



# CLSA INVESTORS' FORUM HONG KONG

**September 2018**

OIL SEARCH LIMITED | ARBN 055 079 868 | ASX: OSH | POMSx: OSH | US ADR: OISHY

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**Oil Search**

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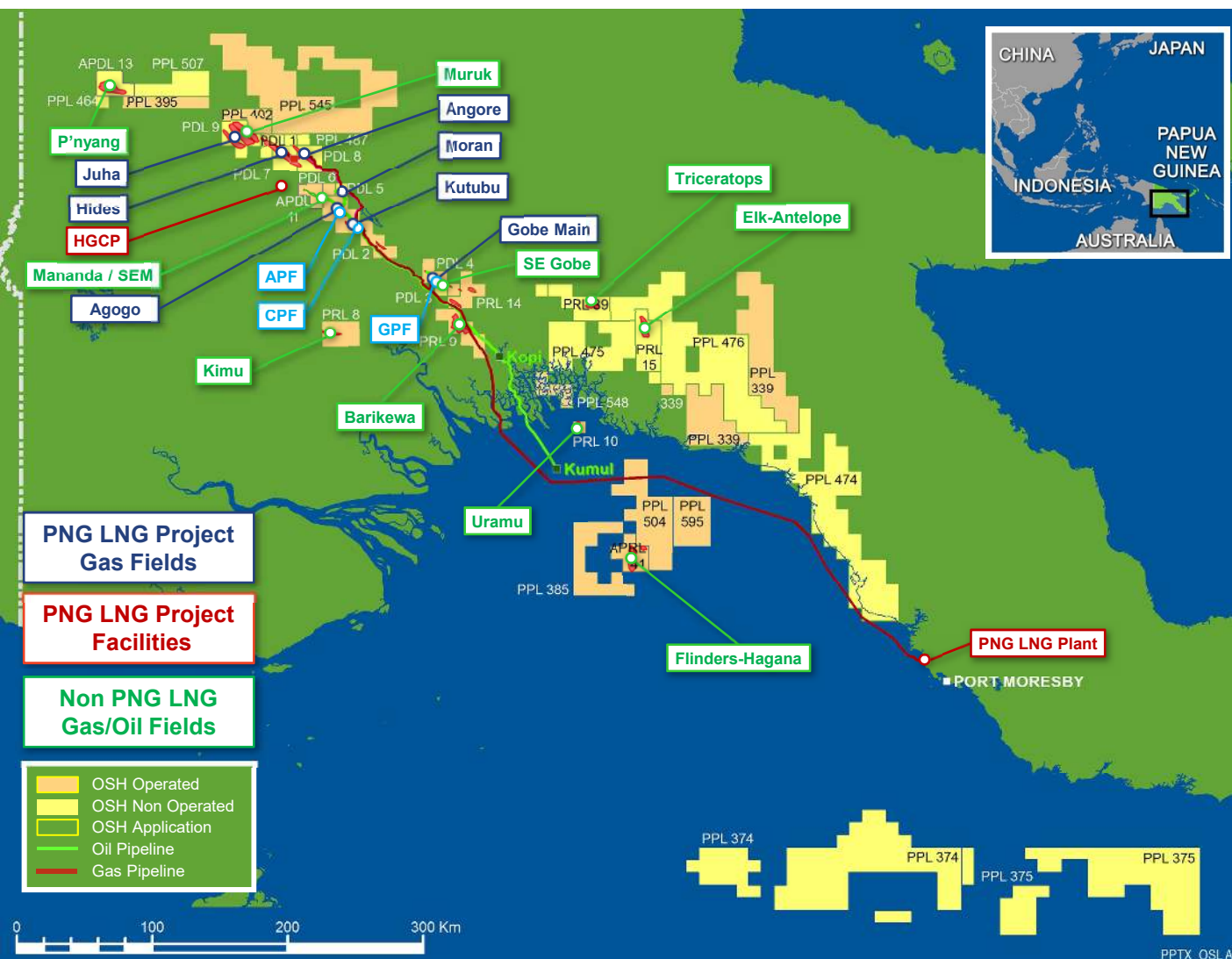
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Oil Search

