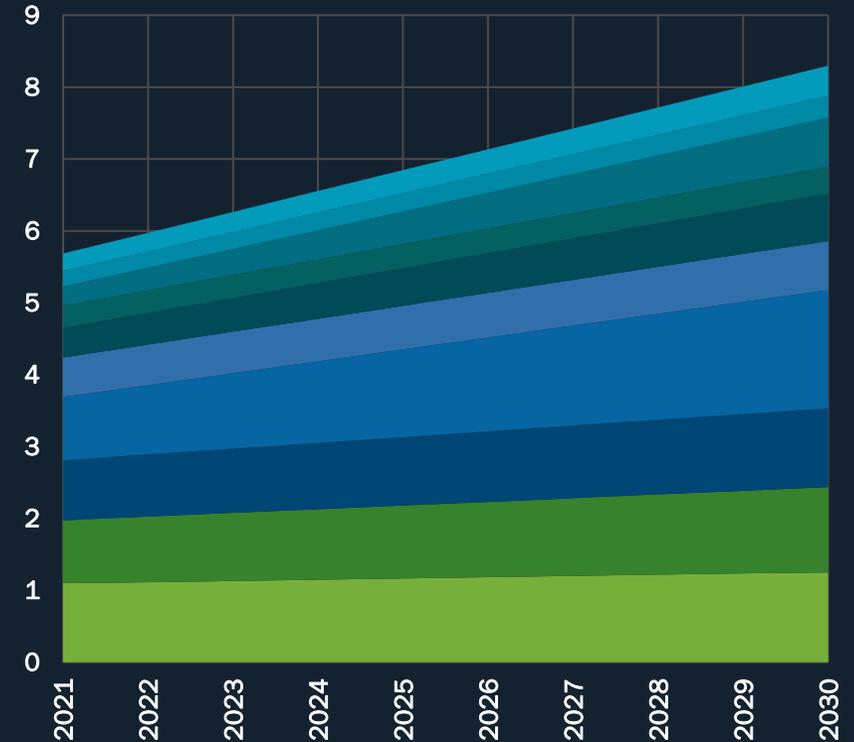
Can be used to find the smallest of leaks

Helium Usage by Industry



- MRI/NMR
- Lifting
- Welding/Cutting
- Fibre Optics
- Diving
- Other

Forecast helium consumption by industry 2021 - 2030E (bcf/y)



- Laboratory/Space
- Semiconductors
- Leak Detection
- Military & Space

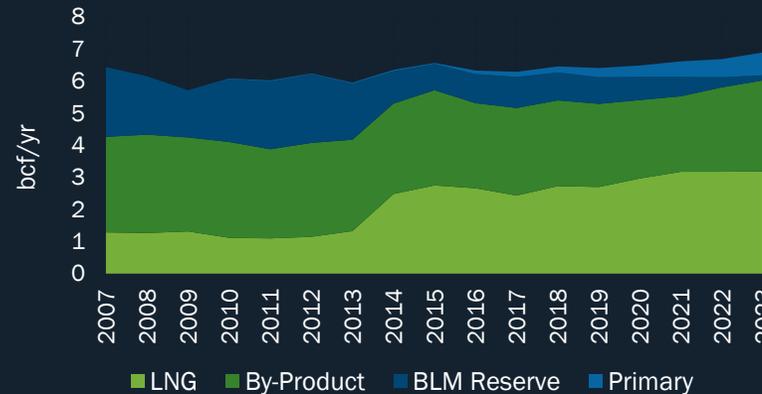
Source: H&P Equity Research / Akap Energy estimates Feb 2022

Helium Supply and Demand Factors

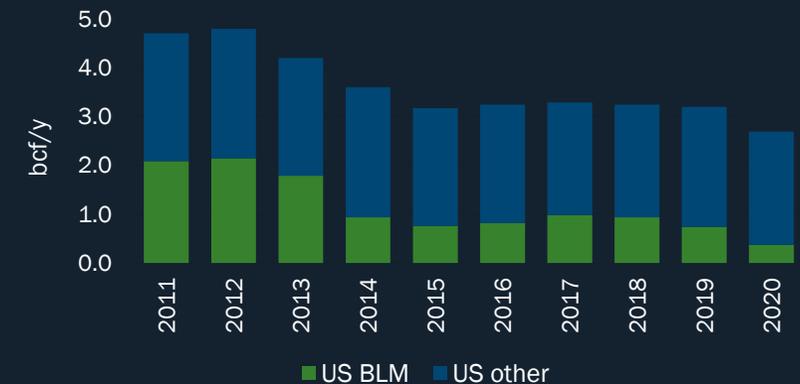
Key Observations

- Historic Supply predominantly oil and gas / LNG by-product, and BLM reserve.
- Recently increasing helium supply from primary projects.
- China:
 - most important growth market
 - imports close to 1bcf/yr
 - virtually no domestic supply
- Helium Stewardship Act of 2013 is part of a privatization effort that began back in 1996 and culminated in the BLM divesting itself of helium storage and facilities in 2021, with supplies currently being depleted.

