



BuruEnergy

# Oil and Gas and the Energy Transition

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19 May 2022



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## BURU'S BUSINESS MODEL

# Buru Energy's core oil and gas business provides the platform for its participation in the high growth Energy Transition Economy

### Our Core Business:

Profitable oil production, conventional gas appraisal and development, extensive exploration acreage and well developed operating capability.

### Our Energy Transition Assets:

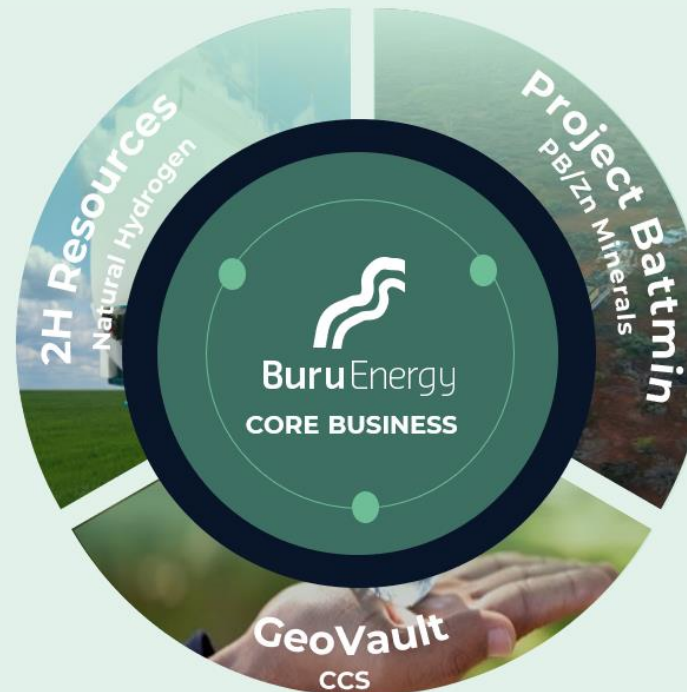
**2H Resources** – Natural Hydrogen exploration and production

**Geovault** – Carbon Capture and Storage (CCS)

**Battmin** – Battery Minerals (PB/Zn/Ag) in the Canning Basin

### Our People:

The Buru senior executive team is being strengthened by the appointment of a CEO and senior staff who are experienced in the energy transition and strategic growth options



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*Buru recognises the **shifting sentiment from fossil fuels**, whilst acknowledging they will be part of the energy mix for decades to come.*

*The Company's **active participation in the energy transition economy is vital** to ensuring it remains **relevant and commercially viable** in the future.*

**Eric Streitberg,**  
Executive Chairman



## Key assets and infrastructure to drive value

### Large contiguous land holdings in the Canning Basin (~22,000 sq kms) with onshore Carnarvon expansion

- Onshore, underexplored basins
- Exploration prospect inventory with extensive exploration running room



### Long term, experienced local operator

- Well established in the Kimberley
- Excellent stakeholder relations
- Operator for 3 major JV's
  - Origin Energy (exploration/appraisal)
  - ROC Oil (Ungani production)
  - Mineral Resources (onshore Carnarvon )



### Exploration and Appraisal

- Rafael 1 wet gas discovery with potential major gas resource
- Major seismic program recently completed to mature drilling prospects for 2023 and beyond



### Funding

- Current working capital of ~\$10 million with no debt
- Rights issue aimed to strengthen balance sheet for Rafael appraisal
- Cash flow from Ungani production
- Origin Energy farm-in part funding exploration



### Operated oil production

- Stable and secure oil production from Ungani Oilfield
- Production ~550 - 600 bopd
- Ungani 8 development well suspended, with potential for a vertical well in 2022/23 to capture high oil prices.



### Focus on Emissions Reduction

- Geovault a key CCS project enabler
- Ungani production system optimisation and potential for trucking and shipping reduction and offsets
- Target net zero by 2050



## Exploration programs to drive value

Extensive 2021 exploration program including two wells and regional seismic program.

Rafael 1 well discovery of significant conventional wet gas accumulation with independently verified Contingent Resources potentially sufficient for major gas development.

