

**Santos**

# **PIKKA PROJECT UPDATE & NET ZERO APPROACH**

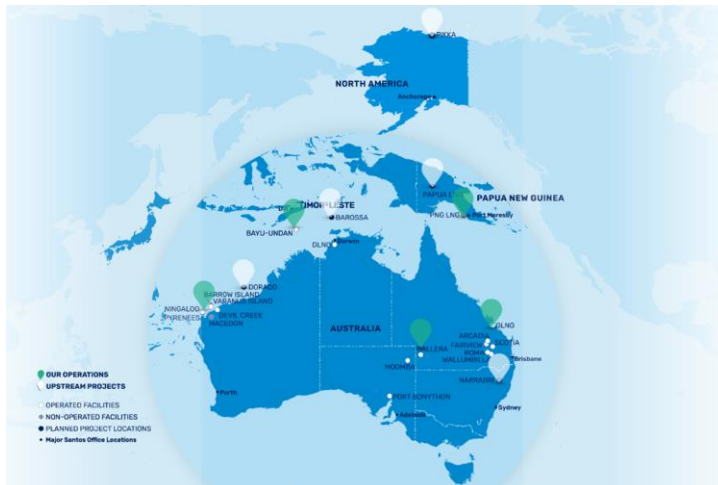
SENATE RESOURCES COMMITTEE  
FEBRUARY 5, 2024



# Who we are...

## About Santos

- Founded in 1954 and headquartered in Adelaide, Australia
- One of Australia's largest domestic gas suppliers and leading LNG supplier in the Asia Pacific region
- Merged with Oil Search in 2021
- Global footprint with operations in Australia, Papua New Guinea, Timor-Leste and the United States (Alaska)
- About 4,000 employees globally



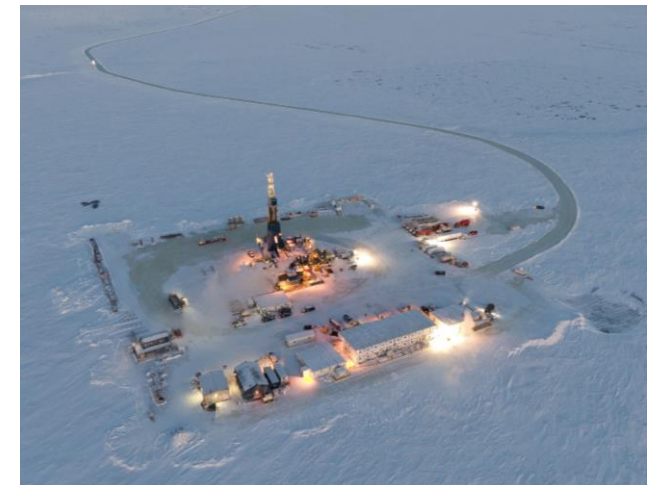
## About Santos in Alaska

- Santos is 51% owner of Pikka with Repsol partnership 49%
- Strong stakeholder support aligned through long-term land use agreement with Kuukpik
- Current Alaska workforce of 259; growing to ~430 by year-end
- Moving to new downtown Anchorage office this year