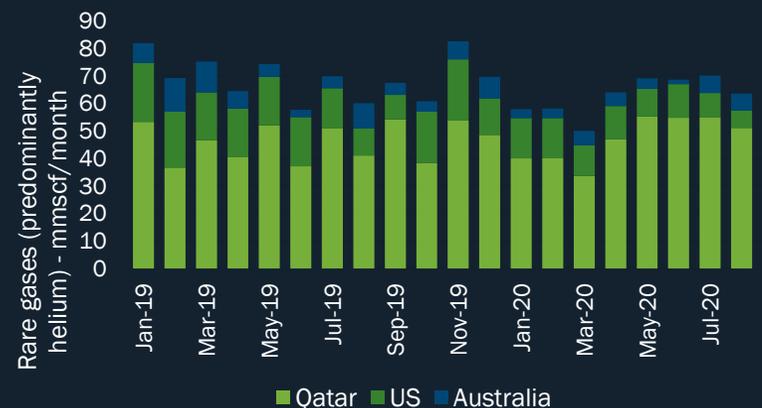
Helium Production by Supply Source



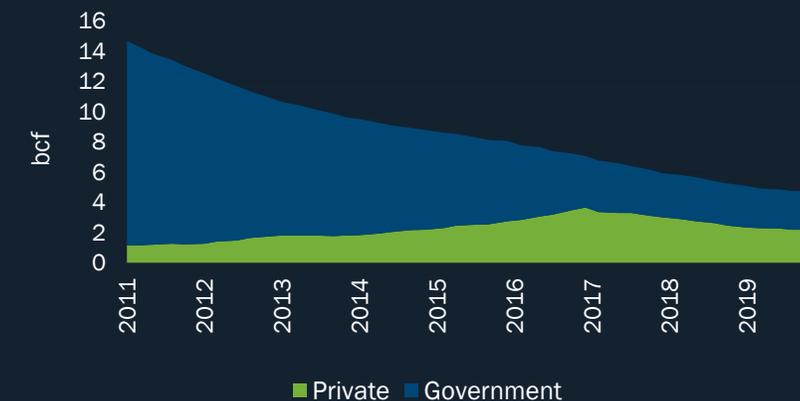
US annual helium Supply 2011-20



Chinese Monthly Imports by Exporter



US BLM Inventories 2011-2020



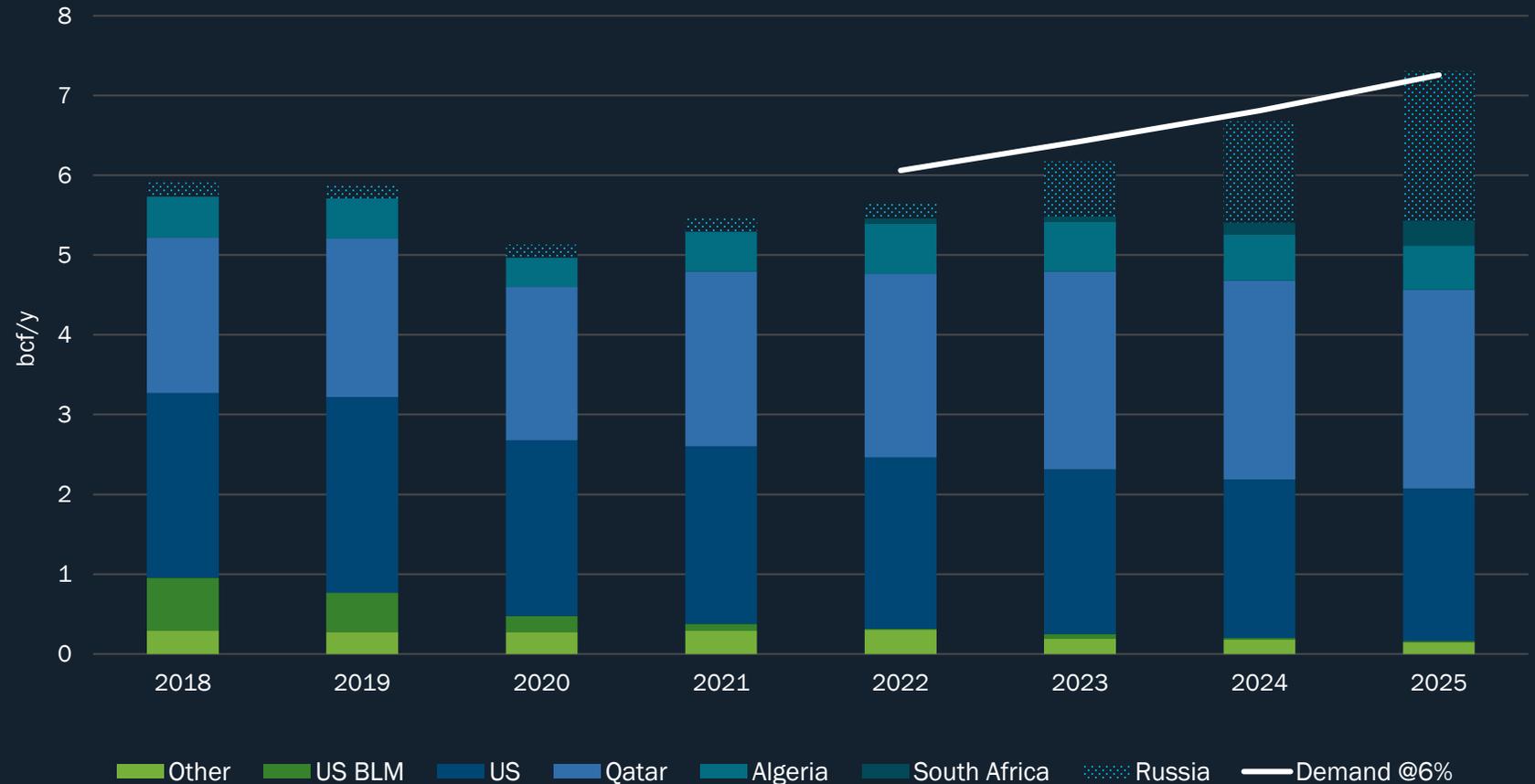
Source: H&P Equity Research / Akap Energy estimates Dec 2021, Feb 2022, Edison Research Global Helium Market Update, May 2021.