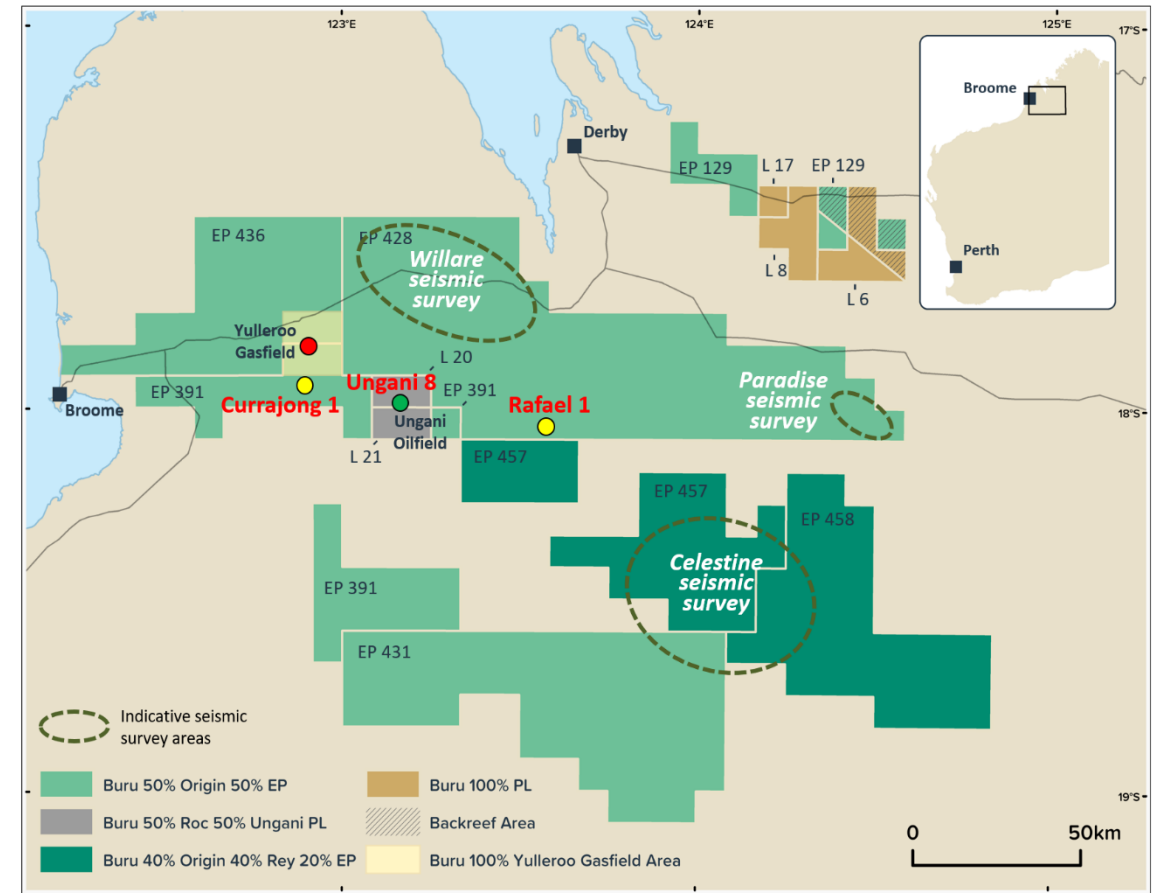
Currajong 1 well – first 2021 exploration well with encouraging oil shows and good reservoir but no commercial flows.

990 kilometres of new 2D seismic acquisition during 2021 over high prospectivity play types.

Significant funding from Origin Energy Farmin earning 50% across all Buru 100% exploration permits and 40% in southern EP457/458 permits with major additional contingent carry.

Buru retains 100% interest in substantial proven tight gas resources in Yulleroo Gasfield area with major regional tight gas endowment.

Ungani 8 horizontal development well suspended after mechanical difficulties – JV considering vertical well in 2022/23 to capture high oil prices.



Operations Location Map

## Carnarvon Basin conventional oil and gas and CCS potential

### Canning Basin IP applied to new areas

Buru's experience and knowledge of Palaeozoic aged geology in the Canning Basin is being applied in other Australian Basins to competitive advantage.

### Successful application as first step

Bid block L20-1 onshore Carnarvon Basin offered to 50/50 Joint Venture between Buru Energy (Operator) and Mineral Resources Limited.

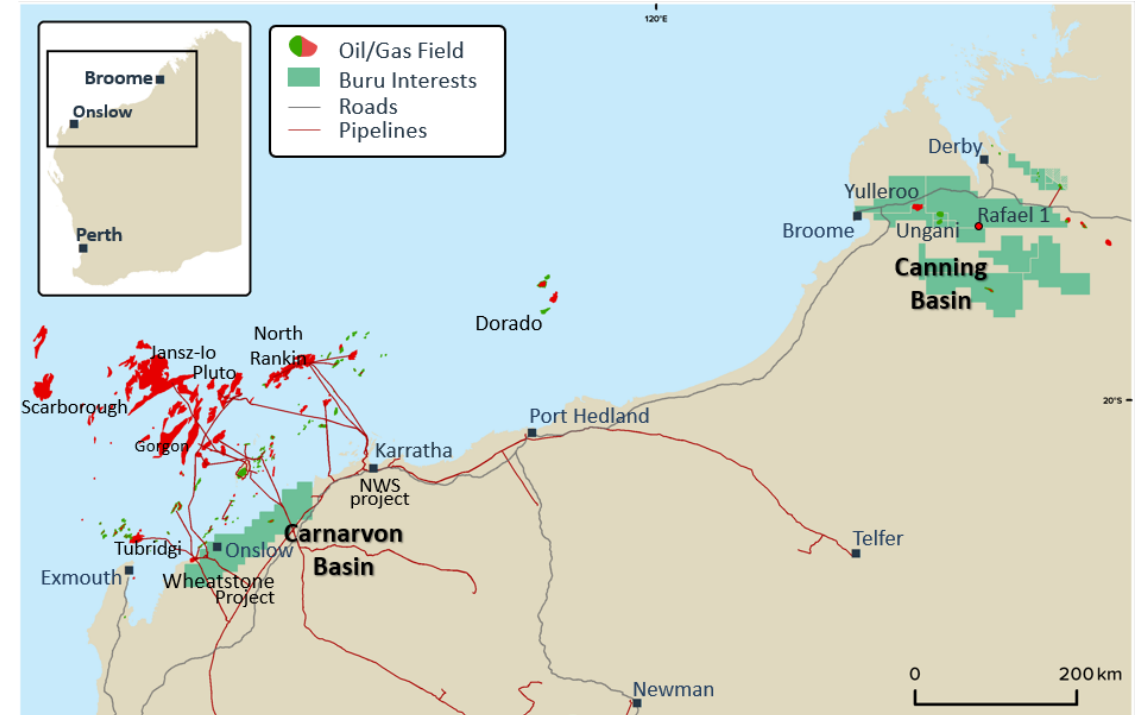
### Strategic location

Close to existing gas infrastructure including the Tubridgi gas storage facility, the Dampier-to-Bunbury Natural Gas Pipeline and the Wheatstone and Macedon gas processing plants.