# OIL SEARCH OVERVIEW



- ❖ Established in PNG in 1929
- ❖ 29% interest in PNG LNG Project, operated by ExxonMobil, ~60% interest in, and operator of, PNG's producing oil fields
- ❖ Pursuing major LNG growth opportunities in PNG in partnership with ExxonMobil and Total
- ❖ Alignment reached on preferred downstream development concept for ~8MTPA of new LNG capacity
- ❖ PNG gas exploration upside
- ❖ 25.5% interest in major oil resource in Alaska North Slope, USA, with material growth potential
- ❖ Market capitalisation ~A\$14bn (~US\$10bn)
- ❖ Listed on ASX (Share Code: OSH) and POMSOX, plus US ADR programme (Share Code: OISHY)

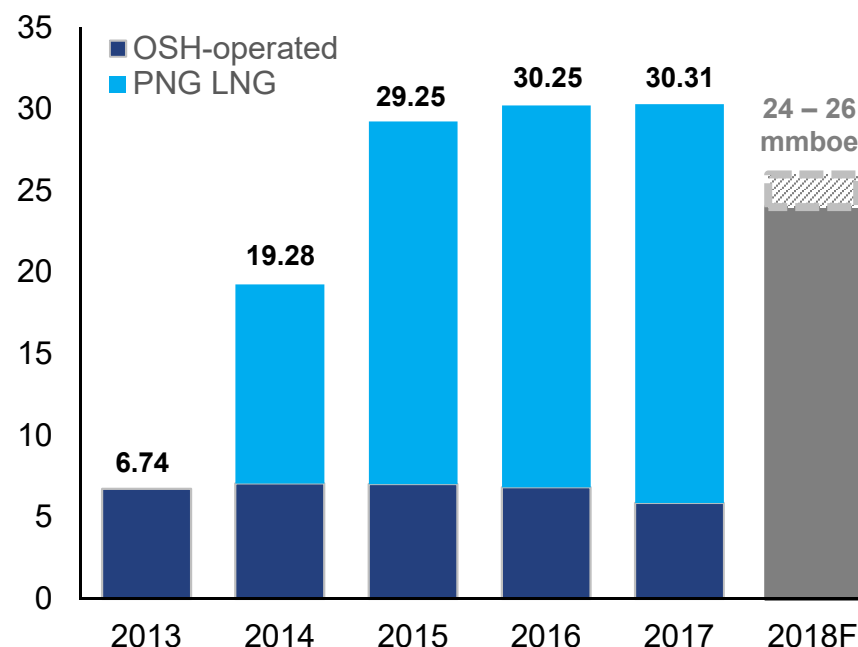


# STRONG RECOVERY FOLLOWING MAJOR EARTHQUAKE IN PNG HIGHLANDS



- ❖ 7.5 magnitude earthquake struck PNG Highlands in late Feb-18 – one in 100 year event:
  - Fortunately no major injuries among staff and contractors, facilities proved to be highly resilient
- ❖ All operations temporarily shut-in, resulting in 31% fall in production, 39% reduction in NPAT for 1H18
- ❖ Since resuming production in April, PNG LNG operating at/above pre-earthquake levels :
  - Annualised rates of 8.5 MTPA in May and June, 8.9 MTPA in July (vs 8.3 MTPA in 2017) and record daily rate >9 MTPA
  - Reflects high operating reliability and planned modifications to Hides Gas Conditioning Plant, maintenance work on LNG trains undertaken during shutdown period
- ❖ Progressive ramp up in OSH-operated production expected through to 1Q19
- ❖ Positive production outlook for 2H18 with operating cash flow and profitability buoyed by higher oil and LNG prices

## OIL SEARCH NET PRODUCTION (MMBOE)<sup>1,2</sup>



Production	2018 Guidance
Oil Search-operated <sup>2</sup>	3 – 4 mmboe
PNG LNG Project <sup>1,2</sup>	21 – 22 mmboe
Total production	24 – 26 mmboe