Helium Supply Demand Balance

Helium Supply Shortage: extending into 2023

- Devastating fire at Amur facility impacts 20-30% of potential global helium capacity into 2023, exacerbated by increasing geopolitical tensions.
- The Russian shaded area includes the Amur contribution ramping up to ~1.4bcf/yr by 2025, now significantly delayed.
- 2022 maintenance shutdown US BLM Cliffside facility from January - June impacting up to ~20% of US supply (10% of global supply).
- After numerous previous supply side shortages, current situation dubbed:
 - **Helium Shortage v4.0**
- Most US majors are in Force Majeure with their supply contracts
- Recent US spot market prices have reached over **\$2000/mcf²**.

Estimated supply demand balance for helium

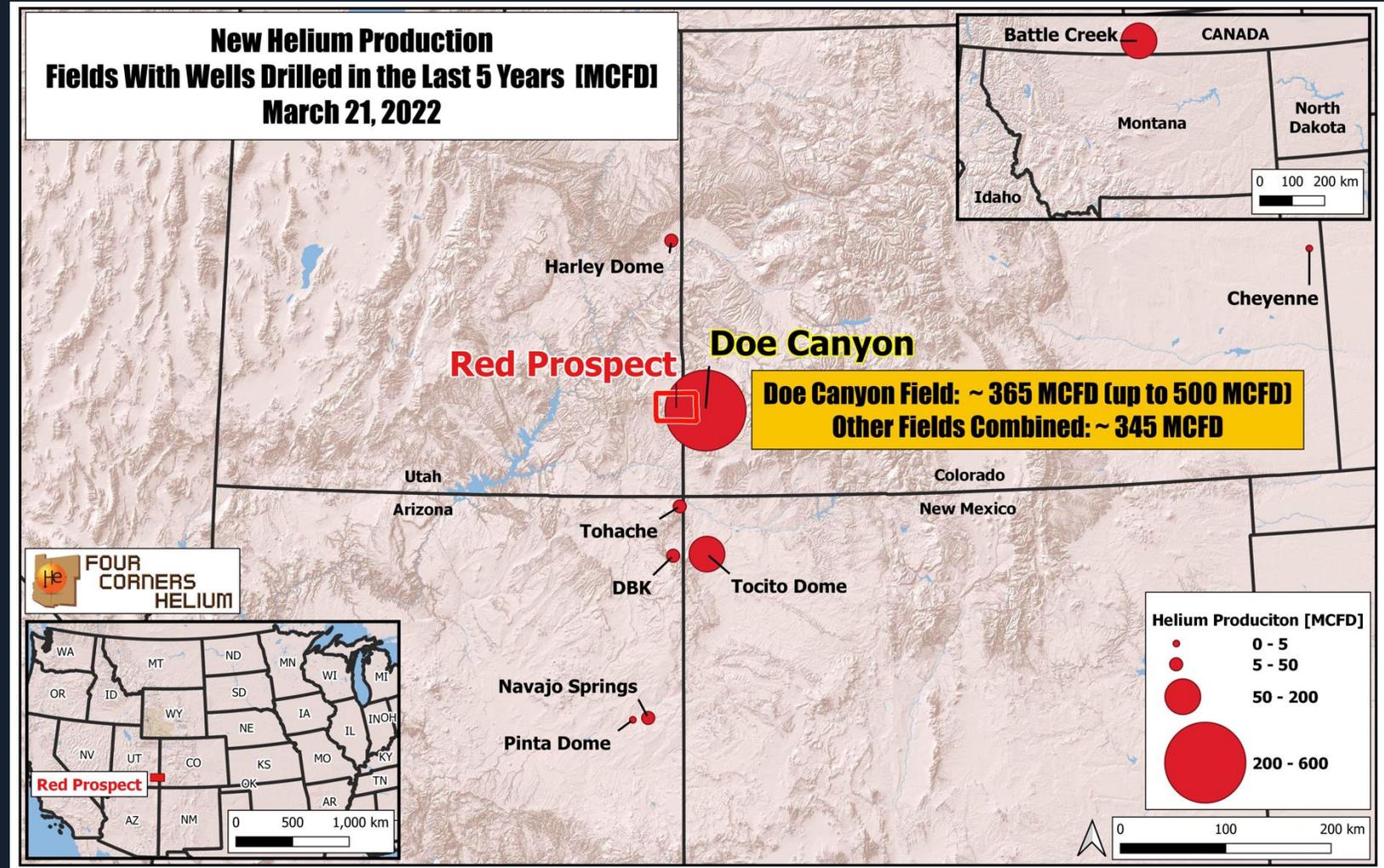


Source: H&P Equity Research / Akap Energy estimates Feb 2022
<https://www.gasworld.com/helium-markets-now-experiencing-helium-shortage-40/2022650.article>

Four Corners Area: New Helium Production

Prolific Proven Producing Helium Region

- Up to 50% of new North American production is from the Doe Canyon Field.¹
 - 15 miles to the East
 - 3 - 5 bcf anticipated helium production
 - High rate gas wells: Avg. IP ~20mmcf/d
 - Average helium grade ~0.4%
 - = high helium flow rates
 - ~80 mcf/d
- Wholesale global helium industry is a multi-billion dollar market²
- Approximate annual global helium market:
 - ~6 bcf/yr²
 - ~16.5 mmcf/d

