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The Manager, Company Announcements ASX Limited Exchange Centre 20 Bridge Street Sydney NSW 2000

# HORIZON OIL (HZN) PNG PETROLEUM AND ENERGY SUMMIT PRESENTATION

Please find attached the presentation which will be presented by Brent Emmett, Chief Executive Officer at the PNG Petroleum and Energy Summit today.

Yours faithfully,

**Brent Emmett** 

Chief Executive Officer

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PNG Petroleum & Energy Summit - 28 Feb 2017 Session 2 - PNG Projects Status Update: Accelerating PNG's LNG Plans to Promote Growth

# **Developing Western Province Gas**

Brent Emmett CEO Horizon Oil Limited



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The reserve and resource information contained in this announcement is based on information compiled by Alan Fernie (Manager – Exploration and Development). Mr Fernie (G.Sc), who is a member of AAPG, has more than 38 years relevant experience within the industry and consents to the information in the form and context in which it appears.

All dollars in the presentation are United States dollars unless otherwise noted.



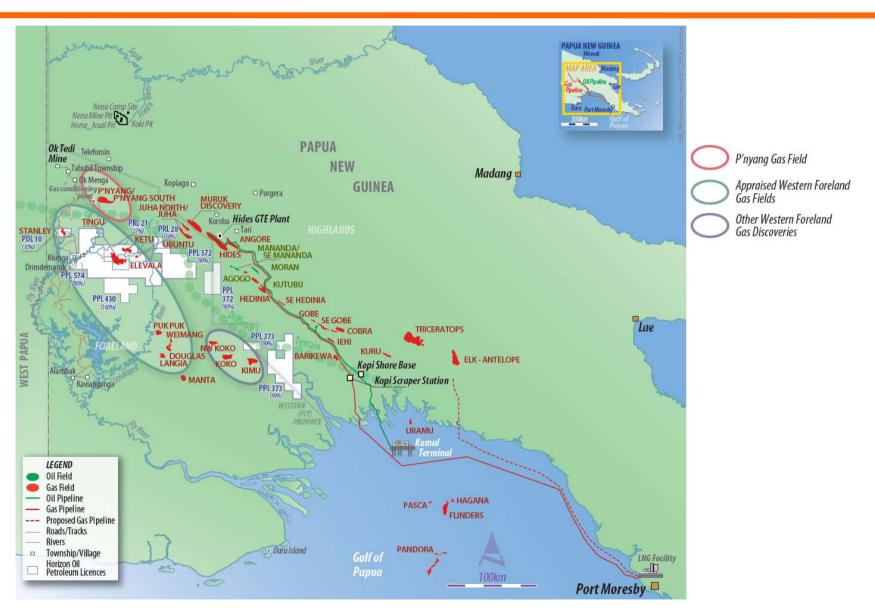


- Western Province hydrocarbon accumulations where are they located?
- Who are the players?
- Gas commercialisation opportunities
- Development alternatives
  - Western LNG (WLNG)
  - Western Pipeline
- The size of the prize
- Key success factors



# Location of Western Province gas accumulations – regional view

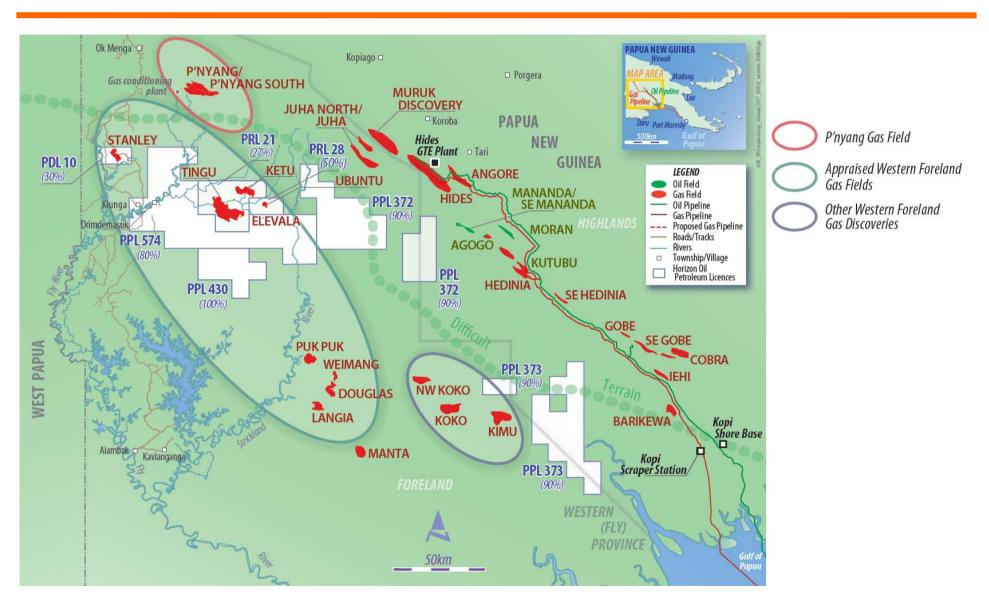
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# Location of Western Province gas accumulations – provincial view

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# Who are the players?