1. LNG sales products at outlet of plant, post fuel, flare and shrinkage

2. Gas:oil conversion rate from 2014 onwards: 5,100 scf = 1 barrel of oil equivalent (prior 6,000 scf/boe)

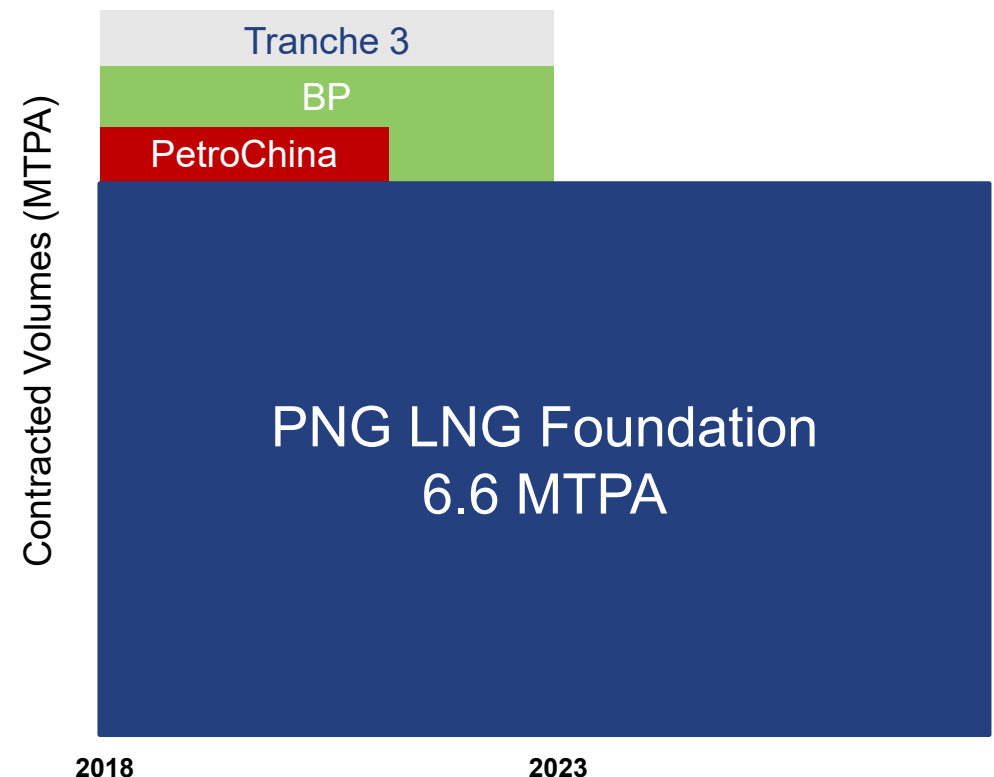
\* Oil Search operated production includes SE Gobe gas sales to PNG LNG Project

# MID-TERM SALES AGREEMENTS SIGNED BY PNG LNG



- ❖ Three-year SPA signed with PetroChina for ~0.45 MTPA of LNG. Supply commenced July '18
- ❖ Five-year SPA signed with BP. ~0.45 MTPA of LNG for three years, followed by ~0.9 MTPA for two years. Supply commenced Aug '18
- ❖ Adds to 6.6 MPTA under long-term contract to JERA, Osaka Gas, Sinopec and CPC
- ❖ Supply agreement for remaining mid-term tranche expected to be finalised in near-term
- ❖ Strong spot market for remaining uncommitted volumes