### Prospective geology

Geology and play types similar to and complement Buru's Canning Basin assets, representing new prospectivity for the L20-1 area. With excellent prospectivity for CCS – Geovault engaged for review with recent offer of Commonwealth grant funding.

Deeper geological section underexplored with two drill ready prospects planned for 2023.



## Rafael conventional wet gas discovery

Rafael 1 well drilled on large structure with gas encountered in three zones

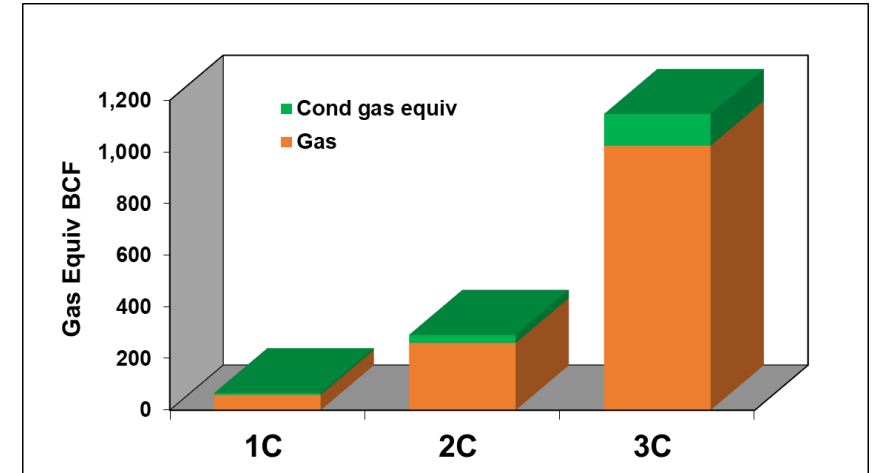
Well is located in EP 428, a 50/50 Joint Venture between Buru Energy (Operator) and Origin Energy

Rafael geology is similar to the currently producing Ungani Oilfield with conventional reservoir in Ungani Dolomite equivalents and a new play type in Upper Laurel dolomites. Test results in restricted part of the reservoir in the Ungani Dolomite equivalent provided encouraging flow rates up to ~7 mmcf with excellent quality gas (<2% CO<sub>2</sub> and 40 bbls/mmcf condensate).

Independent report on resource volumes assessed Contingent Resources as follows (Refer to the ASX release of 26 April 2022 for full definitions and disclosures)

	Oil and Condensate (MMstb)			Gas (Bscf)		
	1C	2C	3C	1C	2C	3C
Gross Contingent Resources	1.2	5.3	20.5	59	260	1,024
Net Contingent Resources	0.6	2.6	9.7	29	126	486

Wide range of resources as expected at early stage of evaluation. 1C is the gas seen in the well, 3C is the inferred gas in the structural closure and backed up by pressure data. 2C is probabilistic calculation with no physical basis.



Rafael 1 Ungani Dolomite Contingent Resources



Rafael 1 flow to flare pit

## Rafael significance

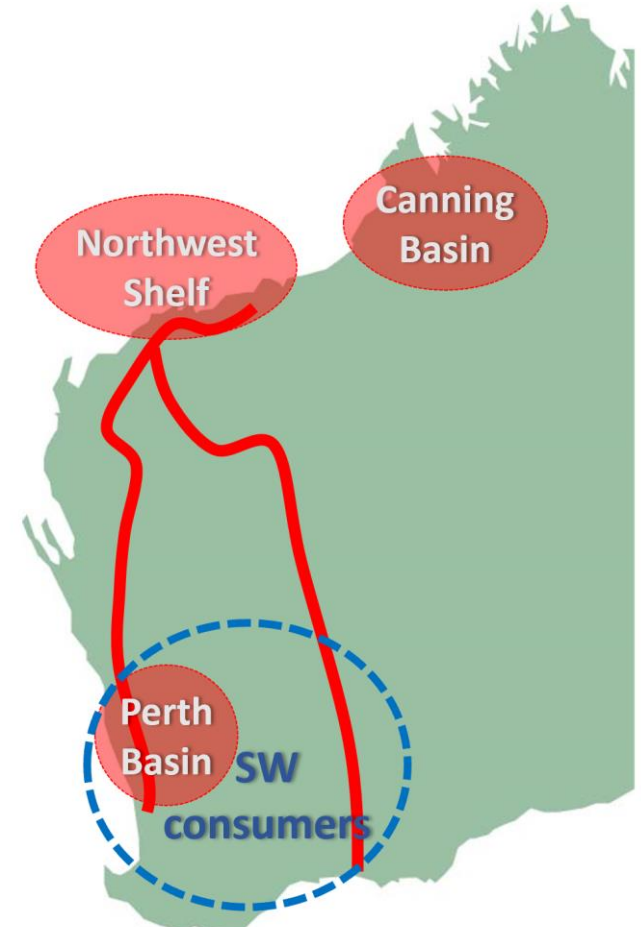
On an energy equivalent basis, Rafael contingent resource equates to ~190 mmbbls of oil at 3C level (energy equivalent basis 6,000 cubic feet of gas = 1 barrel of oil)

Resources are potentially sufficient to provide a large-scale commercialisation pathway.

One trillion cubic feet of gas (1 TCF) is enough gas to provide Western Australian retail customers with gas for over 30 years, and to supply the whole of Western Australia's domestic gas market needs for approximately three years.

