# Oil Search Update - Projects & Initiatives SEAAOC, August 2017 Oil Search







Oil Search Limited ARBN 055 079 868



#### Disclaimer

While every effort is made to provide accurate and complete information, Oil Search Limited does not warrant that the information in this presentation is free from errors or omissions or is suitable for its intended use. Subject to any terms implied by law which cannot be excluded, Oil Search Limited accepts no responsibility for any loss, damage, cost or expense (whether direct or indirect) incurred by you as a result of any error, omission or misrepresentation in information in this presentation. All information in this presentation in this presentation.

This presentation also contains forward-looking statements which are subject to particular risks associated with the oil and gas industry. Oil Search Limited believes there are reasonable grounds for the expectations on which the statements are based. However actual outcomes could differ materially due to a range of factors including oil and gas prices, demand for oil, currency fluctuations, drilling results, field performance, the timing of well work-overs and field development, reserves depletion, progress on gas commercialisation and fiscal and other government issues and approvals.

## **About Oil Search**

- » PNG incorporated in 1929
- » ~1,250 employees
- » Quality shareholding:
  - UAE sovereign wealth fund Mubadala (IPIC) and PNG Government largest shareholders
- » World class assets:
  - ~29% interest in PNG LNG Project (ExxonMobil operator)
  - ~23% interest in PRL15 Papua LNG Project (Total operator)
  - ~60% interest in all PNG's producing oil fields (OSH operator)
  - 25-70% in 16 quality exploration licences
- »Operate all oil production, associated gas for LNG and majority of drilling and seismic programmes
- » Strategy to maximise LNG growth and oil while providing country building initiatives:
  - >10tcf 2C undeveloped for new 8MTPA+ expansion near term
  - Social programmes for community development, health and power







## OSH will double production early next decade Progressing multiple growth initiatives in PNG





PNG LNG optimisation targeting > 8.5MTPA longer term



LNG expansion targeting 8MTPA+ new capacity and integration savings



Oil production through near field exploration to mitigate long-term decline



Exploration success – three year programme will test >19 tcfe\*

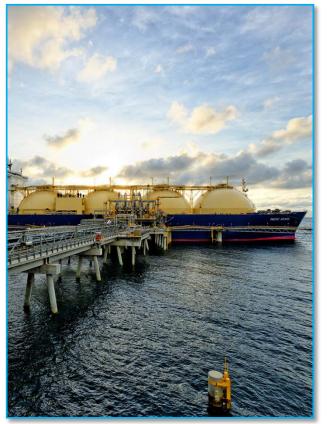


In-country social responsibility initiatives maintaining stable operating environment

\* Mean gross prospective resources. Summed prospective resource P50/best estimate is ~15.9 tcfe. Numbers are based on OSH 2016-17 internal analysis. All estimates are unrisked

## PNG Growth Initiative 1 PNG LNG Optimising expansion

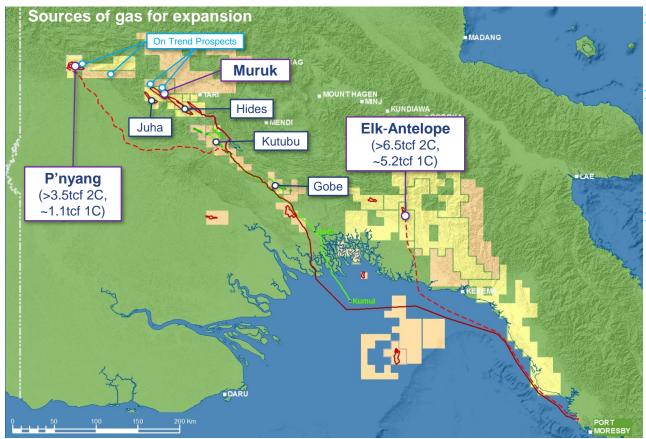




- PNG LNG one of the best delivered and highest value LNG projects globally:
  - Lowest quartile cost
  - High heating value product sought after by quality markets
  - Production consistently above nameplate
  - World class operator and reliability
- » Production > 8.5MTPA achieved in June '17 (>25% above nameplate)
  - Options being reviewed for sustained increases 2018+
- Material increase in foundation reserves and new exploration success provides certainty of supply and optionality

## LNG expansion the focus for 2017+ PNG LNG growth and new LNG development

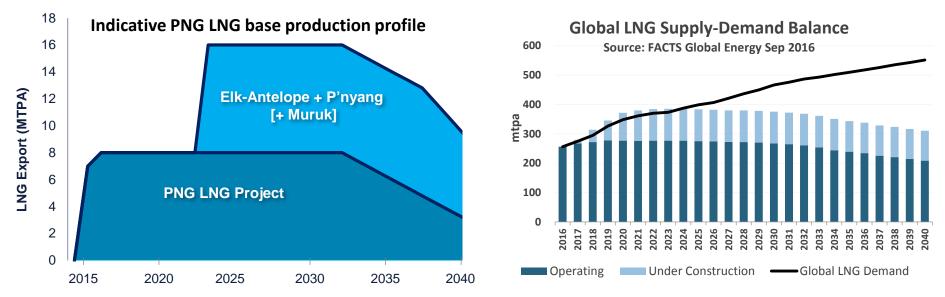




- By mid next decade PNG expected to be producing 16+MTPA
- PNG brownfields LNG expansion globally competitive:
  - Lowest quartile cost
  - High heating value
  - Quality markets
- Material potential to underpin further expansion:
  - Muruk discovery increases optionality and may improve expansion economics
  - Multiple exploration targets being confirmed by seismic between Hides to P'nyang
  - Additional LNG scale exploration hubs in Aure and deepwater regions