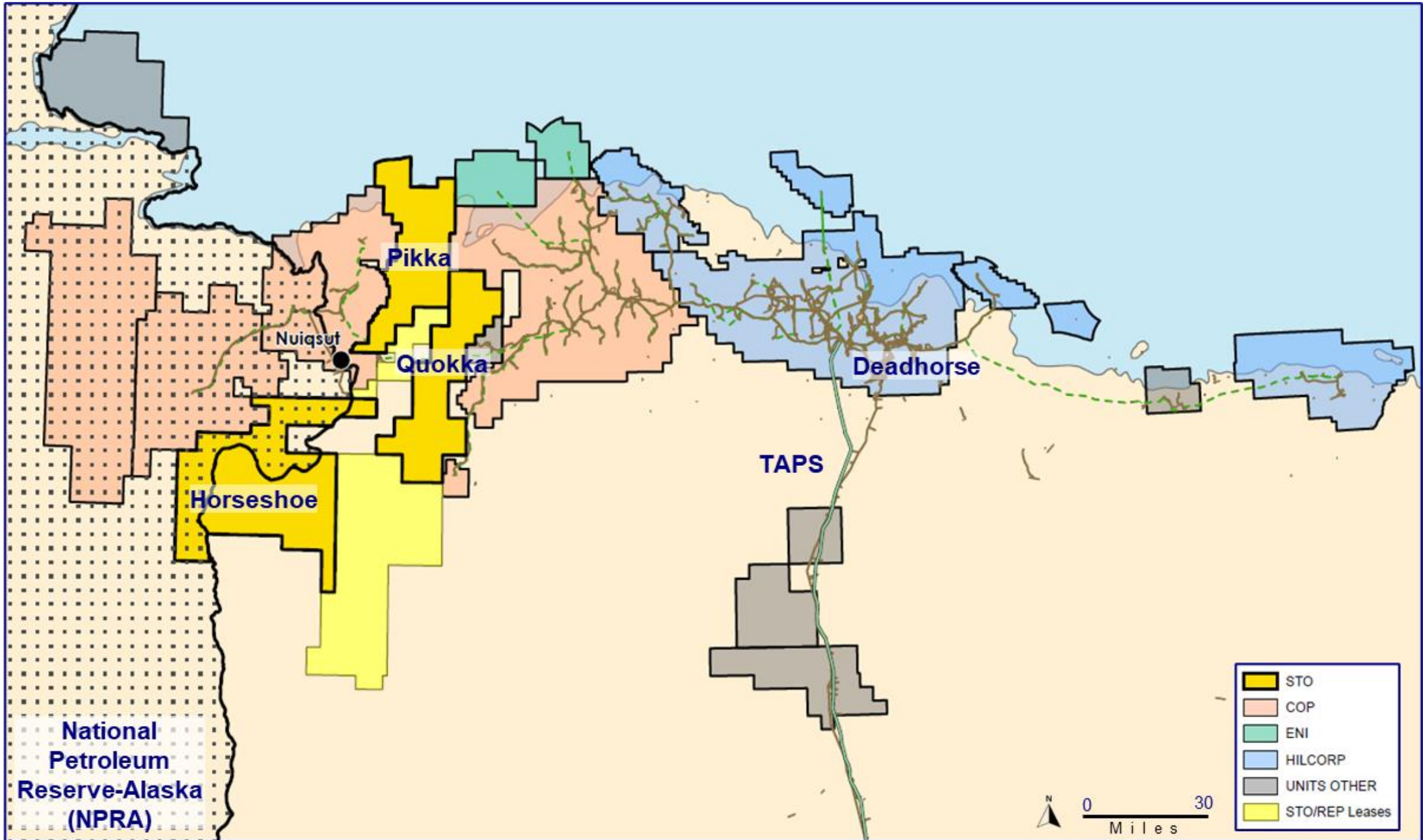


## About Pikka

- Discovered in 2013; Horseshoe discovery in 2017 confirmed giant oil field
- Pikka to be net zero (Scope 1 & 2 emissions, equity share) from first oil
- Core acreage position is on State land
- Other long-term benefits focused on sustainable support of community









# Bringing Pikka to Life

## Pikka Project: Phase 1

- Final Investment Decision (FID) taken in August 2022 - \$2.6 billion (gross)
- Completed major contracting & issued purchase orders under awarded contracts totaling more than \$2 billion
- Development drilling began in June 2023
- 45 total wells and 397 MMbbl from 1 pad
- Shortest well: 7,600 ft / Longest well: 30,000 ft
- Nanushuk Processing Facility (NPF) modular design approach with growth in mind for Phase 2
- Winter 2023: 1,200 beds on North Slope
- First oil planned for 1H 2026
- Adding 80,000 BOPD down TAPS





# Local Content and Contribution

Strong stakeholder support aligned through royalty and Land Use Agreement

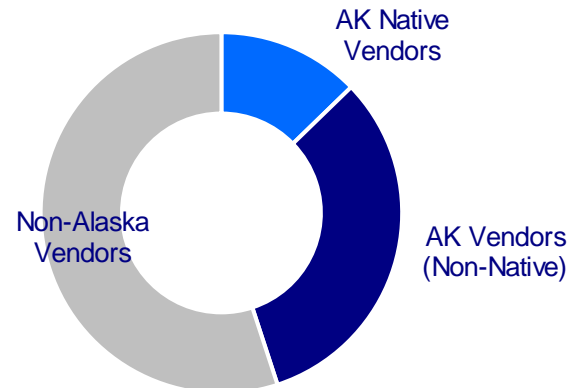
## Long Term Land Use Agreement with Kuukpik