Potential volumes are greater than some of the recent Perth Basin gas discoveries that have generated so much excitement.

Rafael also potentially contains more than 20 million recoverable barrels of condensate, a light oil, which could make it one of the biggest onshore Australian oil discoveries in decades.





# Rafael forward program

Initial testing program demonstrated excellent quality gas with less than 2% inerts (CO2) and rich condensate (light oil) of 40 barrels per million cubic feet with no pressure depletion or reservoir boundaries observed.

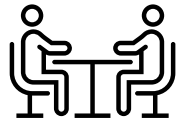
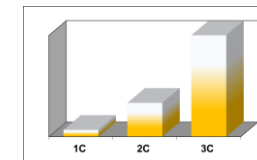
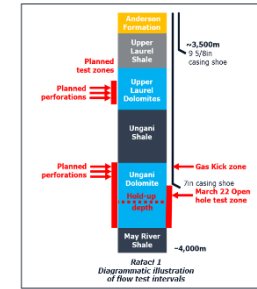
Targeted program over next six months to add value and increase contingent resources.

Initial well test restricted to part of one zone because of well configuration. Planning underway to test two additional zones and retest initial zone in third quarter with confidence of increased flow rates. Higher rates likely to increase contingent resources giving more confidence of higher recoveries from gas in place.

Test program will include remediation of potential formation blockage as well as perforation of additional intervals currently behind casing where gas flows were encountered while drilling, and Prospective Resource zone in the Upper Laurel. Program currently planned for third quarter 2022.

3D seismic survey also planned for the third quarter. Data will provide confirmation of structure size and aims to confirm potential for gas column extent. It will also make sure the appraisal wells in 2023 are optimally sited.

Commercialisation studies/activity undertaken in parallel with operations.



## Rafael commercialisation

Multiple paths for commercialisation.

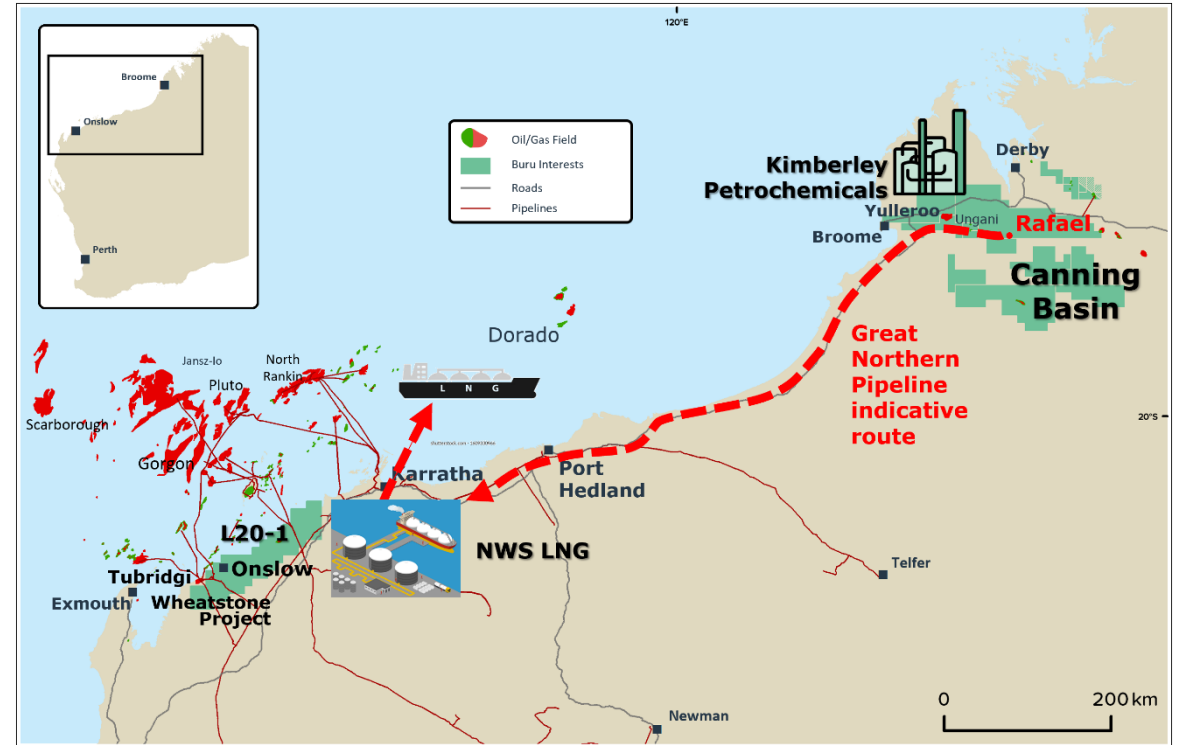
Export to NW Shelf, Pilbara markets, petrochemicals and Blue Hydrogen in the Kimberley.

Current ullage window on the NWS opens the way for access to lucrative international LNG markets. Pipeline costings, route and approvals pathway part of Buru's previous long term planning for gas export from the Basin.

Kimberley based petrochemical projects with potential for low to net zero emissions facilitated by Geovault have similar capex and potentially shorter project timelines than export. Blue Hydrogen and potentially ammonia production, with associated geological CCS provided by Geovault for green product stream.

At the 1C Contingent Resource level, sufficient gas is available to supply current domestic Kimberley gas markets with a much reduced carbon footprint.

Discussions with project proponents underway under confidentiality arrangements and with regulators with aim of end of year project definition.





# Geovault

CCS (Carbon Capture and Storage) is a key component of any realisable path to net zero by 2050.