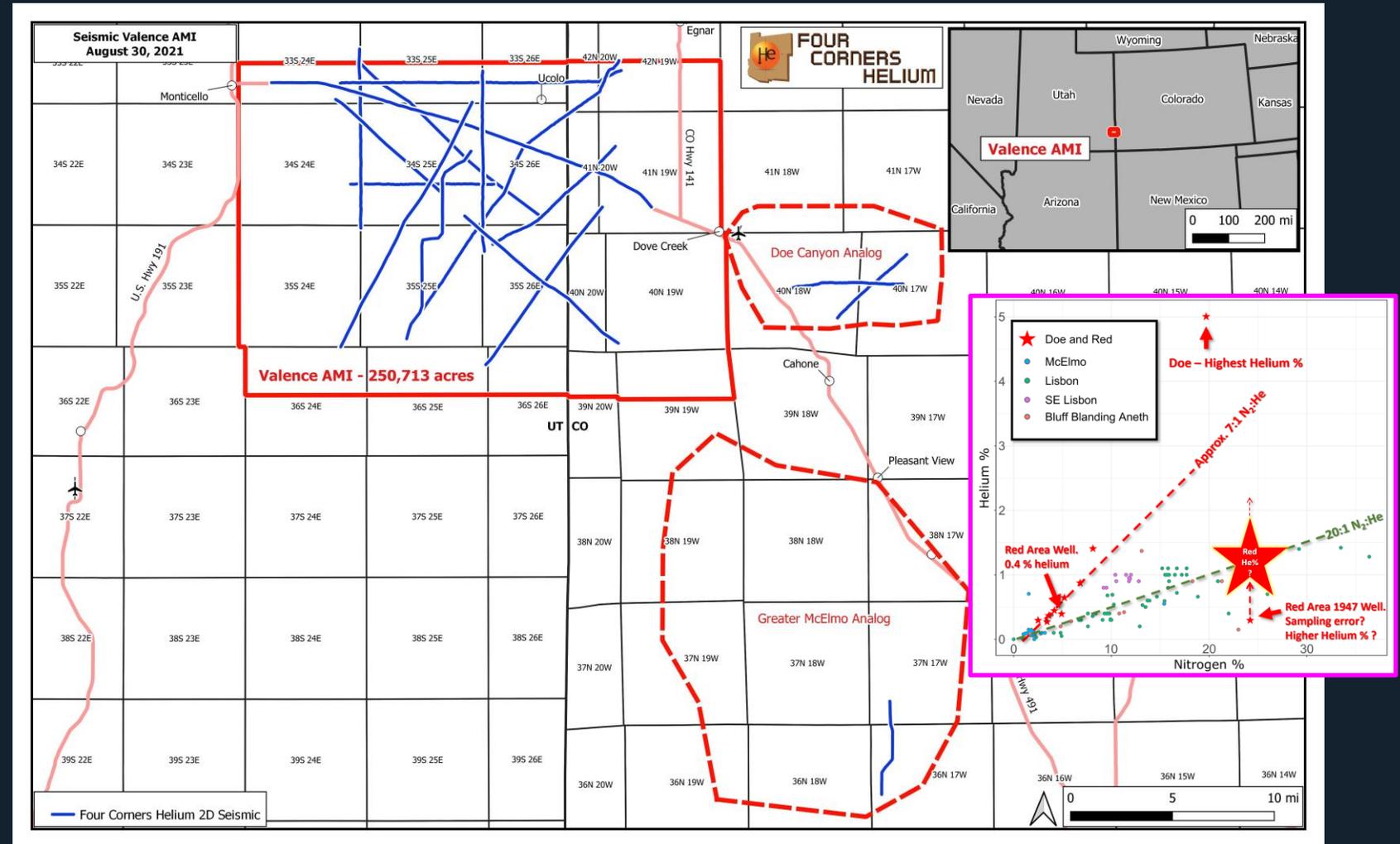


¹ Four Corners Helium LLC Internal Estimate, Source: ² Edison Research Global Helium Market Update, May 2021

Red Helium Project – High Quality Dataset

High Quality 2D Seismic Coverage and Well Control

- Dominant lease position focused on prime prospective locations, driven by high seismic
- >29,000 acres (private leases/Utah state leases) leased in drill-friendly Utah
- Lease holdings 315 km's of high quality seismic data acquired and reprocessed
