

**PNG's Next  
Big Project**



**RESOURCE  
35%  
UPGRADE**

# Pasca Development Project

Energy from the Gulf of Papua

12 December 2023

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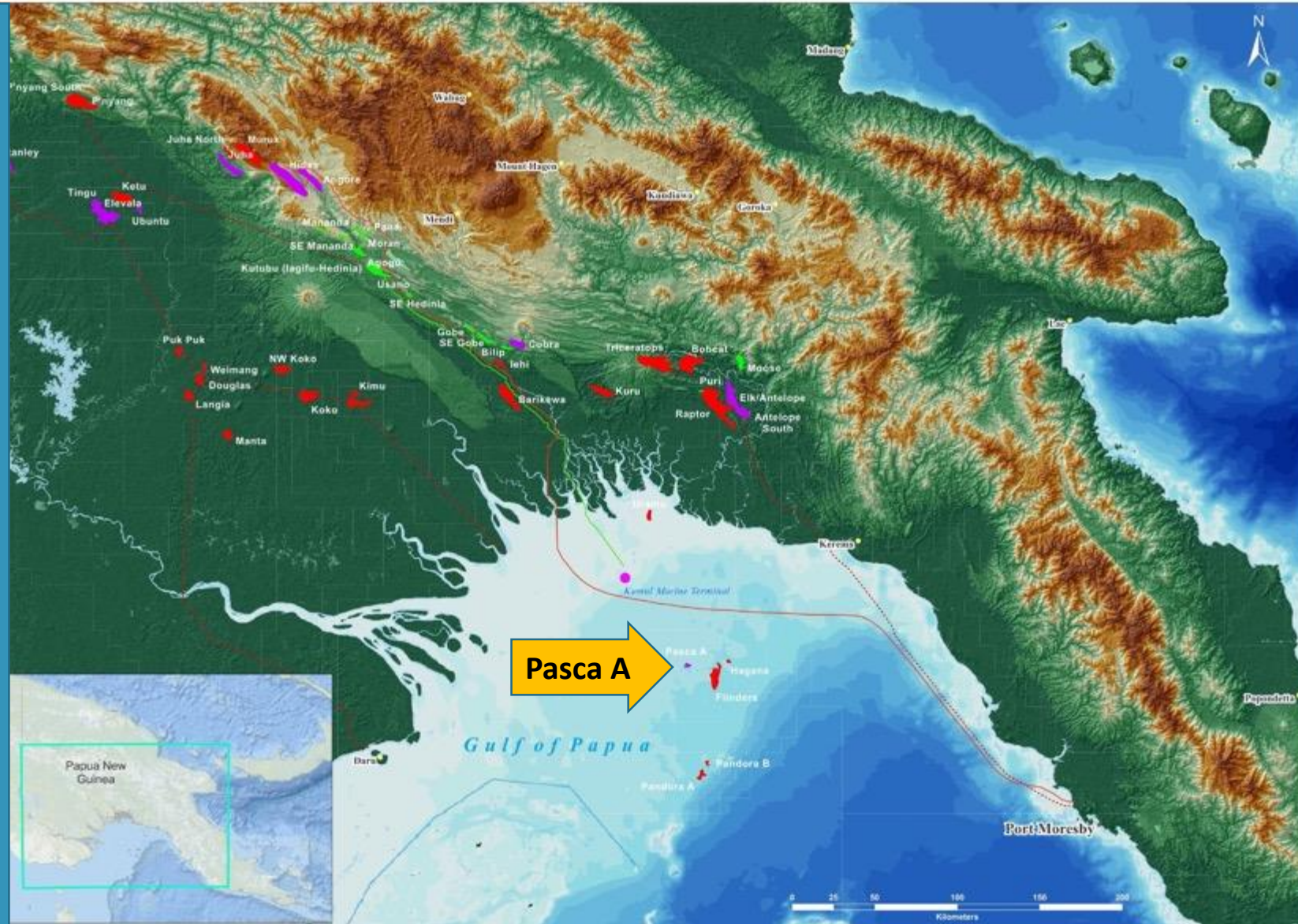
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# Pasca: PNG's Next Big Oil and Gas Project – Development Ready

- "Big 5" new resources project
- Over K600 million invested since 2008
- Pasca PDL application in 2015
- Gas Agreement terms agreed in 2021
- FEED-ready design (~170mboe)
- Pasca project benefits for PNG:
  - USD \$1.5billion of FDI
  - First State revenues in 2027\*
  - ~K15 billion revenue to PNG
  - >K31 billion GDP impact