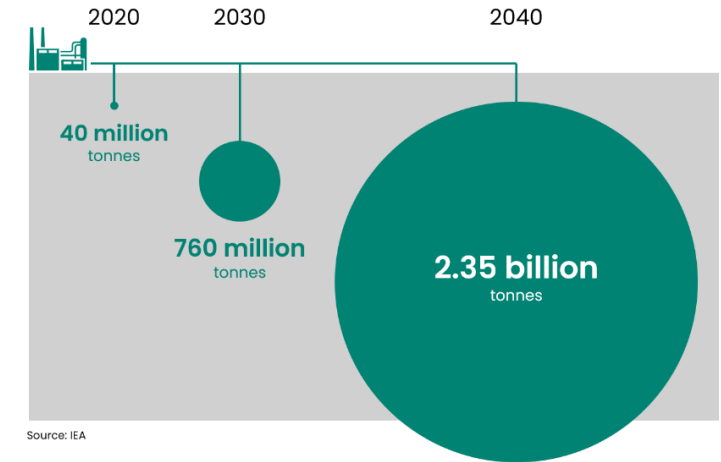
Geovault aims to be a pre-eminent operator in the identification and operation of CCS projects, focused on the geological sequestration of CO<sub>2</sub> in underground geological reservoirs.

Geovault's objective is to consolidate the geological IP for these processes and to undertake a demonstration project to gain experience in the operation of CCS projects using geological storage.

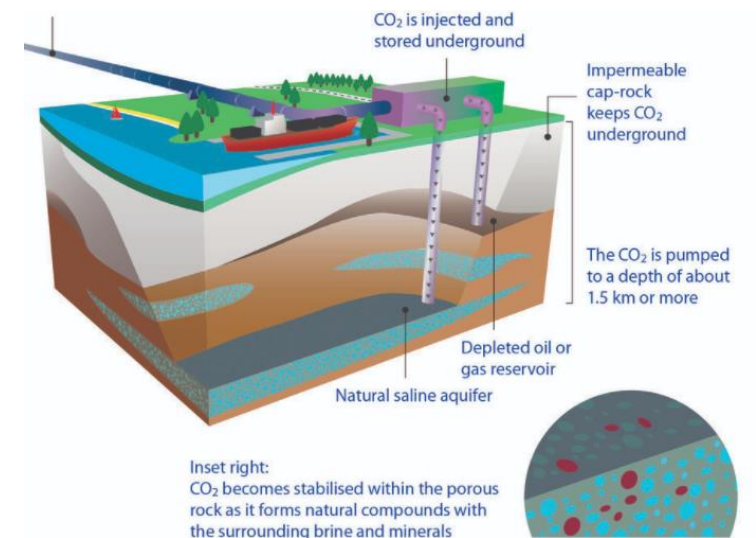
CCS will be an enabler for any Canning Basin or Carnarvon gas project with the potential for developments to be able to dispose of process and reservoir CO<sub>2</sub> in a cost effective manner for a "green" product stream.

The Company has access to technical specialists with extensive experience in Australian and international CCS projects and is undertaking wide ranging technical studies to ensure it is at the forefront of the industry.

Buru has recently been offered a Commonwealth Grant of matching \$7 million to investigate the feasibility of CCS in the onshore Carnarvon Basin in the vicinity of its L20-1 application area. This validates the expertise within Geovault and the prospectivity of Buru's acreage for CCS.



**Annual global CCS capacity needed to meet IEA sustainable development scenario**



2H  
Resources

## Natural Hydrogen

2H Resources is exploring for Natural Hydrogen (Gold or White Hydrogen) and associated Helium.

Natural Hydrogen is produced from underground accumulations in the earth and not manufactured, so it has the potential for a low-cost net zero carbon hydrogen supply economy.

Natural Hydrogen is often associated with helium in the subsurface and both can be produced at the same time.

The potential of Natural Hydrogen has only recently been recognised and 2H Resources is joining the search for and exploitation of these resources.

2H Resources is initially technically supported by Buru but is expected to become independent in due course.