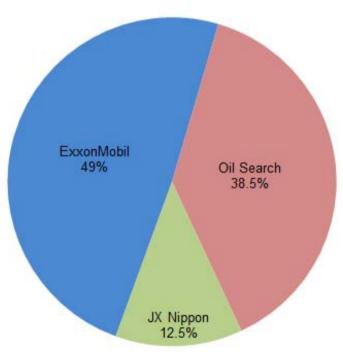
#### P'nyang Field

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Operator: ExxonMobil

2C resource: 3.5 tcf gas

35 – 50 mmbbl condensate

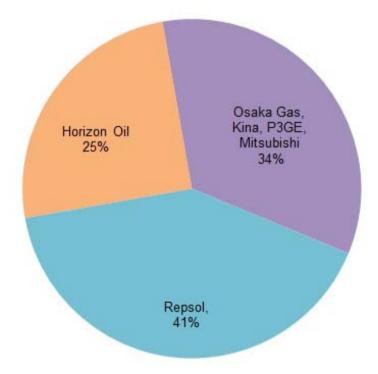


Participants' share of boe

### **Appraised Western Foreland Fields**

Operators: Horizon Oil, Repsol 2C resource: 2.0 – 2.5 tcf gas

60 – 70 mmbbl condensate



Participants' share of boe

Horizon Oil and Repsol operate all appraised Western Foreland fields and hold a combined 66% of the total 2C resource



## Commercialisation opportunities for Western Province gas

- Sales to domestic buyers for power generation and other industrial use
  - Gas-to-power for mines, industrial consumers and village/town supply
  - Gas for petrochemical and fertiliser production in PNG
  - Pipeline export to West Papua: Merauke, Jayapura
- Mid-scale Western LNG project aggregation of appraised Western Foreland gas
  - To feed expandable mid-scale LNG plant (1.5 2.0 mtpa) located on or near Daru Island
  - Option for early condensate recovery will remain on table if oil price/economics permit
  - LNG customers:

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- City and mining project power demand in PNG and East Indonesia, as substitute for diesel or fuel oil

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- Singapore LNG and products hub
- North Asian markets
- Western Pipeline project aggregation of P'nyang with Western Foreland gas
  - To feed dedicated expansion train at PNG LNG site at Caution Bay, Port Moresby
  - Export to Caution Bay via Kumul Petroleum's proposed open access Western Pipeline
  - Option to participate solely as upstream gas supplier or through midstream and downstream projects as well