- Excellent data, particularly below the salt seal
- Geologic analogs with historic He concentrations
- Analog Doe Canyon and McElmo Fields – same reservoir/same trap/same source rock



Multiple Independent Prospects

De-risks greater Red Helium Project¹

Vintage wells within AMI exclusively targeting hydrocarbons proved:¹

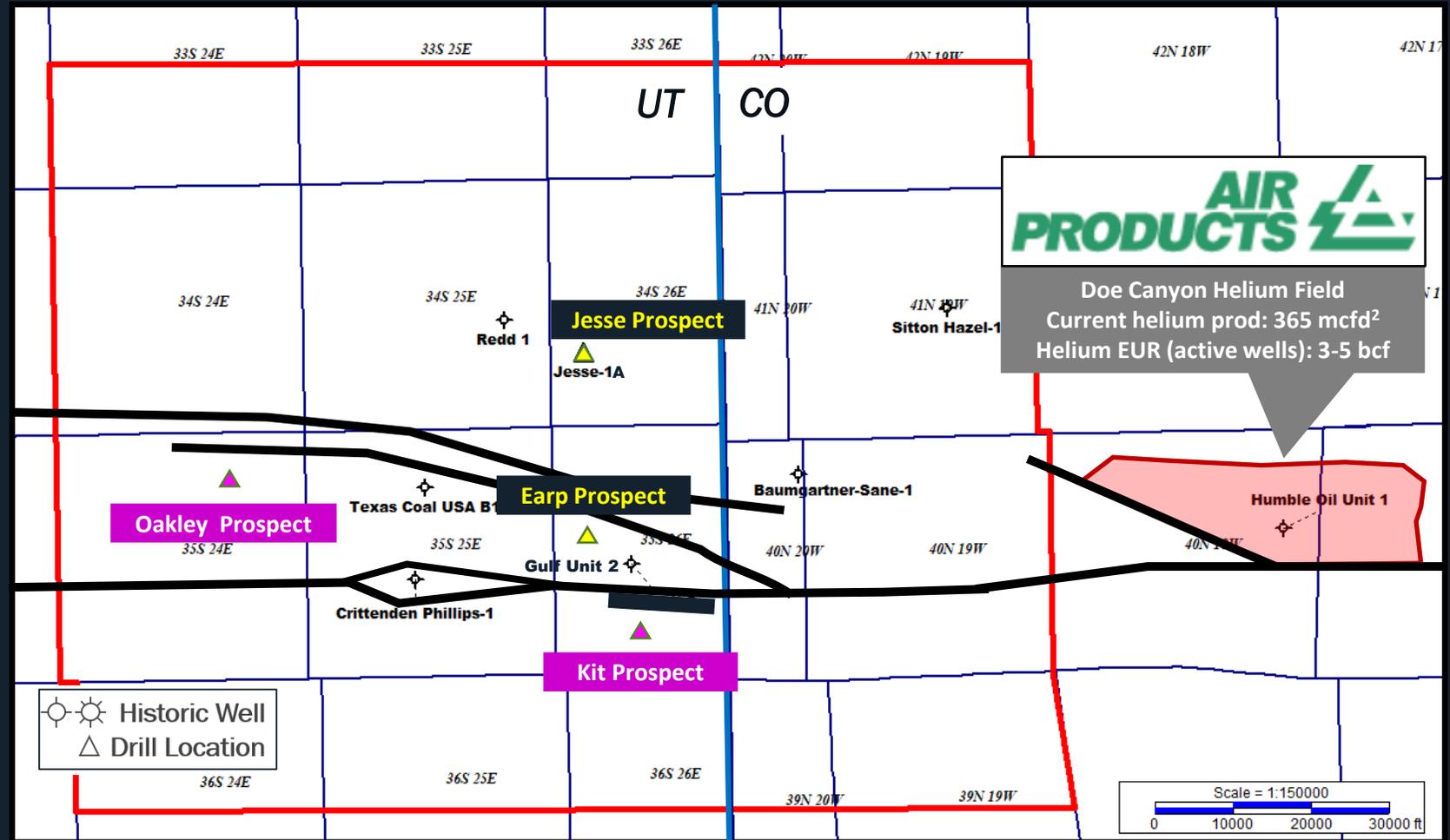
- Trap / Seal, Reservoir, Charge
- Helium system within AMI