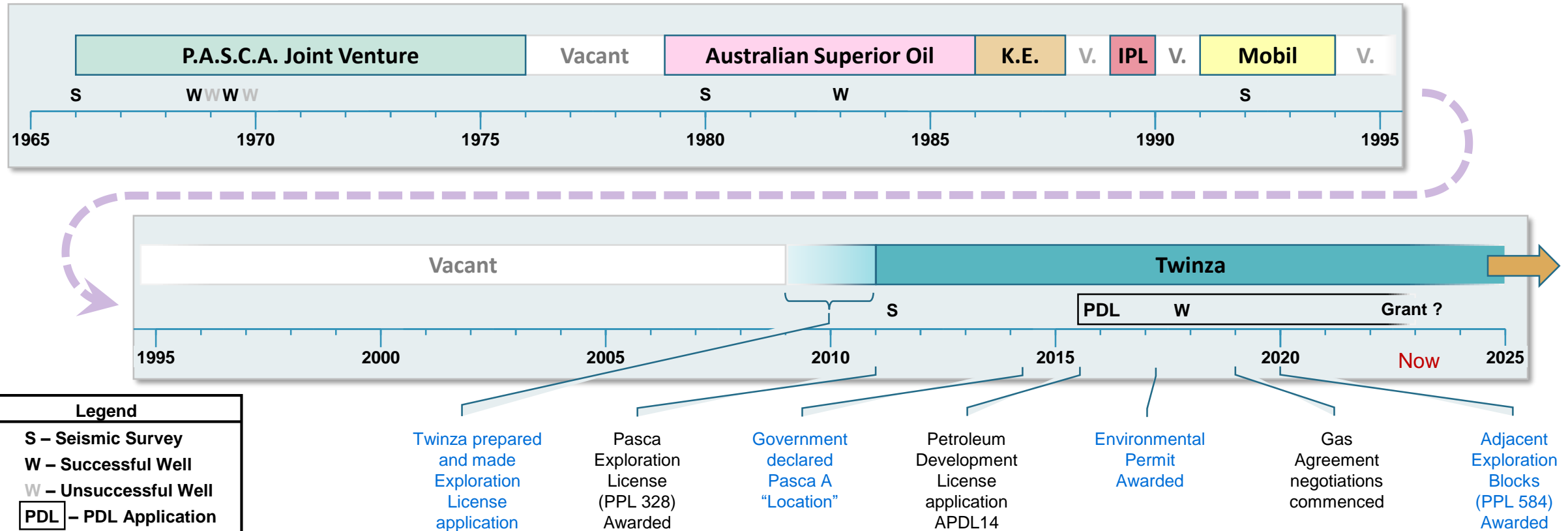


\*Subject to Gas Agreement by end 2023

# Twinza: An Exploration Success Story in PNG



- After 3 decades of exploration by oil majors since 1966, the Pasca asset lay dormant for 14 years before Twinza
- Over the past 16 years (since 2008), Twinza has advanced the Pasca project to development readiness:
  - Submitted a Petroleum Development License application in June 2015
  - Social Mapping and Landowner Identification (SMLI) and Environmental Impact Assessment (EIS) completed in 2016
  - Fully completed the Pasca A reservoir appraisal program including drilling the A4 well in 2017