**2H**  
**Resources**

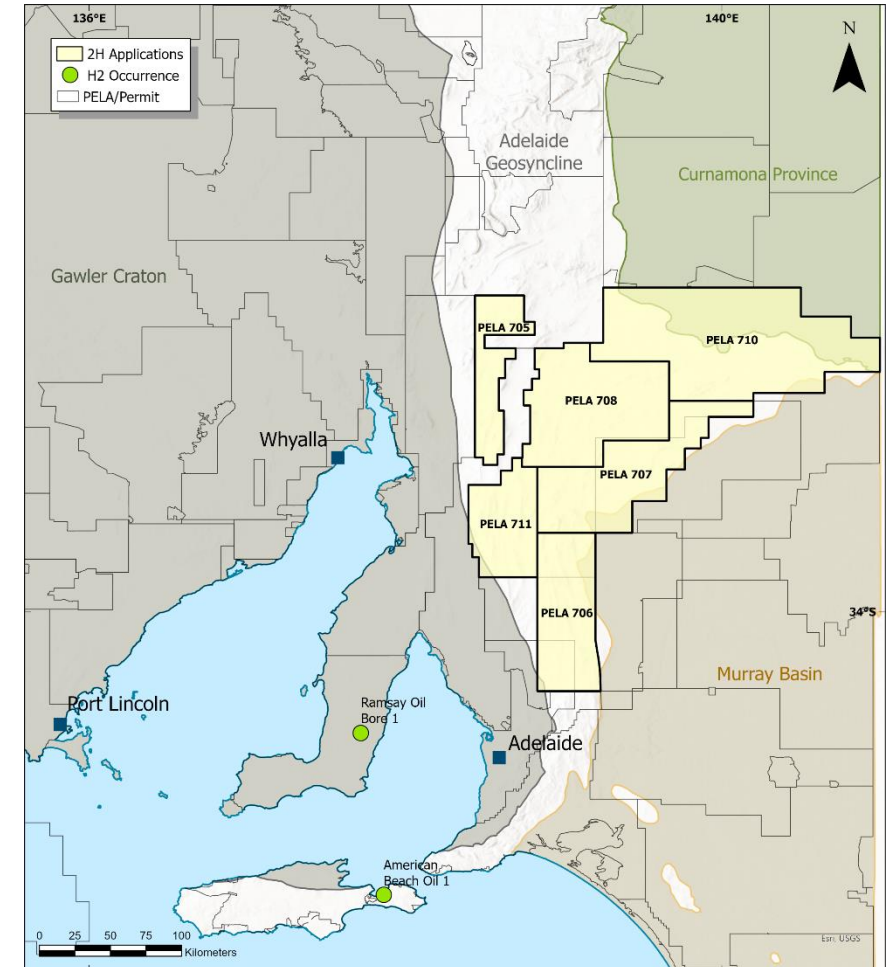
## 2H Resources

2H Resources is a first moving explorer for Natural Hydrogen (Gold or White Hydrogen) and associated Helium.

The potential of Natural Hydrogen has only recently been recognised and 2H Resources has moved quickly to establish an exploration portfolio in South Australia where the regulatory framework is in place for natural hydrogen exploration.

Other permit holders in the area have quantified the potential for natural hydrogen based on hydrogen recovered from previous wells in the area. These estimates suggest that on a regional basis there is potential for large volumes of hydrogen in place.

Hydrogen has also been detected in wells drilled in the Canning Basin and these indications are being analysed for their commercial significance. 2H also has proprietary sampling equipment and processes which it will be using for exploration.



2H Resources South Australian application areas



# Battmin

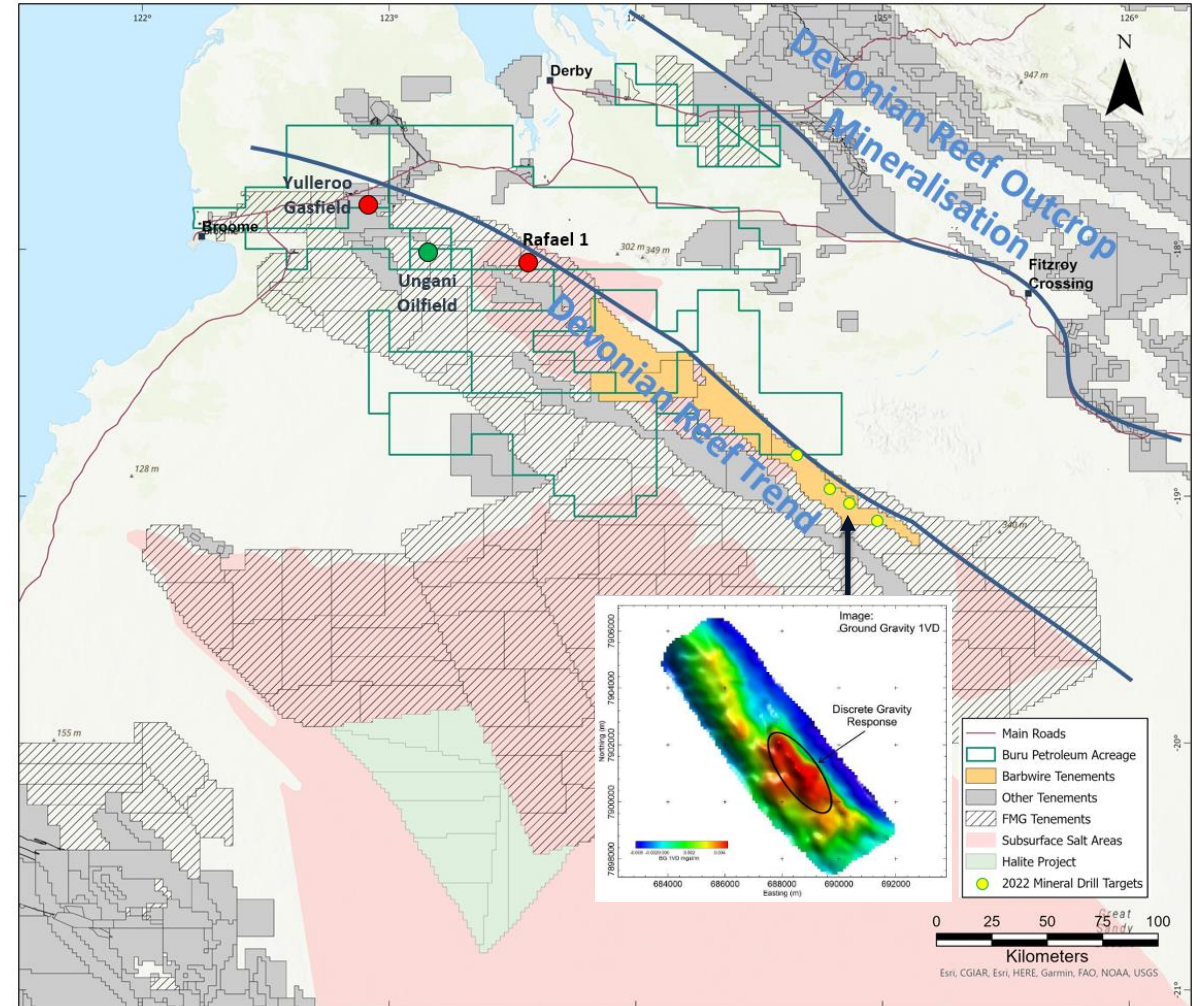
PB/Zn/Ag MVT style deposits are mined from hydrothermal dolomites in the Canning Basin and have been encountered in numerous petroleum wells.