## PNG LNG CONTRACTUAL COMMITMENTS



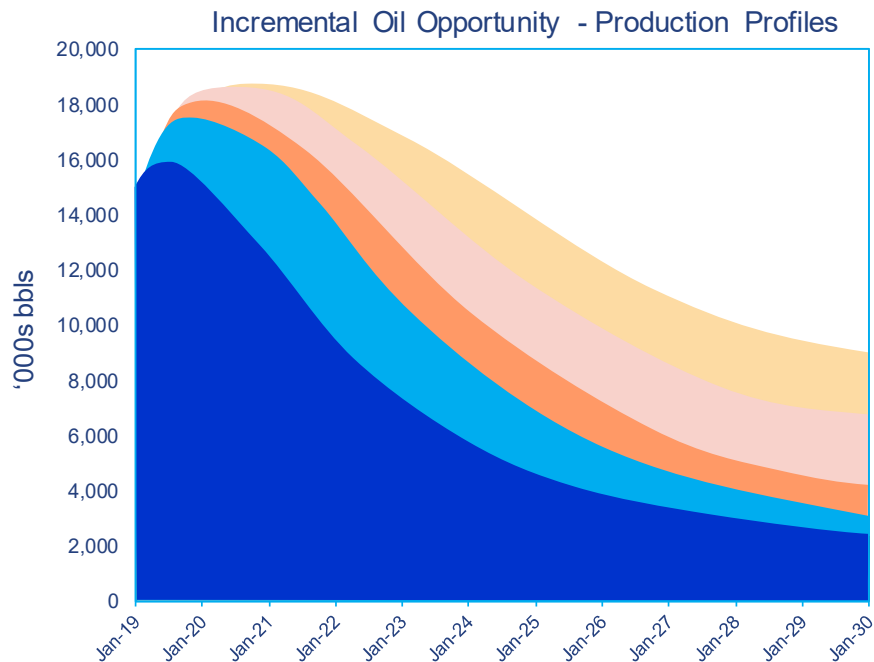
***PetroChina and BP SPAs take total contracted PNG LNG volumes to ~7.5 MTPA***

# PNG OIL FIELD AND ASSOCIATED GAS OPPORTUNITIES



## LIQUIDS

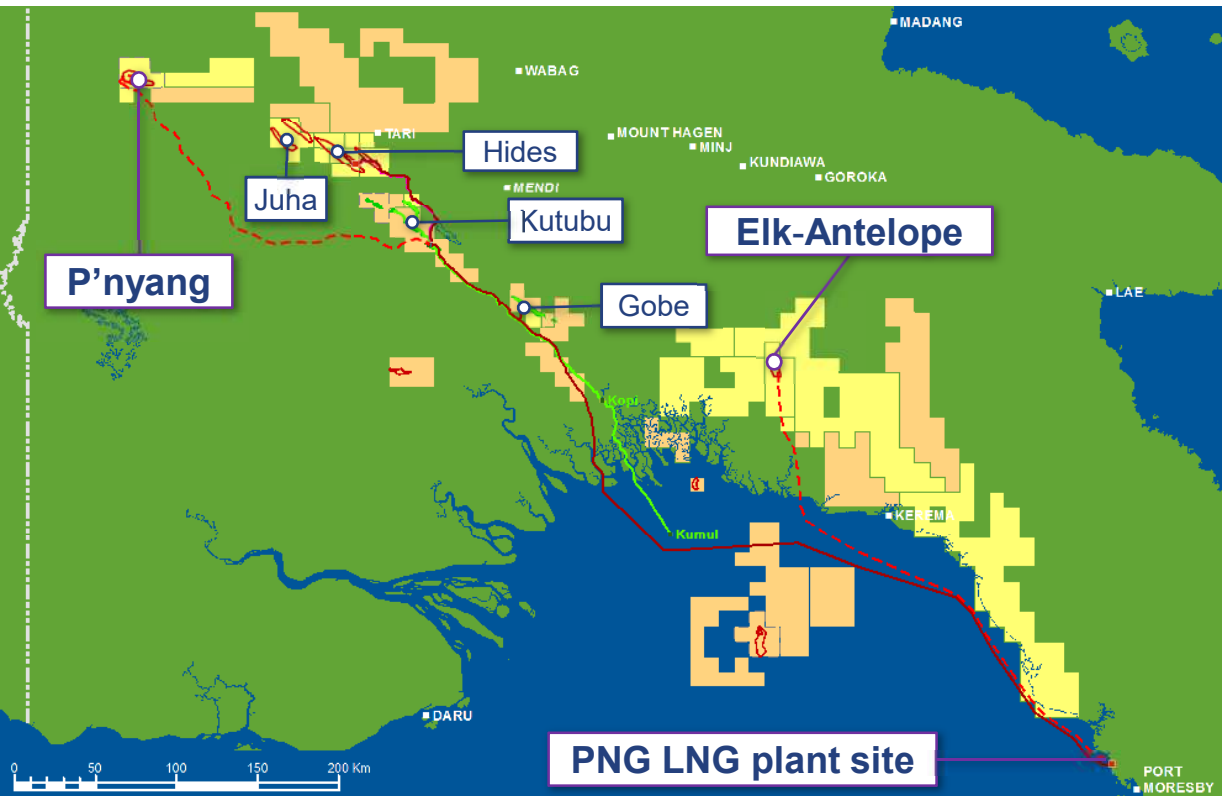
- ❖ Significant low risk opportunities identified to extend production life of PNG oil fields
- ❖ Potential to extend plateau oil production until 2023-24 and add > 30mmbbl net to OSH