# Pasca Development Project: Two Phases

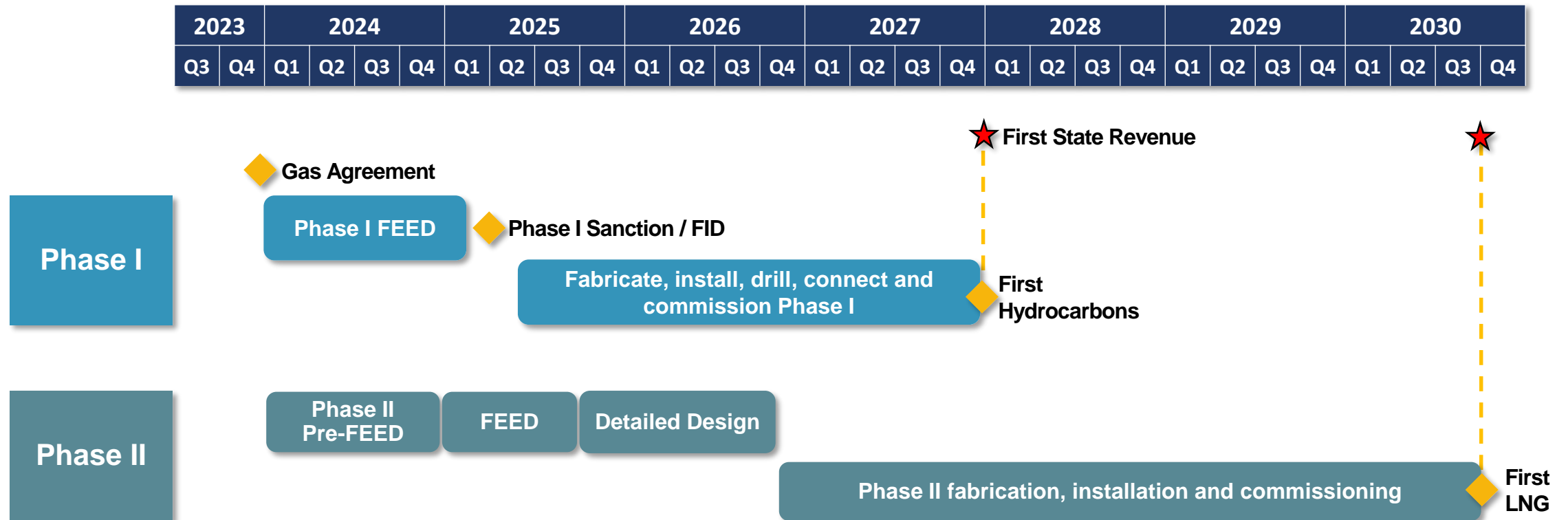
Phase I: 7 million bbl p.a. liquids, US\$700million investment

Phase II: 0.75 Mtpa LNG, US\$800million investment



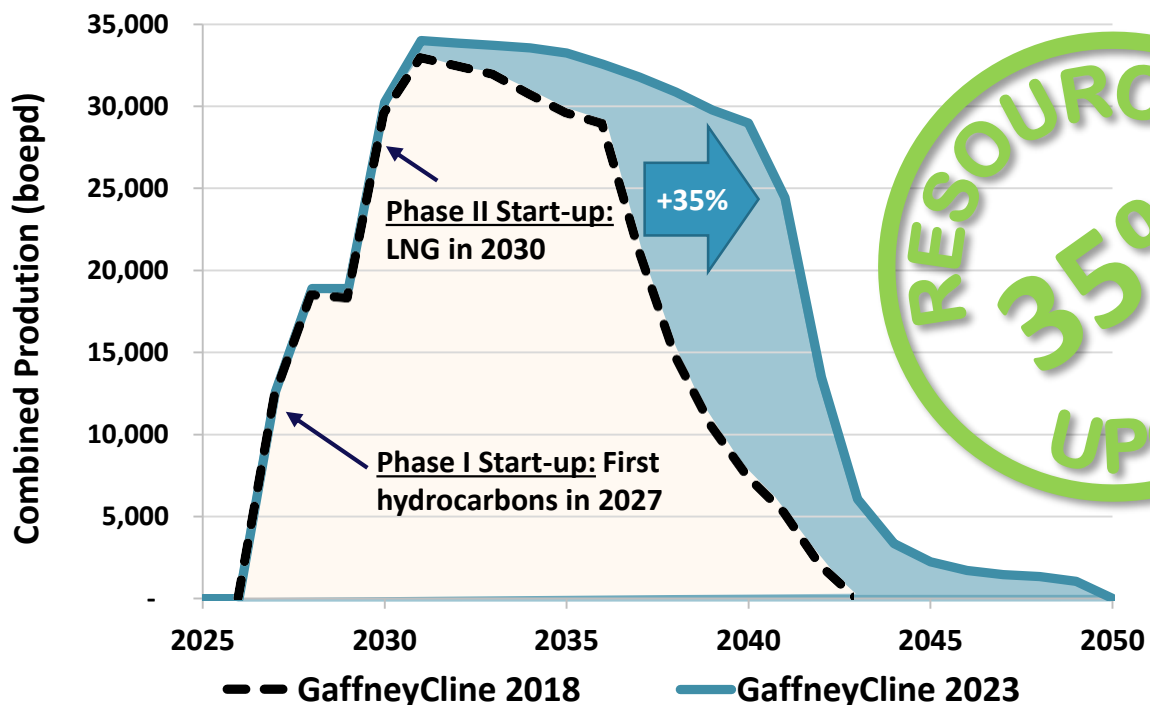
## Pasca Development Project Phase I & II