- Subsistence preservation and open access with close cooperation and transparency on planned activities to minimize impacts
- Provisions for employment, training and business development
- Other long-term benefits focused on sustainable support of community
- Community projects total ~US\$59 million gross (US\$31 million net 51% working interest)

## Local Content & Contracting

- Project committed to local content and sourcing where possible
- Alaska vendors (Native and Non-Native) account for ~45% of vendor spend to date

Pikka Phase 1 Vendor Spend through November 2023



## Tax & Royalty Impacts to Local Stakeholders

- North Slope Borough receives 95% of all local tax revenue from oil and gas-related property taxes
- ASRC receives royalty payments for its mineral rights ownership

# Facilities Design & Logistics Approach

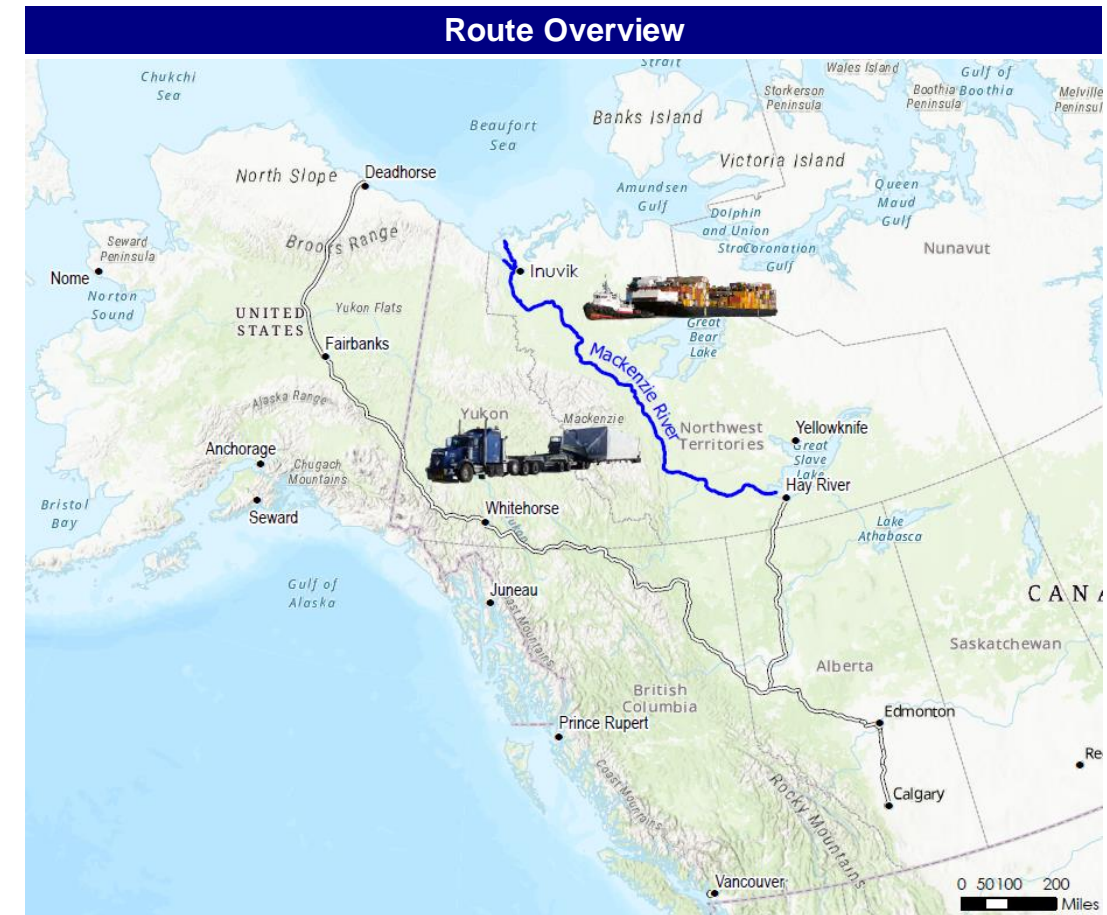
Phasing & standardized truckable design reduce cost and risk