## ASSOCIATED GAS EXPANSION (AGX)

- ❖ Work progressing on AGX opportunity
- ❖ Comprises accelerating gas from Kutubu, Agogo and Moran fields to support higher PNG LNG production
- ❖ Potential source of low cost feed gas to front-end PNG LNG/P'nyang train under proposed three-train development concept
- ❖ Recertified increased PNG LNG reserves within oil fields underpins higher gas production rates

# DISCUSSIONS ADVANCING ON DEVELOPMENT OF NEW LNG CAPACITY

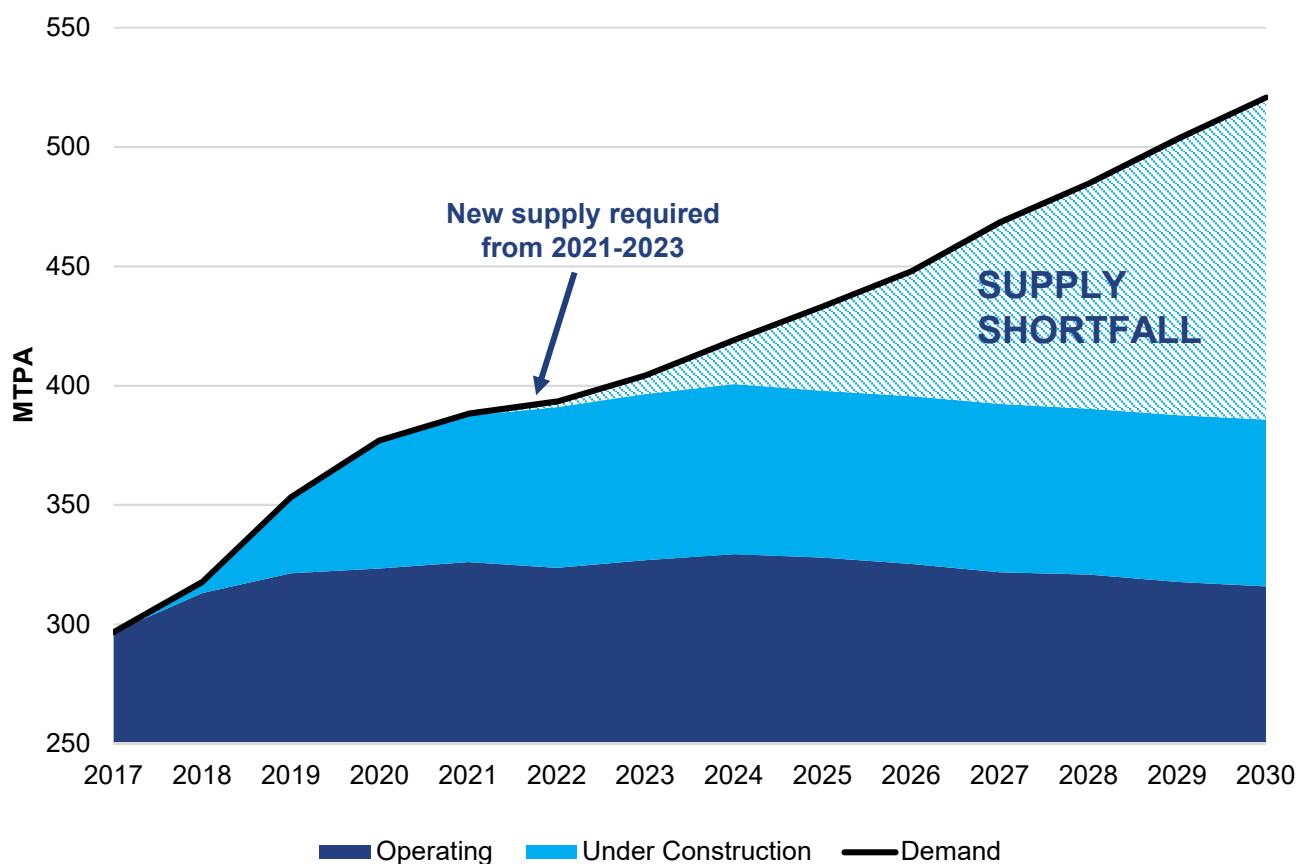


- ❖ Steady progress on new LNG developments in PNG following alignment on downstream concept:
  - Three trains, ~8 MTPA total capacity, two supported by Papua LNG (Elk-Antelope), one by PNG LNG and P'nyang, all located on PNG LNG plant site
  - Underpinned by gas resources in Elk-Antelope and P'nyang (>8 tcf 1C, 11 tcf 2C)
  - Excellent technical outcome, simplifies commercial and financial structure, cost competitive