Year end 2023 Gas Agreement would mean first revenues can be delivered to PNG in 2027



## Significant increase in benefits to PNG

- Longer plateau gives longer cash generation phase
- 35% increase in resource
- Drives 75% increase in total revenue to PNG
- Project development scope is unchanged

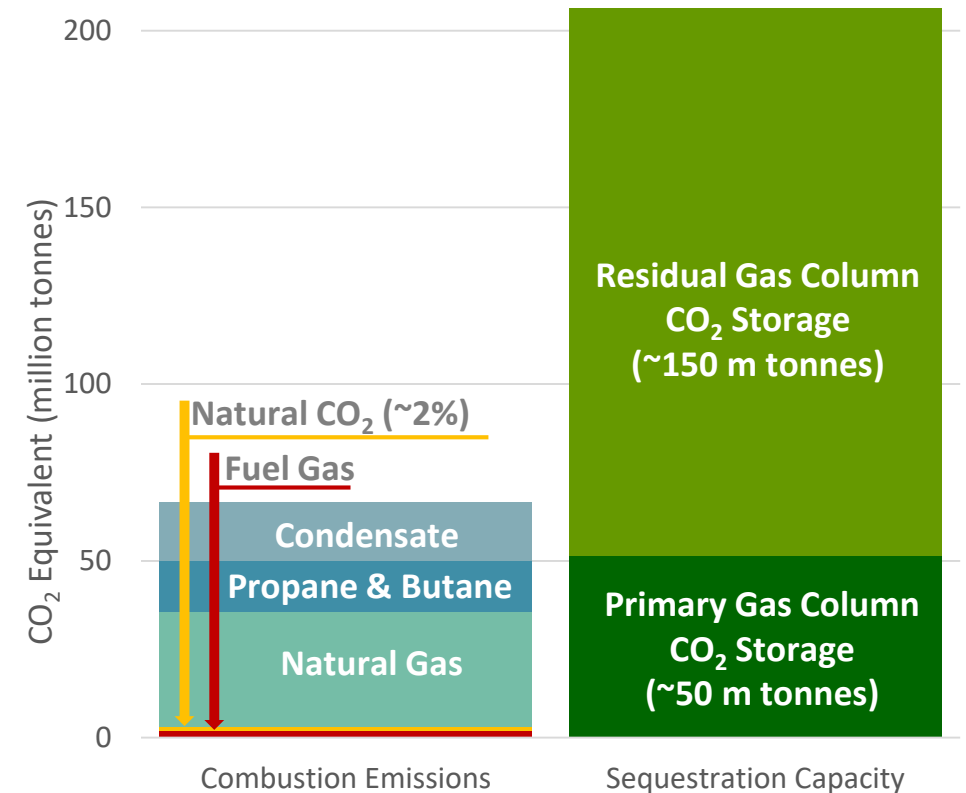
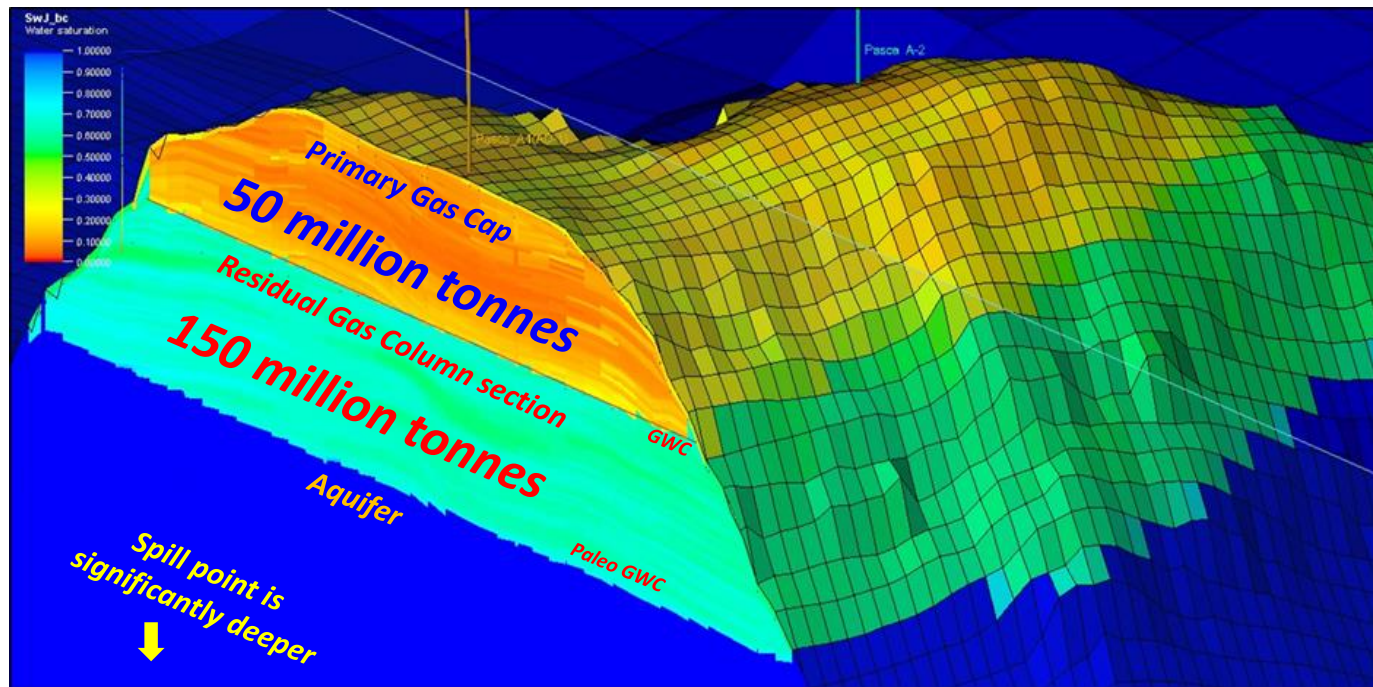