## Project costs reduced through:

- Standardized truckable NPF ~\$200MM savings vs. typical North Slope sealift design
- Driven by standardization of design and equipment
- 14' x 130' x 16' x 90-ton modules
- Facilities built in Canada and then transported via barges and trucks to Alaska development site

## Project execution risk reduced through:

- Contracting: Engineer Procure Fabricate (EPF lump sum)
- Utilizing proven and standard equipment / designs
- Truckable modules
- Increasing seasonal transport window from 1 month to 10 months
- Reducing peak activity levels
- River lift modules increasing fabrication window up to 3 months
- Leveling workforce needs
- Installing modules that are trial fit in fabrication yard
- New build Seawater Treatment Plant (STP) versus de-bottlenecking existing 40-year-old Kuparuk River Unit (KRU) STP



# Beyond Phase 1

Lower capital requirements and breakeven, higher returns for subsequent phases

## Scalable Facility Concept

### Expansions leverage Phase 1 infrastructure

- Roads and pipelines
- Seawater treatment plant
- Pad space for facility expansion

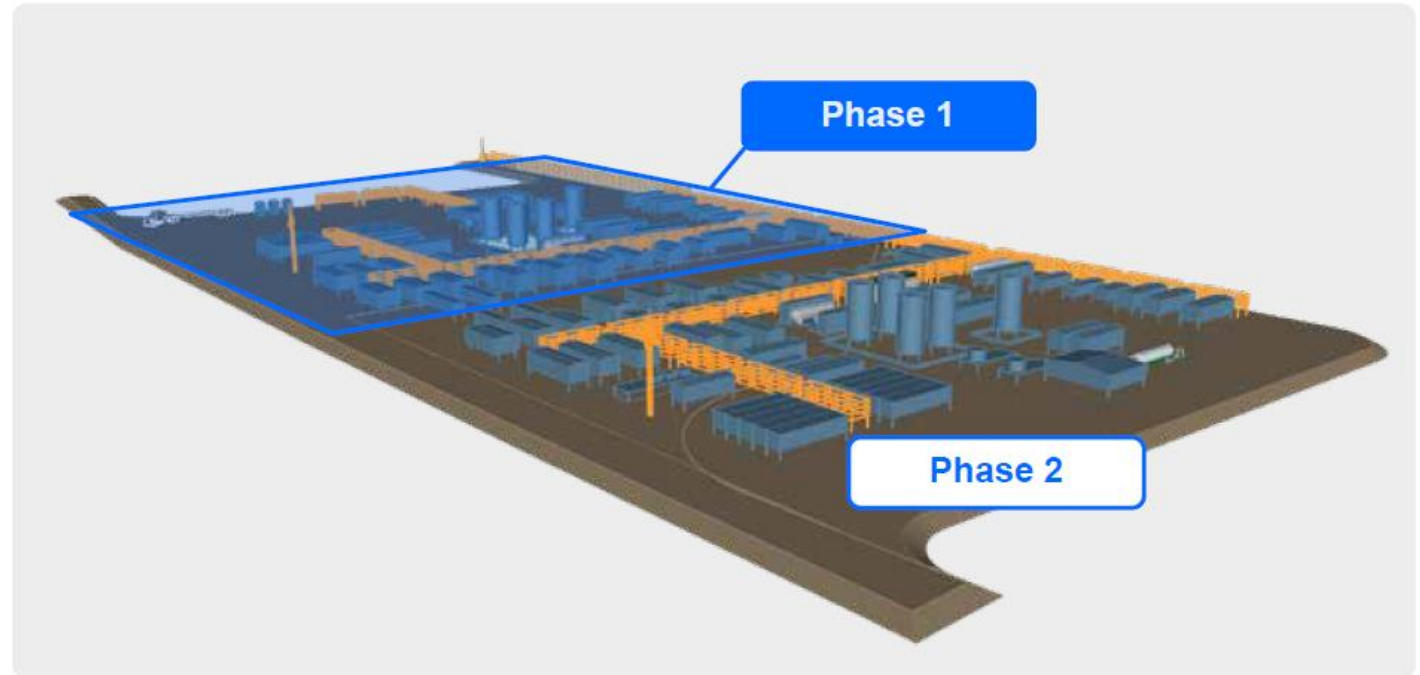
### Processing facility concept (future phases)