- ❖ Ongoing PNG LNG, PRL 3 and PRL 15 meetings to advance concept definition, engineering, project financing and commercial agreements
- ❖ Dialogue between State Negotiation Team and PRL 15 and PRL 3 on gas agreements underway
- ❖ Targeting decision on FEED entry in 2H18

# SUBSTANTIAL GROWTH IN GLOBAL LNG DEMAND



## GLOBAL SUPPLY AND DEMAND



Source: IHS Markit Aug 2018

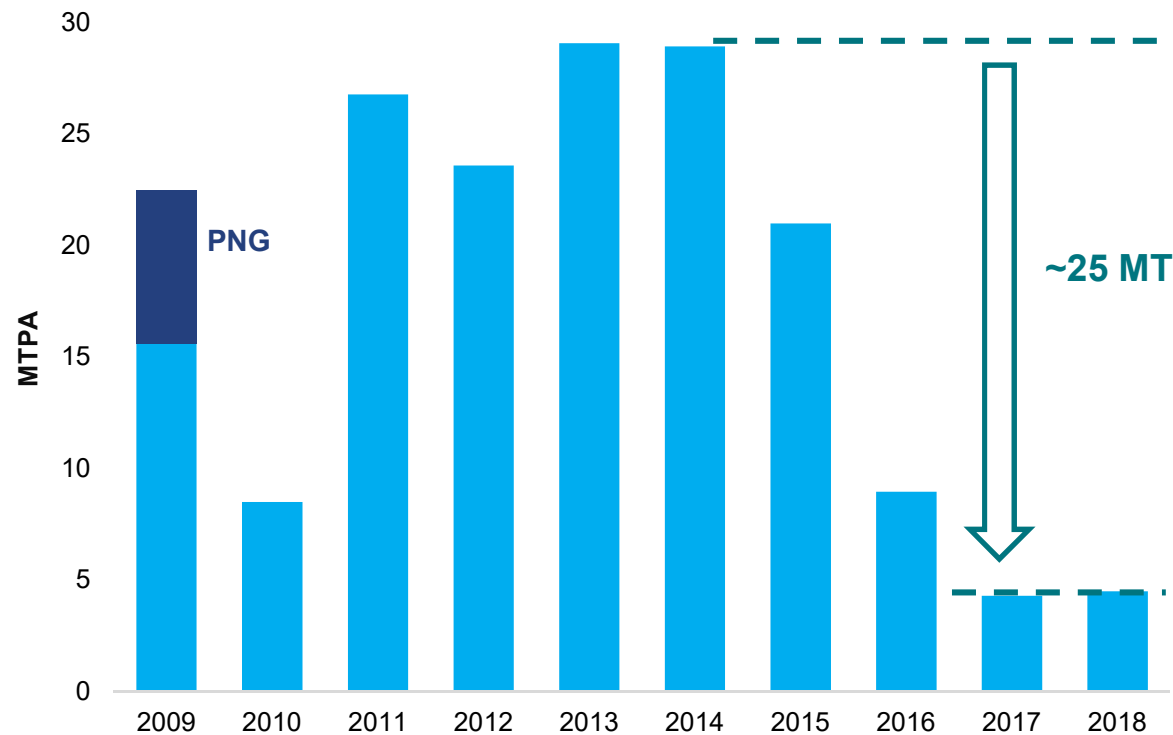
- ❖ Global LNG demand grew 11% in 2017 and >7% higher in 1H18 than in 1H17
- ❖ LNG demand growth expected to be >4.5% p.a. to 2030
- ❖ Growing demand driven by NE Asia:
  - China and South Korea prioritising gas and renewable generation over coal and nuclear to address air quality concerns
  - Taiwan phasing out nuclear power by 2025
- ❖ Material supply shortfall of ~135 MTPA expected by 2030:
  - New LNG projects required to meet supply-demand gap, expected as early as 2021-2023