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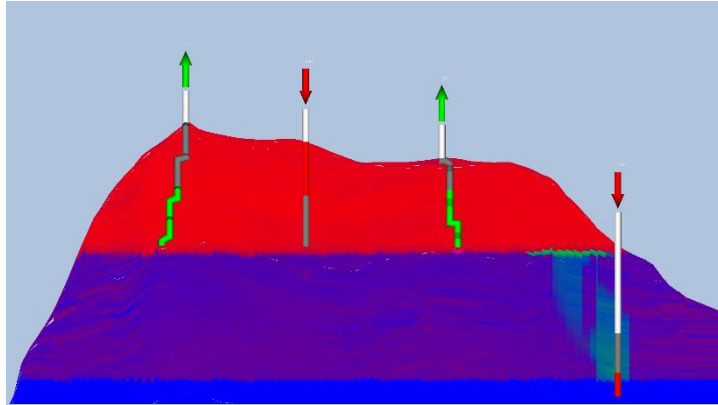
- Pasca has potential to become **PNG's only carbon negative LNG project**
- GaffneyCline validated the subsurface feasibility, and quantified CO<sub>2</sub> sequestration, in the Pasca A field and aquifer.
  - **>50m tonnes of CO<sub>2</sub> in the gas cap section** of the reservoir
  - Plus **>150m tonnes in the aquifer section** directly below the gas water contact.
  - CO<sub>2</sub> injection is technically feasible **concurrently with gas production**.
  - CO<sub>2</sub> injection modelled at **3mtpa**



## Phase I:

Simultaneous:

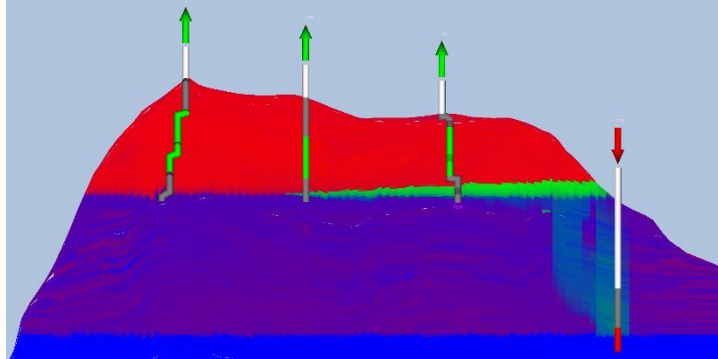
- liquids production,
- dry gas injection,
- liquid CO<sub>2</sub> injection



## Phase II:

Simultaneous:

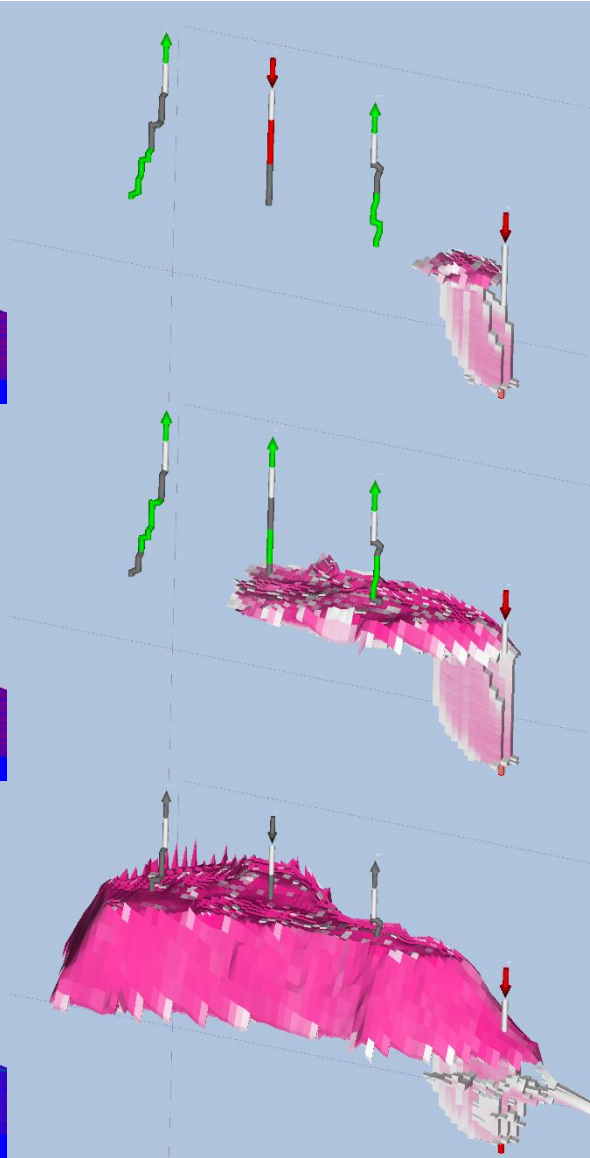
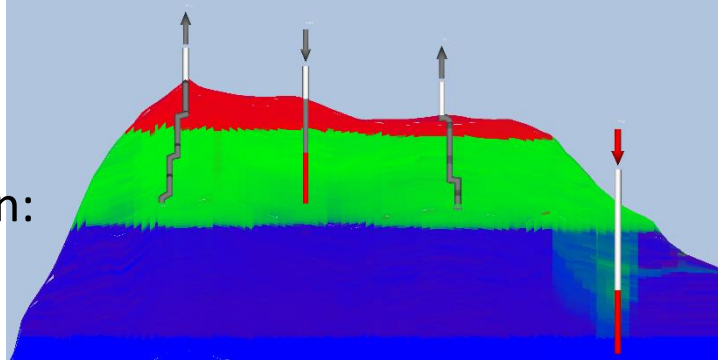
- LNG production,
- liquid CO<sub>2</sub> injection



## Possible Phase III:





Post reservoir depletion:

- CO<sub>2</sub> injection continues



- Large structure
- High porosity & permeability
- Excellent seal; no faulting
- Ideal for injection storage
- **CO<sub>2</sub> Storage >200m tonnes**

### LEGEND

	100% Gas
	100 % Water
	Injected CO <sub>2</sub>
	0% - 100% CO <sub>2</sub>

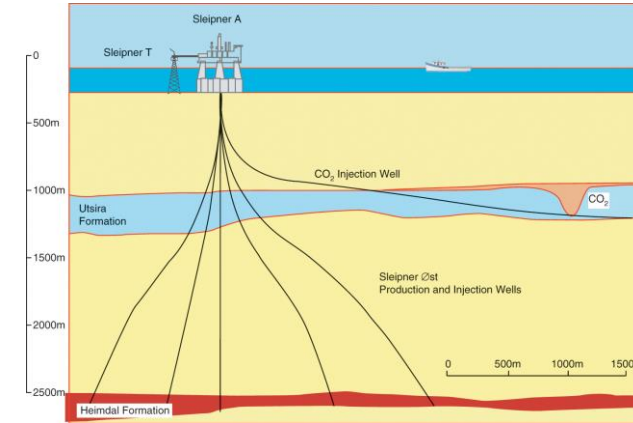
# World Class Potential of Pasca CO<sub>2</sub> Sequestration