- Design once build multiple
- Install proven module designs
- Significant cost savings targeted through:
  - Minimizing North Slope work
  - Minimal footprint increase

### Post-phase 1 activities

- Entered concept select for Phase 2
- Evaluating expansion plans
- High-grading well stock
- Quokka delineation late 2024-2025

## Development Schematic

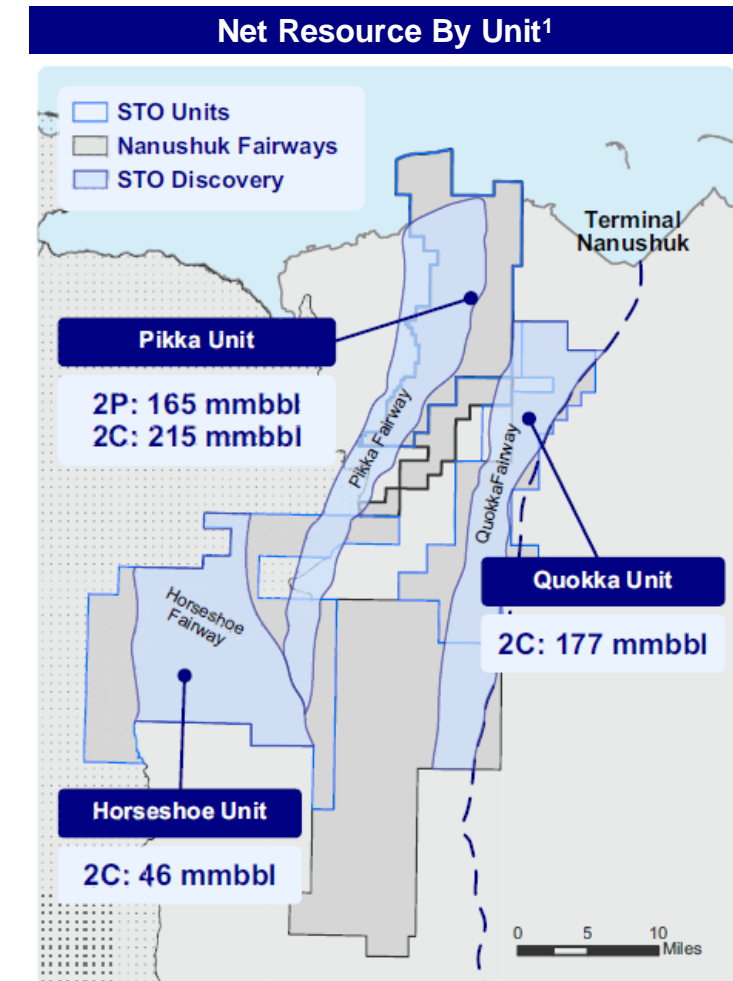
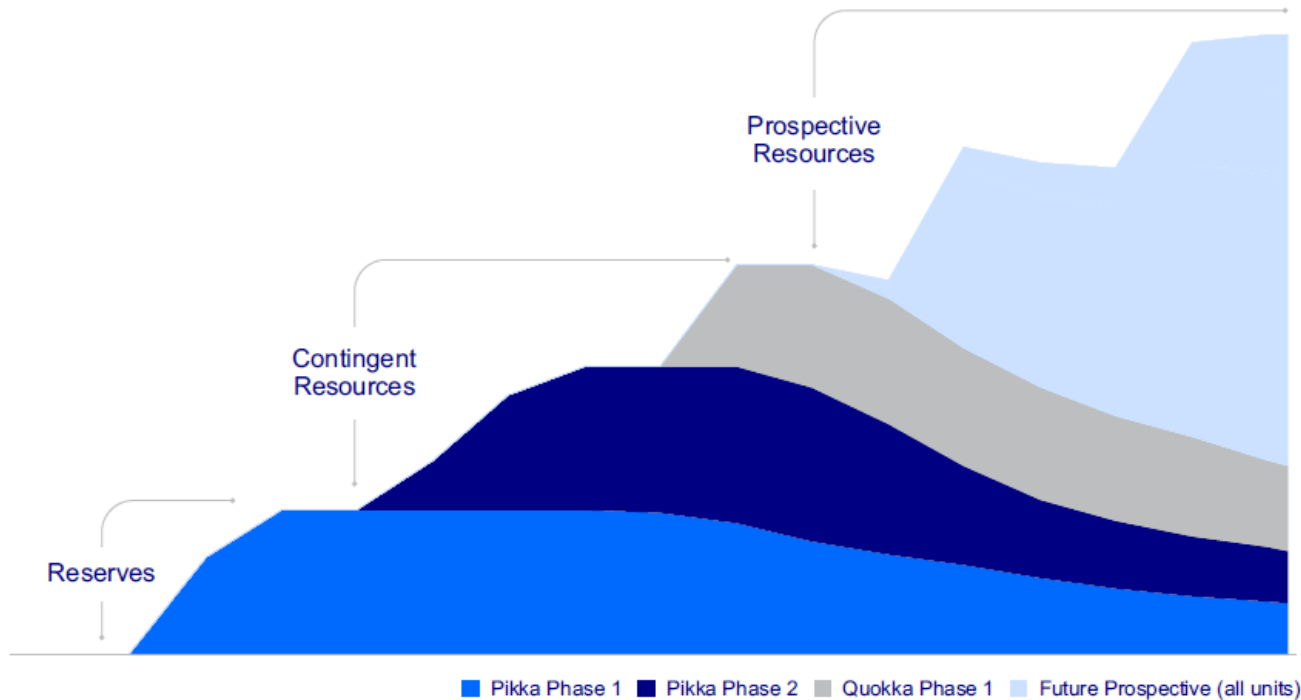