Independent prospects

- Three drill locations on mature prospects independent to Jesse.
- Earp drill ready, permitting advanced.
- Prospects independent due to structure associated with well-defined and favorably-timed strike-slip faulting.
- Primary Target Mississippian Leadville Dolomite

Running Room:

- Deeper under-explored Devonian McCracken Sandstone formation
- Numerous leads



¹ ASX announcement 4 Apr 2022 https://cdn-api.markitdigital.com/apiman-gateway/ASX/asx-research/1.0/file/2924-02506327-6A1085020?access_token=83ff96335c2d45a094df02a206a39ff4

² Four Corners Helium LLC Internal Estimate

Helium Offtake Agreement Secured

Gas Sales & Processing Agreement (GSPA) executed with Paradox Resources LLC¹

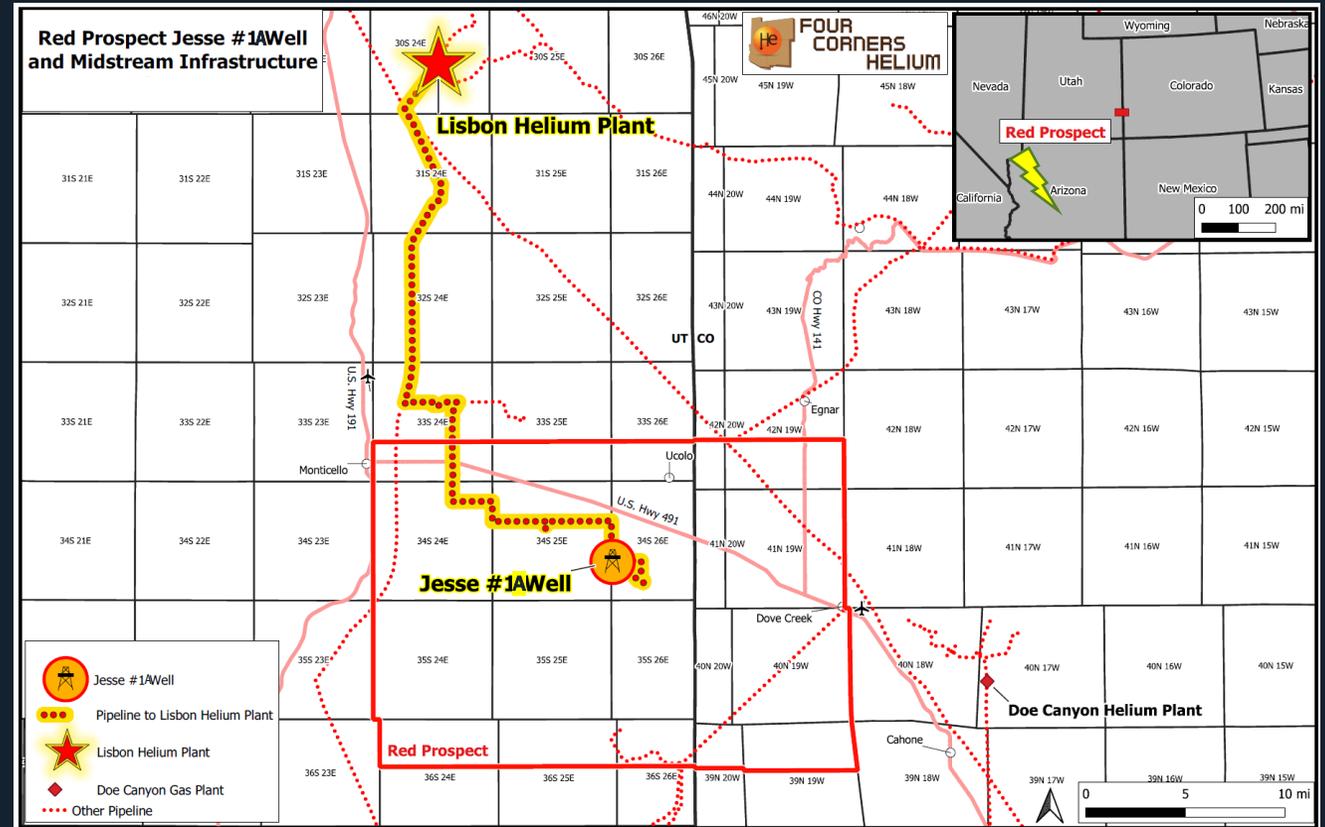
- 2 of the 8 helium purification plants in the U.S. are within 20 miles