## 50m - 200m tonnes is large potential by global standards

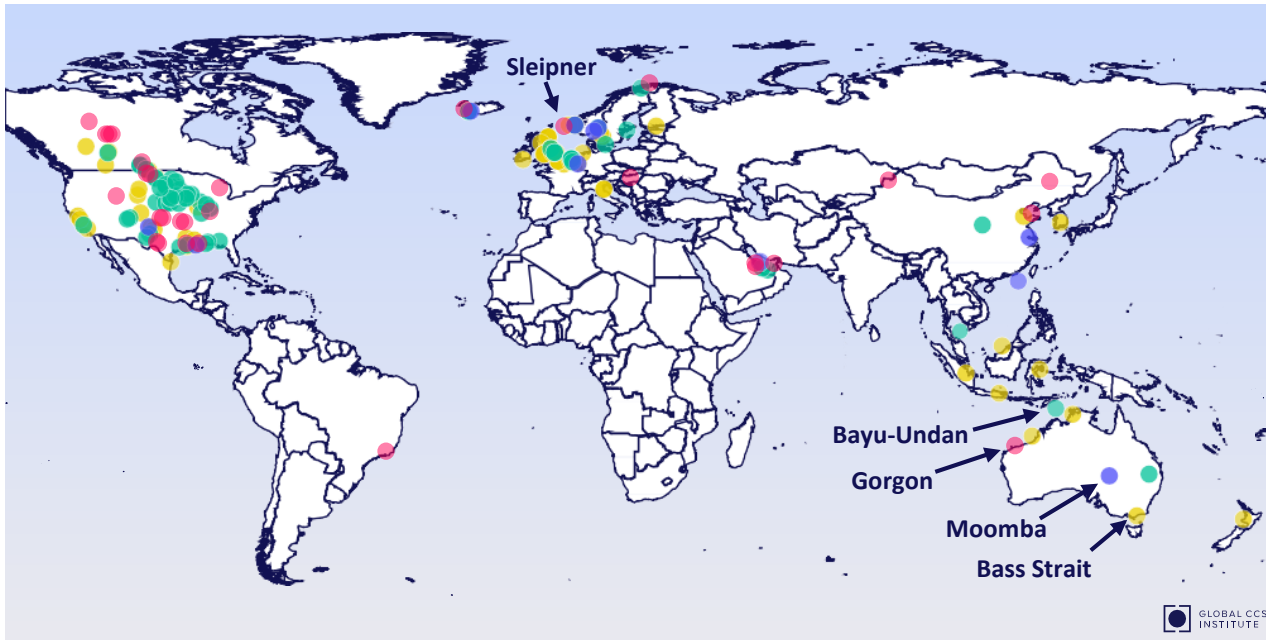
- Climate goals: >5.6 billion tonnes of global CO<sub>2</sub> capture every year by 2050
- Currently >20 large-scale CCS projects in operation, storing ~40 million tonnes per year of CO<sub>2</sub>