40-80 kbbbl/d expansions or new processing plants with duplication of the Pikka Phase 1 Plant

# Significant, Long-Term Supply Portfolio

Self-funding development pipeline plus providing significant returns

- Cash flow from Phase 1 will be very robust
- Self fund whilst providing returns to shareholders



<sup>1</sup>Santos equity net reserves and resources, as of December 31, 2022.



# Alaska

World-class resource in tier 1 jurisdiction, with significant optionality

World-class resource base of scale with 2P reserves of 165 mmboe and 2C of 438 mmboe<sup>1</sup>

Significant free cash flow: modular design can self-fund future development phases and fund returns to shareholders

Leveraging significant infrastructure in place

Operational team with significant North Slope experience

Stable regulatory environment and supportive stakeholders

<sup>1</sup>Santos equity share.

“

***Pikka Phase 1 will be net-zero (Scope 1 and Scope 2 emissions, equity share) from first oil.***

”



# What are Scope 1, 2 & 3 Emissions?

Pikka emissions examples of EPA classifications

Pikka Net Zero Commitment: Scope 1 and Scope 2

## Scope 1

### How we produce our products and services

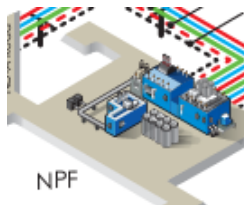
Direct emissions from sources that Santos owns or controls, due to fuel combustion, flaring, venting, CO2 removal and fugitive emissions



Company facilities



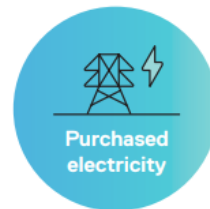
Company vehicles



## Scope 2

### How we power our operations

Indirect emissions from the generation of energy that Santos purchases for our operations including electricity purchased for our operations including ancillary activities such as our office buildings



Purchased electricity



Purchased heating and cooling



## Scope 3

Everything else upstream/downstream in Santos' value chain, all indirect emissions not included in Scope 2

The vast majority of Scope 3 emissions from Santos' activities are emissions from the Use of Sold Products