Offtake: Jesse#1A to Lisbon in success case

- Validates technical merit of Greater Red Helium project.
- Industry standard commercial terms such as 80/20 revenue split, gas gathering / treatment tariffs
- Established gathering system in project AMI immediately adjacent to Jesse#1A and connects directly to the Lisbon plant
- Pathway to monetization and FCF with minimal time delay / CapEx for Jesse#1A success case
- Strategic Alliance to work with offtake partner to identify high tech end users (space, semiconductor) to identify long term large volume contracts for premium liquified helium, which demands premium pricing
- Exploring further synergies and strategic corporate opportunities

Lisbon Valley Gas Plant

- 60mmcf/d treating plant, 45mmcf/d cryogenic plant
 - 0.6mmcf/d liquefaction high purity 99.9995% helium
 - 0.5mmcf/d 99.989% gaseous helium
- Currently sequestering CO₂ well advanced in permitting to qualify for carbon capture tax credits (Section 45Q, US tax code)



¹ ASX announcement 16 Mar 2022 https://cdn-api.markitdigital.com/apiman-gateway/ASX/asx-research/1.0/file/2924-02499691-6A1082068?access_token=83ff96335c2d45a094df02a206a39ff4

Investment Highlights

Low Cost / Risk Pathway to Production

Jesse#1A Results^{1,2}

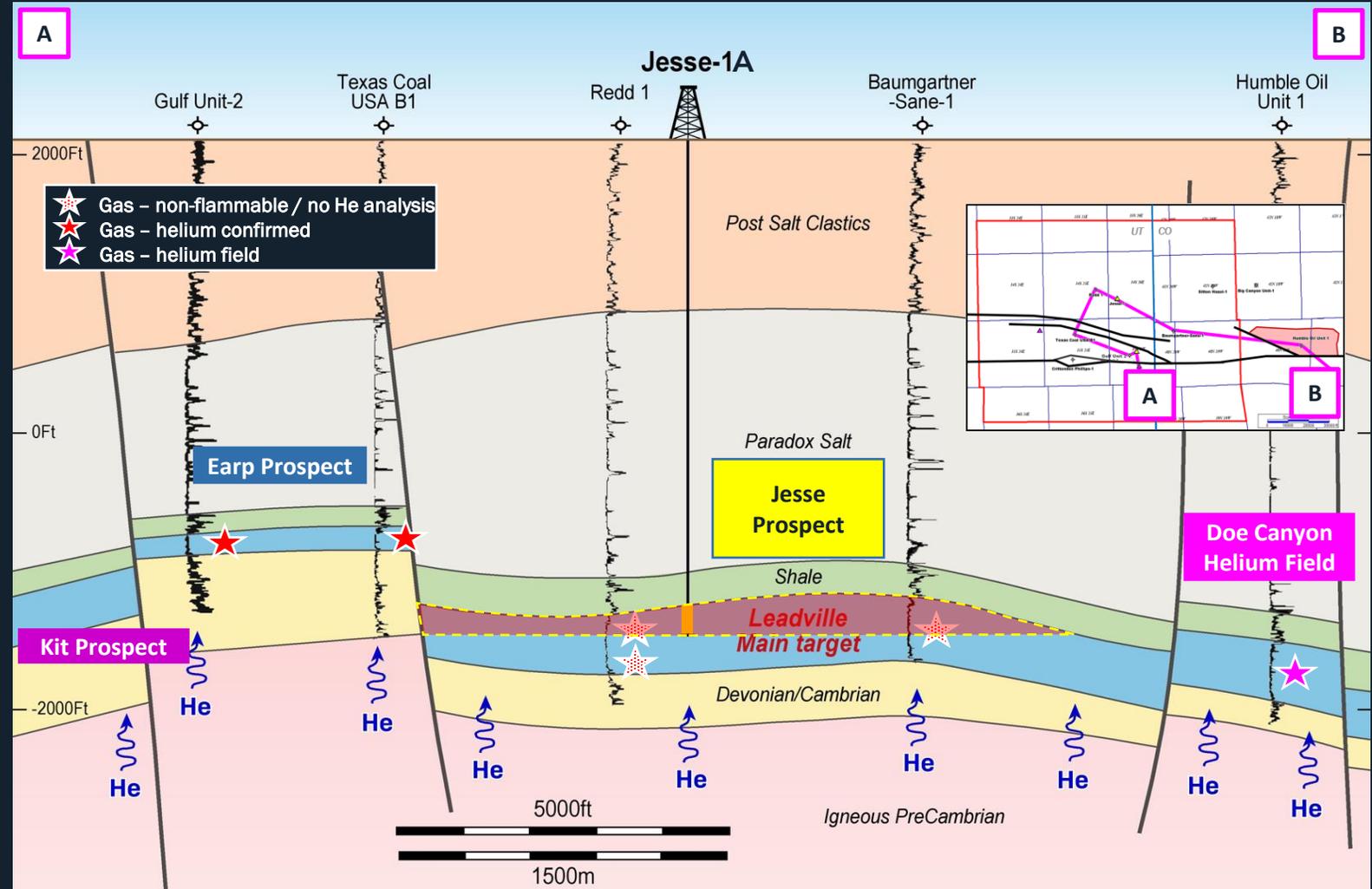
- Logs indicate large gross gas column
- Up to 0.65% helium
- High 2300psi bottomhole pressure