**Moomba Project: 1.7 Mtpa, 100 million tonnes storage resources booked** (Santos)

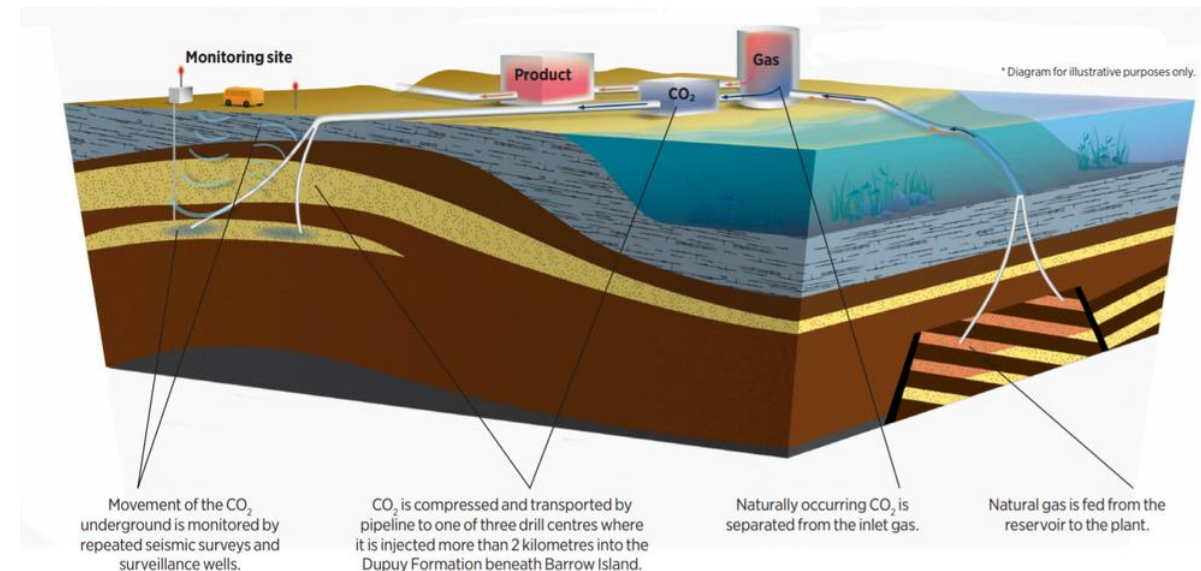


**Sleipner: 1 Mtpa, oldest non-EOR storage project (operating since 1996)** (Global CCS Institute)



● EARLY DEVELOPMENT ● ADVANCED DEVELOPMENT ● IN CONSTRUCTION ● OPERATIONAL

Sources: International Energy Agency and Global CCS Institute



**Gorgon Project: 4 Mtpa capacity, has averaged 2.2 Mtpa since Aug 2019 startup, 100 million tonnes total over life of project** (Chevron Australia)

- 2015 – Application for Petroleum Development Licence
- 2020 – Gas Agreement Term Sheet signed with State Negotiating Team
- 2021 – Additional and Final Gas Agreement Terms agreed and announced by PNG Government
- FEED, investment and project financing are awaiting the Gas Agreement and PDL awards



## Twinza's Board has deep industry expertise in developing, financing and operating major energy projects

### Board of Directors



#### **Stephen Quantrill**

*Executive Chairman*

Over 20 years international experience in company leadership, including over 12 years in oil and gas.



#### **Stefan White**

*Deputy Chairman*

Over 20 years of experience in financial, credit and energy markets as a corporate executive, financial advisor and investor



#### **Julian Ball**

*Non-Executive Director*

Over 25 years in private equity & investment banking in energy and resources. Former Head of Investment and Portfolio Management at Kerogen Capital



#### **Erick Kowa**

*Independent Non-Executive Director*

PNG national; former Twinza Gas Development Manager, production engineer at Oil Search and project management with IPA



#### **Stuart Brown**

*Independent Non-Executive Director*

Geologist with over 35 years experience at technical, managerial and executive levels in Woodside and Shell



#### **Abby Macnish**

*Company Secretary and CFO*

Over 15 years experience as an investment professional and as the CFO and Company Secretary for a number of public and private companies..



#### **Ivor Orchard**

*Alternative Director*

Over 35 years of oil and gas industry experience spanning private equity, investment banking and management. Co-Founder and Executive Chairman of Kerogen Capital Ltd



#### **Bill Clough**

*Alternative Director*

Over 38 years of diverse experience in the resources industry. Founder of Twinza Oil Limited in 2004 and continues to advise on strategy and operations.

## Twinza's executive management team has deep industry and operational expertise on major projects

### Senior Management



#### **Stephen Quantrill**

##### *Executive Chairman*

Over 20 years experience in international company leadership, including over 12 years in oil and gas.



#### **Stefan White**

##### *Deputy Chairman*

Over 20 years of experience in financial, credit and energy markets as a corporate executive, financial advisor and investor



#### **Robert Gard**

##### *CEO*

CEO positions with Denison Gas and Pilot Energy. 35 years of extensive Oil and Gas experience including 23 years at ExxonMobil



#### **Rob Mountjoy**

##### *Project Director*

Over 35 years of engineering, construction, commissioning and project management of large-scale offshore oil and gas projects, including roles at BHP, JGC and SBM



#### **Wayne Spencer**

##### *Geoscience Manager*

Senior management at Premier Oil with 35 years of exploration and development experience in Asia Pacific



#### **Simon Newton**

##### *Project Facilities Manager*

25 years project and process engineering experience on more than 50 oil and gas projects across Asia, Africa, Europe and the Middle East.



#### **Peter Kirkham**

##### *Project Engineering Manager*

Engineering and commercial roles in Asia Pacific and US. Extensive project management experience with IPA

**PNG's Next  
Big Project**

**Thank you**



- P**'nyang Gas Agreement
- P**apua LNG FEED
- P**orgera Re-opening Agreement
- P**asca Gas Agreement and PDL
- W**afi-Golpu Framework MOU

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