### Upstream

Inputs that go into Santos' product/service



Capital goods



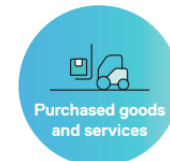
Leased assets



Waste generated in operations



Transportation and distribution



Purchased goods and services



Employee commuting



Business travel



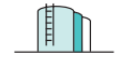
Fuel and energy related activities

### Downstream

How Santos' products/services are used by customers



Use of sold products



Processing of sold products



Transportation and distribution



End-of-life treatment of sold products



Leased assets



Franchises



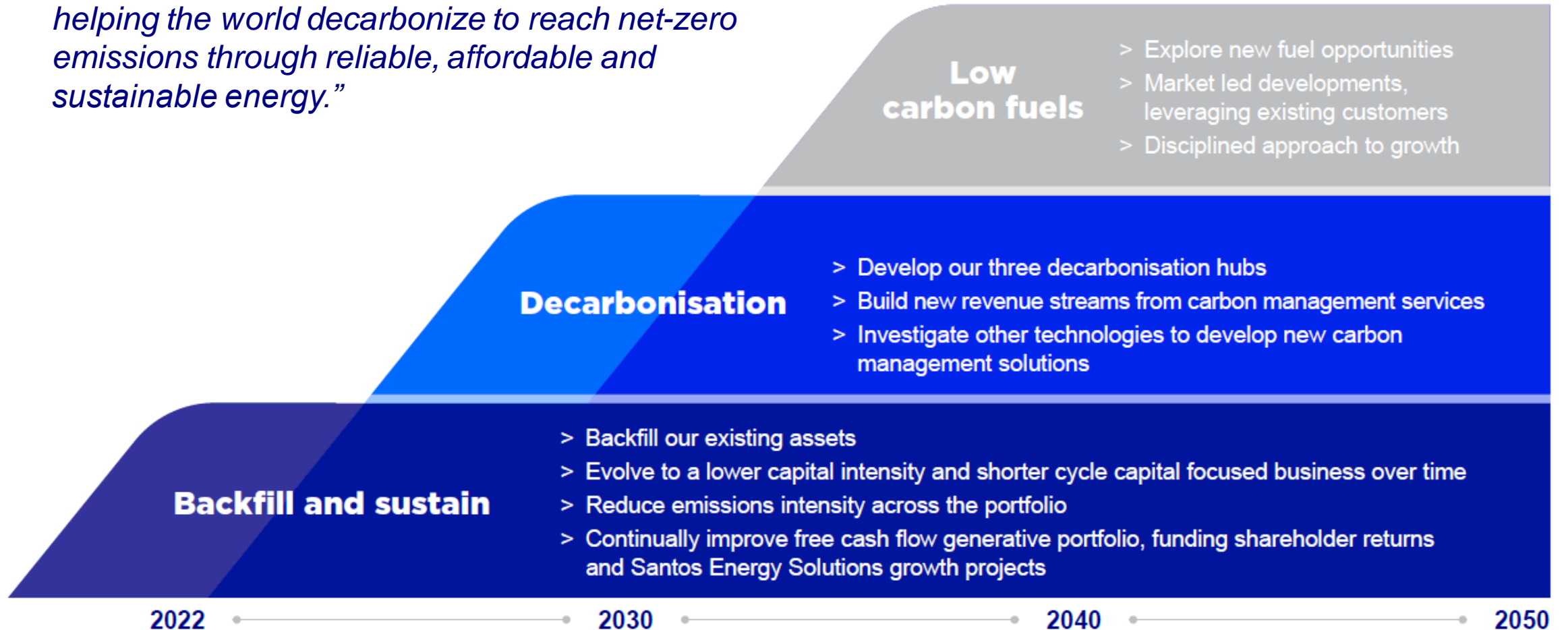
Investments

Greenhouse Gas Protocol (2004), A Corporate Accounting and Reporting Standard (Revised Edition): <https://ghgprotocol.org/sites/default/files/standards/ghg-protocol-revised.pdf>

[Climate-Change-Report-2023.pdf \(santos.com\)](#)