Forward Plan / Catalysts

- Jesse#1A flow test imminently
- 2nd Red Helium Project Well Q3/Q4 2022

Investment Rationale

- De-risked geology, high flow rates, He conc.
- Development friendly regulator – accelerator
- Structural deficit in helium market
 - High prices
- GGE positioned to capitalise quickly / cost effectively
- Existing infrastructure: minimal time / Capex
- Near immediate production
- Significant near term FCF potential
- Resource scale
- Target high tech end users, long term, large volume contracts



¹ ASX announcement 30 May 2022

² ASX announcement 29 June 2022

Leadership



Dane Lance
Managing Director

- >18 years' experience across E&P Lifecycle, Reservoir Engineer, including many major/mega development projects with significant exploration and MA&D
- Woodside Energy, Oil Search, Ophir



Keith Martens
Technical Director

- >40 years' experience as an oil finder
- North America – Hudson Bay, Home Oil, Marathon, and Saggasco
- Australia – SANTOS, Tap Oil, Bow Energy, Victoria Petroleum/Senex
- International – Jupiter (Kazakhstan)



Lloyd Flint
CFO / Company Secretary

- >25 years' experience in the corporate and financial services arena.
- Chartered Accountant, BAcc, FINSIA and MBA
- Numerous management / senior administrative positions, and corporate advisory services as a consultant to corporate clients



Craig Burton
Chairman

- Experienced active investor in emerging oil and gas companies
- Provides financial backing and legal advice

Four Corners Helium Team - www.fourcornersheliumllc.com

Four Corners Helium is a powerhouse of professionals with over 400 years of combined experience and expertise that are committed to finding and producing helium reservoirs.

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.

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.

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.

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.

Doug Frederick

Drilling Manager

- Over 40 years of experience in drilling and well operations.
- Directed the drilling and workover of over 2500 wells.
- Responsible for annual drilling and workover budgets of over \$500M.
- Drilled in 7 different States

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.



Jesse#1 drill site preparation, San Juan County, SE Utah



Aztec 980 Drill Rig on Jesse#1A well site



Work-over rig on the Jesse#1A well



Aztec 980 Drill Rig on Jesse#1A well site in SE Utah with Abajo Mountains



Jesse#1A drill site location with local pipelines

Strategic Alliance with Helium Offtake Partner

Exploit Significant Synergies Between Red Helium project and Paradox Resources Assets

Pursue several advanced opportunities to optimize and prioritize near-term exposure to the burgeoning helium market with potential mutually commercially advantageous revenue sharing agreements

Paradox Liquefier:

- Potential priority supplier to re-start the Paradox liquefier
- Current helium production gaseous purified 99.989%
- Liquefaction high purity 99.9995% helium
- Attracts premium pricing, US spot recently over **US\$2,000/mcf**
- Expansion of Jesse#1A to Lisbon offtake agreement

Collaborative downstream marketing

- Targeting end users of high-purity helium such as semi-conductor manufacturers and the space industry



CO₂ Disposal Options with Revenue Generating Potential:

- Joint investigation of Red Helium Project CO₂ for enhanced oil recovery (flooding) from Paradox's Lisbon Oil Field
- Investigate expansion of carbon sequestration activities at Paradox's Lisbon Plant to include CO₂ from Red Helium Project and application for tax credits (revenue) under Section 45Q of the US Tax Code

Corporate opportunities:

- Potential synergistic commercial benefits in assessing corporate opportunities that involve both Paradox assets and the Red Helium Project and have agreed to jointly pursue such opportunities.

ASX announcement 11 Apr 2022 https://cdn-api.markitdigital.com/apiman-gateway/ASX/asx-research/1.0/file/2924-02509232-6A1086215?access_token=83ff96335c2d45a094df02a206a39ff4

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Abbreviation	Description
He	helium
US BLM	US Bureau of Land Management – National Strategic Helium Reserve
UDGOM	Utah Division of Gas Oil and Mining
SITLA	Utah School and Institutional Trust Lands Administration
U	Prospective Resources – 1U/2U/3U – P90/P50/P10 - low/most likely/high
cf	Cubic Foot of Gas
scf	Standard Cubic Foot of Gas
b	Prefix – Billions
mm, M	Prefix - Millions
m	Prefix - Thousands
/d, d	Suffix – per day
tCO ₂	Tonnes of Carbon Dioxide
YE	Year End 31 December
WI	Working Interest
NRI	Net Revenue Interest (after royalty)
Net	Working Interest after Deduction of Royalty Interests
NPV (10)	Net Present Value (discount rate), before income tax
EUR	Estimated Ultimate Recovery per well
Net Acres	Working Interest Acres