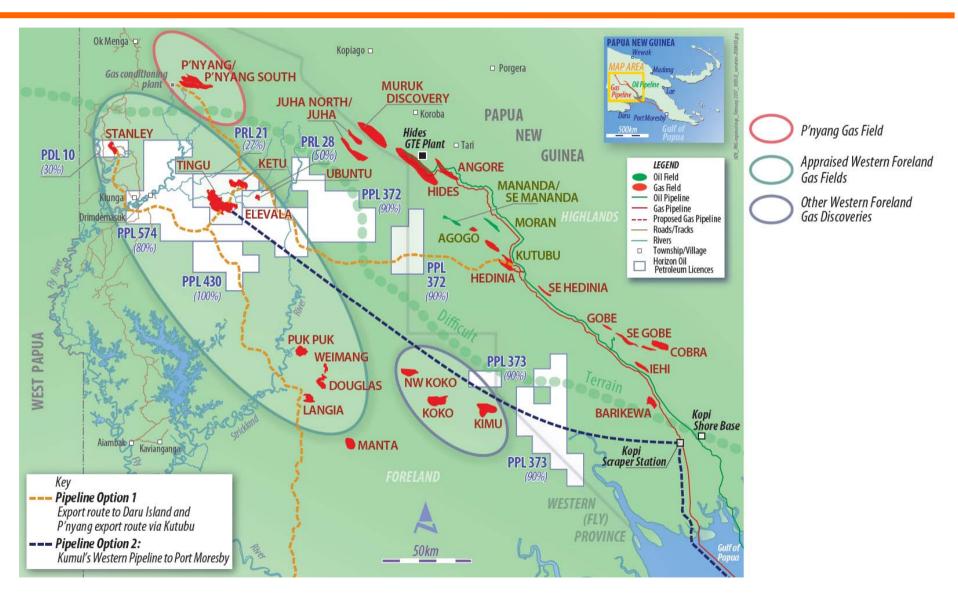


# Development alternatives – export south (Western LNG) or east (Western Pipeline)?





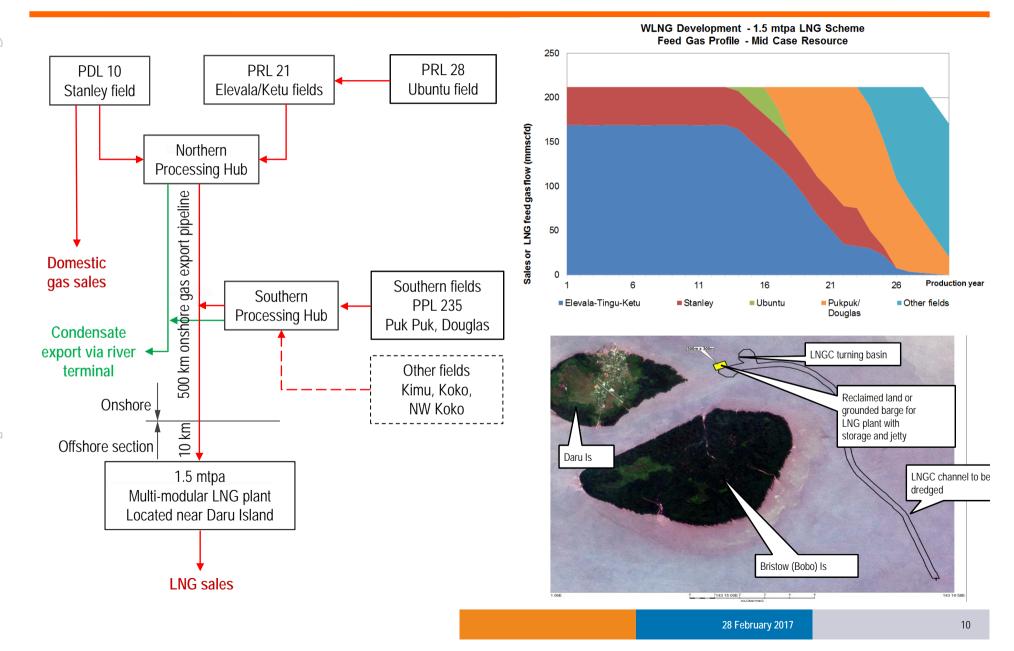
# Export pipeline route south (Western LNG) or east (Western Pipeline)? - close-up view



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# Western LNG – base case for Western Foreland appraised gas development





## Western Pipeline – Kumul Petroleum's solution for developing Western Province gas



- Develop the western fields through aggregation of the fields and providing transportation to users.
- KPHL is promoting the Western
   Pipeline which will run from the
   Western Province to the coast
   and on to Port Moresby's Caution
   Bay
- This will provide transportation for the stranded gas, and reenergise the exploration activity in the Western Province, creating value for all the stakeholders including KPHL, licence holders, Governments and landowners



Source: PNG Mining & Petroleum Investment Conference, December 2016



## Horizon Oil's strategy

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- Mature the Western LNG (Daru) alternative as the stand-alone base case this is a sound concept and is within the gift of Horizon Oil, Repsol and their joint venture partners to deliver
- At the same fully engage with Kumul to support planning of the Western Pipeline (Kopi
   Caution Bay) alternative this is an attractive initiative by Kumul, involving
  participation by parties in addition to the Horizon Oil / Repsol joint ventures to
  succeed
- Make selection of go ahead development scheme based on timeframe, viability, financial and technical risk, as well as consideration of overall stakeholder benefits

## The size of the prize – is it worth doing?

#### Western LNG (appraised Western Foreland fields)

- Potential to generate approximately US\$20 30 billion in total revenues over the life of the project
- Cumulative after tax cashflow (real) of approximately US\$10 billion
- ~15% IRR (real, ungeared)

#### Western Pipeline (P'nyang plus appraised Western Foreland fields)

Has the potential to generate US\$55 – 65 billion in total revenues over the life of the project

#### Other benefits – to landowners, communities and the State

- Creates long term employment and economic development opportunities in Western Province
- Provides gas for power generation for PNG mines, industries and communities
- Potential to supply gas to PNG-located industrial consumers (e.g. methanol, fertiliser)
- Generates tax revenue and earns export income
- Project infrastructure will benefit the petroleum industry, other industries and communities

Note: Revenues and project economics are Horizon Oil estimates, are approximate, assume oil price of US\$75/bbl and gas price of US\$9/GJ in \$2020, unescalated



### Key success factors

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- Collaboration between Western Foreland gas licence holders to enable gas aggregation for either Western LNG (Daru) or Western Pipeline (Port Moresby) this is underway with formation in 2016 of a Joint Working Team (JWT), led by Horizon Oil and Repsol
- Decision to aggregate P'nyang and Western Foreland gas may be critical to underpin export to Port Moresby via Western Pipeline, depending on configuration of pipeline downstream of Kopi
- Success by Kumul in executing and financing Western Pipeline and securing offtakers for the gas
- Government support in coordinating gas aggregation across multiple licences with different licence obligations (especially in light of current challenging market conditions) – this is already evident both from the Minister and the DPE
- Cooperation between all petroleum project participants in optimising use of in-country infrastructure and facilities
- Instigation of Government policy to mandate use of PNG gas on a commercial basis for mining, industrial and domestic power supply, rather than imported liquid fuel or coal

...collaboration, cooperation and Government leadership are key



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Please visit the Horizon Oil website www.horizonoil.com.au to see:-Detailed Investor Presentation

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Analyst reports on HZN

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