Battmin is using Buru's expertise to explore for blind (undercover) MVT deposits controlled by the same processes that form petroleum deposits in the carbonate terranes of the Canning Basin.

Buru has partnered with mineral explorers who have additional expertise in on-ground mineral exploration and a 2022 drilling program on well defined geophysical anomalies is planned with joint venture partner Sipa Resources Ltd.

Zinc prices are currently very strong at approximately +US\$3,500 per ton.

USGS review indicates median size of MVT deposits worldwide is some 7 million tons of ore at 6% Zn, for contained zinc of 420,000 tons.



## Experienced Board and management.



**Eric Streitberg**  
Executive Chairman  
Exploration and development



**Ms Joanne Kendrick**  
Independent Non-Executive Director  
Petroleum Engineering



**Mr Malcolm King**  
Independent Non-Executive Director  
Petroleum Geology



**Mr Robert Willes**  
Independent Non-Executive Director  
Commercial



**Mr Thomas Nador**  
CEO Designate  
Project delivery

### Corporate Snapshot

Shares on Issue	~538M
Market Cap	~\$100M
Share Price	\$0.17
Working Capital	~\$10M, with no debt (mid May 2022)
Options	7.2M (Exp 31 Dec 23)

### Current Rights Issue to support Rafael Appraisal and Commercialisation

Record Date	9 May 2022
Entitlement Offer	1 for 6
Issue price	16 cents per share
Discount	24% (to pre announcement price)
Closing date	31 May 2022
Target raise	\$14.4 million

# Clear and compelling case for investment: Strong Buru Core Business with significant core asset growth potential and Energy Transition growth.



### Buru Core

Proven gas resource under development.  
Oil production and infrastructure, with  
and extensive oil and gas prospectivity

#### Controlling acreage interest and infrastructure

in underexplored WA Basin with excellent conventional oil  
and gas prospectivity.

#### Rafael gas discovery provides major growth potential

Rafael gas discovery has +TCF potential with clear pathway to  
commercialisation

#### Strong corporate structure

Contingent exploration farmin cash carry across several  
permits, cash flow from oil production.  
Experienced Board and management team.



### Integrated Energy Transition

Transition to new energy to future-proof  
the business

#### Natural Hydrogen (2H Resources)

Exploring for naturally occurring (geological) hydrogen. Huge  
blue sky potential for low cost hydrogen production.

#### Carbon Capture and Storage (CCS) (Geovault)

CCS is necessary for all aspects of the energy transition with  
significant investment required. Geovault is focused on  
geological storage and was recently offered a grant to  
evaluate geological storage in the onshore Carnarvon Basin.

#### Battery Minerals (Battmin)

Applying geological hydrocarbon IP to Pb/Zn/Ag MVT  
deposits in the Canning Basin with drilling coming up.





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# Strong Core Business and Integrated Energy Transition Business Streams

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# Technical Appendix

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## Rafael Resources determination

ERCE were engaged to provide a resource estimation of the gas and condensate that had been encountered in the well.

As expected at this early stage of the evaluation there is a wide range of resource estimates. (Refer to the ASX release of 26 April 2022 for full definitions and disclosures)

The principal uncertainty at the main Ungani Dolomite level is the height of the gas column. The Rafael 1 well did not encounter a gas/water interface (gas on rock interpreted) such that the most certain estimate is the 1C resources in the gas column of some 165 metres that was encountered in the well bore.

At the 3C level ERCE have used the structural closure of some 634 metres as mapped from the existing 2D seismic data.

The 2C Contingent Resources estimate of 260 BCF of recoverable gas results from a probabilistic calculation and has no actual physical realisation.

The Ungani Dolomite equivalent section has a gross hydrocarbon column of some 165 metres and an interpreted net section of some 50%.

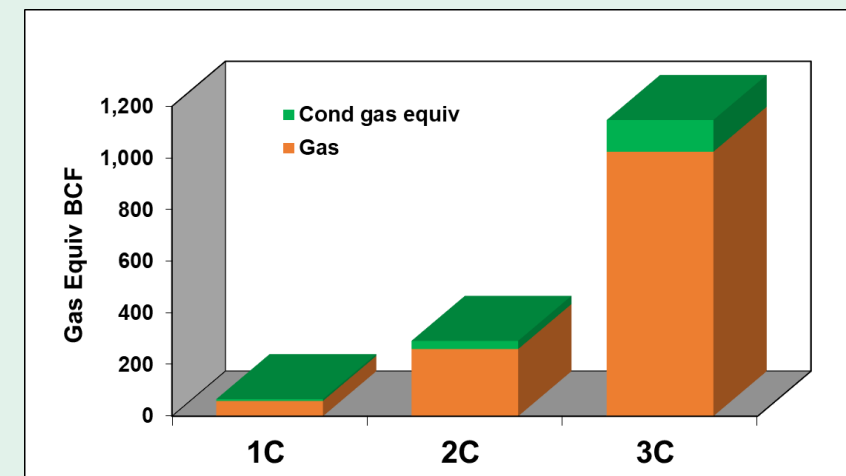
The Upper Laurel Dolomite section shows evidence of some 75 metres of hydrocarbon column (most likely wet gas grading to oil) with approximately 10 metres of interpreted net pay.