# Vision 2040: Purpose and Plan

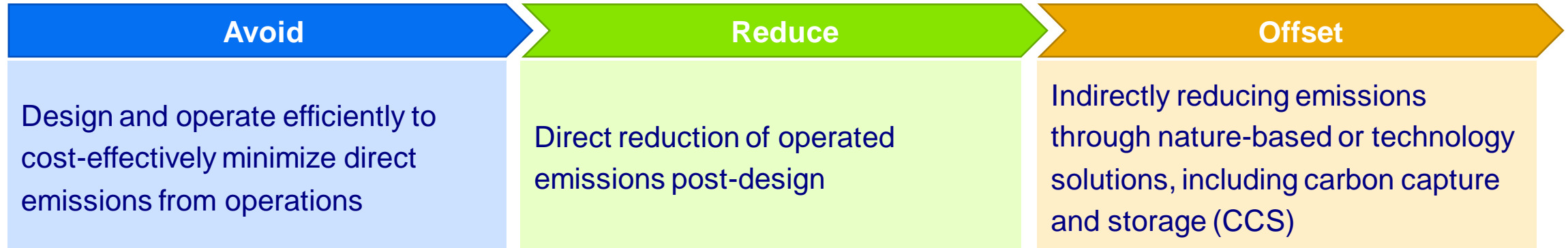
*"We are a global energy company committed to helping the world decarbonize to reach net-zero emissions through reliable, affordable and sustainable energy."*





# Alaska Decarbonization

Net zero philosophy, approach, and plan



# Pikka Phase 1 – Net Zero

**Avoid**

**Low GHG Intensity by Design**

## Minimized emission design

- Central power generation
- Waste heat recovery units for turbines to reduce heat needs
- Highest EPA standards for rig emissions

## Top quartile carbon intensity for Pikka Phase 1 within global oil and gas GHG performance

- 14tCO<sub>2</sub>e/mboe at 53% lower than average conventional onshore developments

**Paris Agreement aligned low GHG intensity oil produced in an environmentally responsible manner**



Sources: Wood Mackenzie Emissions Benchmarking Tool, January 2022; (Re)Positioning for the Future, Wood Mackenzie, November 2019



# Pikka Phase 1 – Net Zero

Reduce

## Carbon Abatement

### Post-design emission reduction

- Strategic alliance with ASRC Energy Services to develop carbon abatement solutions for Pikka
- Drawing from global corporate experience to further reduce direct emissions
- Longer term: alternative power solutions for North Slope operations

Cooper Basin Renewable  
Integration Projects



Power Optimisation,  
Western Australia



Port Bonython  
Solar Farm



Moomba Heat Recovery  
Steam Generator



Santos 2022 Climate Change Report, Investor Briefing March 31, 2022

# Pikka Phase 1 – Net Zero

Offset

**Nature-Based**

## Near-term nature-based carbon solutions

- Letter of Intent (LOI) signed with large Alaska Native landowner to develop a forestry management project
- Initial scope could completely offset Santos share of Pikka Phase 1 carbon emissions with high-quality credits registered for the voluntary market
- Additional beneficial social outcomes for local communities

**Supported Alaska legislation to form state nature-based offsets program (SB48 - *Passed*)**



Nature-Based Forestry Practices

# Alaska CCS Consortium

Offset

Technology-Based

- Unique interest in Arctic-capable CCS technology and pursuing equity ownership
- Extensive project execution, stakeholder engagement, technical, and regulatory experience
- Interest in utilizing federal funding to accelerate project development
- Supporting Alaska legislation to form CCS regulatory framework



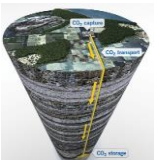
**Direct Air Capture (DAC)**  
DAC Technologies in the Arctic

**1 MTA** (gross) of carbon capture potential



**Point Source Capture**  
Prudhoe Bay Unit (PBU)

**3 MTA** (gross) of Carbon Capture potential



**Carbon Storage**  
Subsurface evaluation

World-class Carbon Storage potential on North Slope (275 GT gross) and Cook Inlet (43 GT gross)<sup>1</sup>

AK LNG H<sub>2</sub> Hub Storage

**2 MTA** (gross) carbon capture potential partnering with Alaska LNG

<sup>1</sup>Source: Department of Natural Resources, House Resources Committee, February 10, 2023



# Thank You

# Santos