### **PNG Growth Initiative 2** New LNG development and cooperation





- » Elk-Antelope and P'nyang combined have >10 tcf 2C and can supply 8+ MTPA new train capacity constructed at existing PNG LNG site
- » OSH, partners and Government have confirmed intent to pursue coordinated development
- » Various commercial models under consideration to deliver brownfield expansion
- » LNG from PNG well placed for LNG market growth early next decade

# Lessons learned drive toward coordination

PNG LNG, P'nyang and Elk-Antelope LNG cooperation (additional 8+ MTPA capacity)



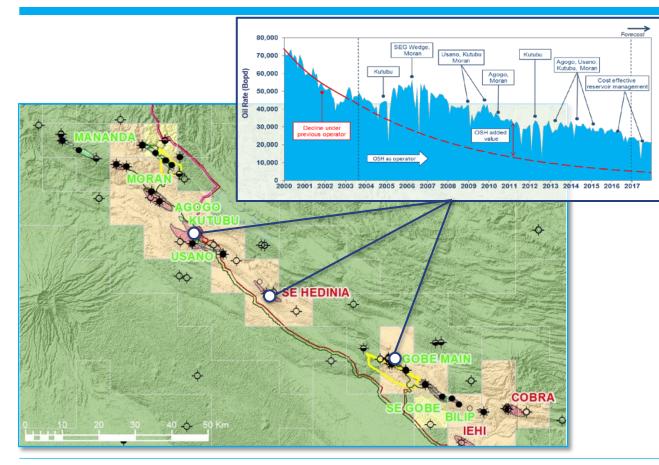
- Estimated >US\$5bn of cost savings over 20yrs (RISC)
- » PNG Govt benefits by potentially >US\$500M+, >US\$25M+ pa net opex savings plus greater tax receipts
- » JV partners and State looking to align on integration principles, terms and marketing

SEAAOC Conference - August 2017

**Oil Search** 

# **PNG Growth Initiative 3**

### OSH operated production increases through near field exploration **Oil Search**



- » One of OSH's core capabilities is extracting full value from its assets
- Targets being matured for near field drilling to mitigate long-term decline
- » Since 2003, OSH has drilled 45 development wells with ~90% success rate
- » Last five years added >49 mmbbl oil (gross) to 1P reserves (plus further 32 mmbbl (gross) to 2P)

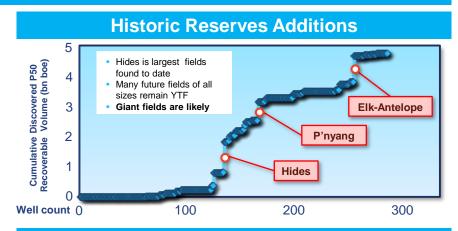
# **PNG Growth Initiative 4**

### Exciting and material remaining exploration upside

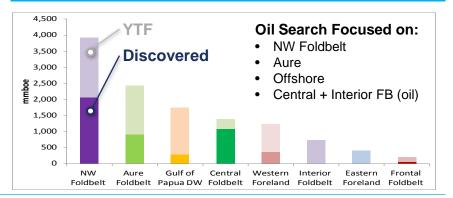


60% (~7bn boe) of PNG's total resource remains to be discovered

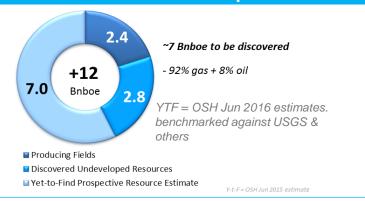
- » 92% Gas, 8% Oil
- » 40 tcf Gas + 550 mmbbl Oil
- » Giant fields predicted