Ungani Dolomite Contingent Resources

	Oil and Condensate (MMstb)			Gas (Bscf)		
	1C	2C	3C	1C	2C	3C
Gross Contingent Resources	1.2	5.3	20.5	59	260	1,024
Net Contingent Resources	0.6	2.6	9.7	29	126	486

Upper Laurel Dolomite Prospective Resources

	Chance of Success (COS)	Oil and Condensate (MMstb)			Gas (Bscf)		
		1U	2U	3U	1U	2U	3U
Gross Prospective Resources	80	0.3	1.5	6.0	9	38	132
Net Prospective Resources	80	0.1	0.7	2.9	4	18	63



Rafael 1 Ungani Dolomite Contingent Resources



## Rafael structure and Ungani Dolomite gas column

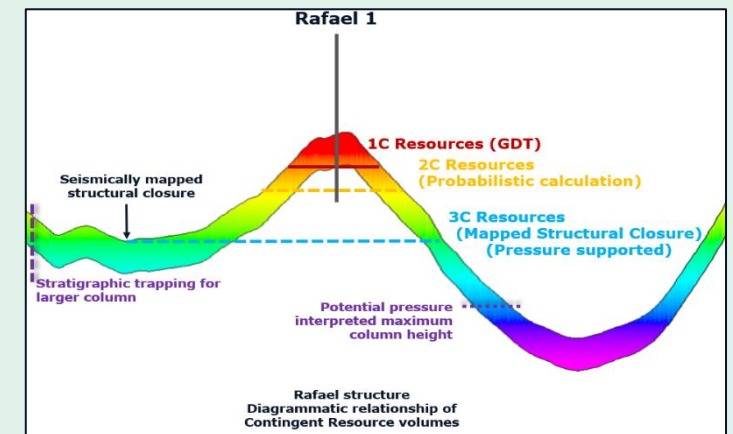
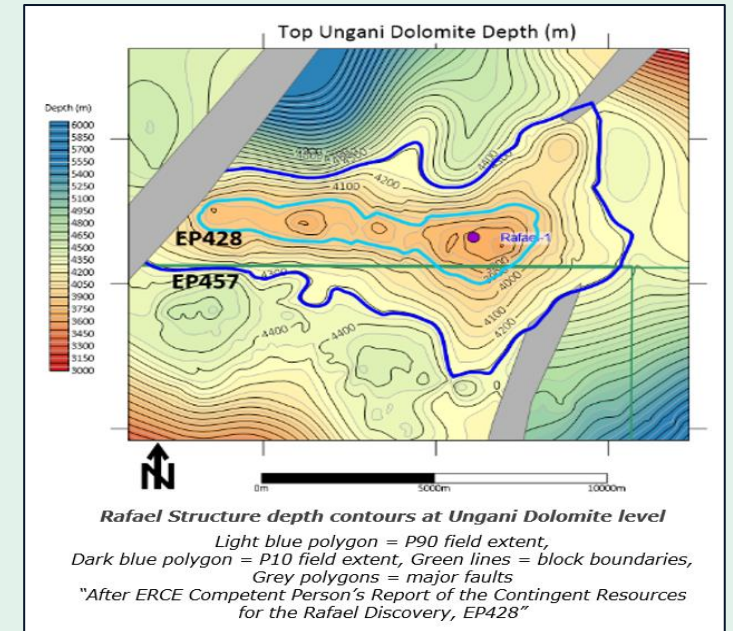
Rafael 1 well drilled on large structure with gas encountered in three zones, Upper Laurel Dolomite (first time in the basin), Ungani Dolomite Equivalent, Anderson Formation (tight).

Structure controlled by 2D seismic with up to 700m of mapped closure.

Column height is principal uncertainty in the Ungani Dolomite. The height of the hydrocarbon column as defined by the “gas down to” at the Rafael 1 well is some 165 metres. Buru’s interpretation is that the pressure data from the well indicates that the height of the hydrocarbon column could be at least 700 metres, which is generally coincident with the structural closure mapped by Buru on the existing 2D data. Furthermore, the interpretation of the pressure data also implies that the column could be as great as 900 metres, which would require an element of stratigraphic trapping.

The ERCE assessment incorporated a structural closure of some 634 metres at the 3C level as shown on the accompanying map.

Determination of the column will require an appraisal well in the 2023 drilling program. A successful well will convert the 3C to 1C/2C – a very large value increment.





## Rafael hydrocarbon zones and test program

Due to a well control event at the top of the Ungani Dolomite section, 7 inch casing was required to be set over the upper part of the Ungani Dolomite section. The well was then completed “open hole” with no casing over the main reservoir section.

The test program was then conducted over the open hole section below the 7 inch casing. It was also noted that there was a “hold up depth” at approximately half the open hole section. This may have impeded flow from the lower part of the section.

The test was successful in proving free flowing high quality gas with less than 2% CO<sub>2</sub> and up to 6% ethane. The condensate ratio measured from field samples was some 40 barrels per million cubic feet of gas.

The condensate has an API gravity of 50 degrees which means it is a light oil. Analysis is currently in progress to quantify the yield with condensates usually yielding high levels of jet fuel and diesel.

The test showed no pressure depletion with reservoir pressures of 6,200 psi being built up quickly after the test.

Analysis of the pressure data indicated potential well bore occlusion (skin damage) from the long exposure to drilling and completion fluids. Despite this the well free flowed gas at up to 7 million cubic feet a day.