#### **PNG Total Petroleum Resource**



#### Total Resource Split

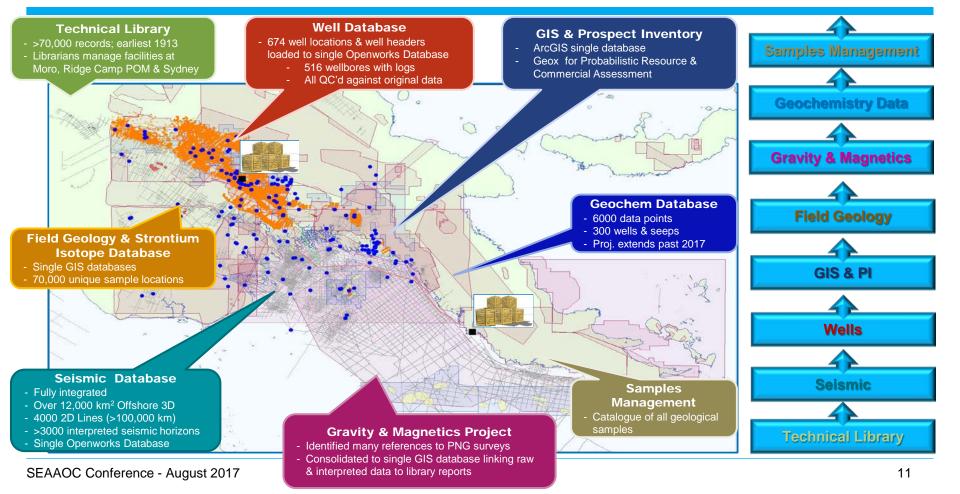


SEAAOC Conference - August 2017

## **PNG's Best Geoscience Database**

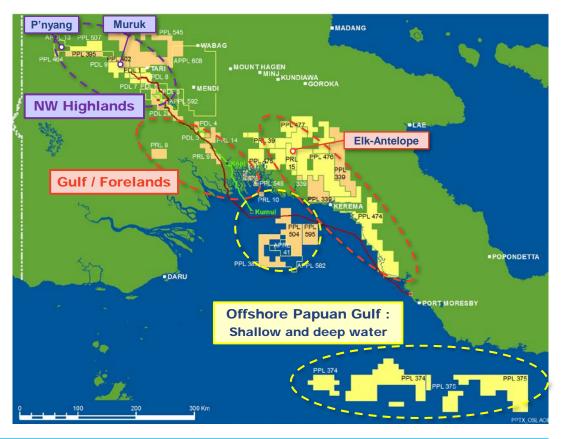
### Data underpins all geoscience work we do





## World class exploration acreage position in PNG Portfolio focused on gas expansion and delineating remaining oil **Oil Search**

- Focused licence acquisition programme:
  - 16+ licences and manageable programme
  - Trend capture and high graded drilling
- » Expanded PNG acreage focused on four potential LNG scale hubs:
  - NW Highlands
  - Gulf/Forelands
  - Offshore Gulf
  - Deepwater Gulf
- » Successful partnering:
  - Optimal equity levels
  - Operatorship of key licences
- » Opportunity, not commitment, driven

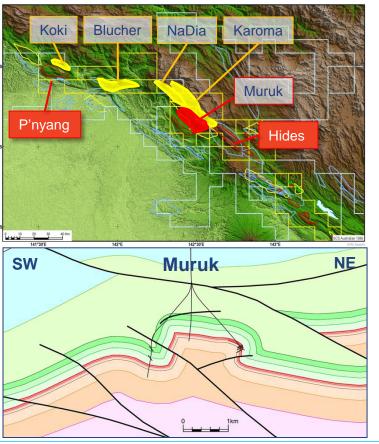


#### SEAAOC Conference - August 2017

# Muruk gas discovery

### Material gas potential along Hides-P'nyang trend

- » Muruk gas discovery located ~21km from nearest producing PNG LNG infrastructure:
  - ~ 8,000m drilled in vertical hole and three side-tracks
  - ~ 780m highest to lowest known gas
  - Two separate compartments (hanging wall and footwall gas confirmed)
  - Aids Juha tie-in and high grades Hides-P'nyang trend
  - Appraisal programme commencing 1Q18, subject to final joint venture approval
- » Four additional multi-tcf prospects being matured:
  - 2016/17 seismic confirming 2018+ drilling programme
  - Trend has >10 tcf unrisked mean potential
- » P'nyang South 2 well scheduled to be drilled in 2H17, well pad construction underway:
  - Resource certification to take place after drilling





## Initiative 5 Social Responsibility – initiatives in action





**Oil Search Foundation** 



Community health and hospitals



Access to power



Leadership and education



Women's protection and empowerment



Livelihood and local enterprise development



Supporting community organisations



Nationally significant infrastructure projects

For further information on: How we work responsibly: http://www.oilsearch.com/how-we-work | Oil Search Foundation: http://www.oilsearchfoundation.org/

# Conclusions

### Top tier production base with significant growth projects



- » Excellent performance from PNG LNG:
  - Reached record annualised rate of 8.65 MTPA in June following compressor upgrade (25% above nameplate)
  - Material 1P and 2P reserve upgrade in Foundation fields
- » 10+ tcf 2C of discovered undeveloped gas in Elk-Antelope and P'nyang:
  - Can support additional 8+ MTPA expansion capacity
  - Discussions on LNG expansion underway focused on coordinated development
- » Muruk gas discovery potentially significant new gas field, increases prospectivity of Hides-P'nyang trend
- » Continued strong performance from operated PNG oil fields and targeting growth through near field exploration
- » Material exploration potential to drive further growth