# POTENTIAL GLOBAL LNG SUPPLY SHORTFALL COMMENCING IN EARLY 2020'S



## LNG LIQUEFACTION CAPACITY BY FID YEAR



Source: IHS Markit Aug 2018

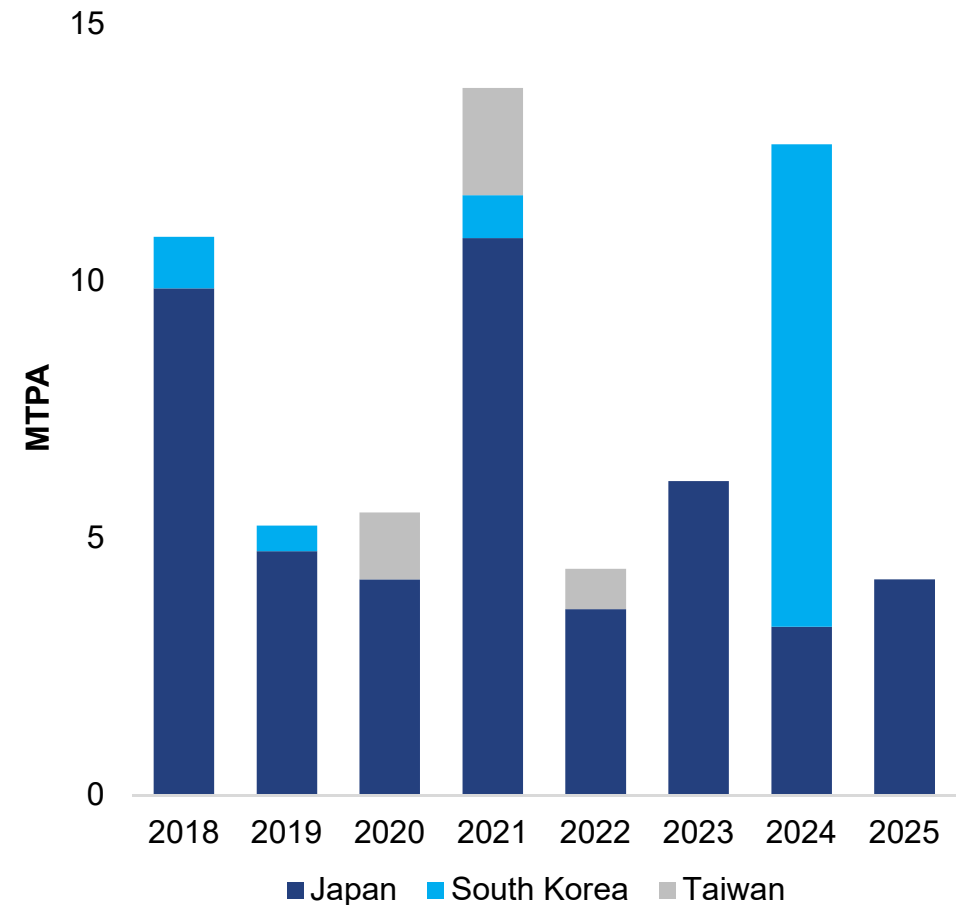
- ❖ Significant fall in new LNG capacity sanctioned:
  - Only 8.8 MTPA sanctioned since 2016
- ❖ To meet supply-demand gap in 2025, ~40 MTPA of additional supply required (9 x 4.5 MTPA LNG trains):
  - New projects would need to take FID by ~2020
- ❖ By 2030, a further 135 MTPA of new supply required (30 x 4.5 MTPA LNG trains)
- ❖ Proposed new LNG capacity development in PNG in strong position to capture markets

# OIL SEARCH EQUITY MARKETING OF EXPANSION VOLUMES



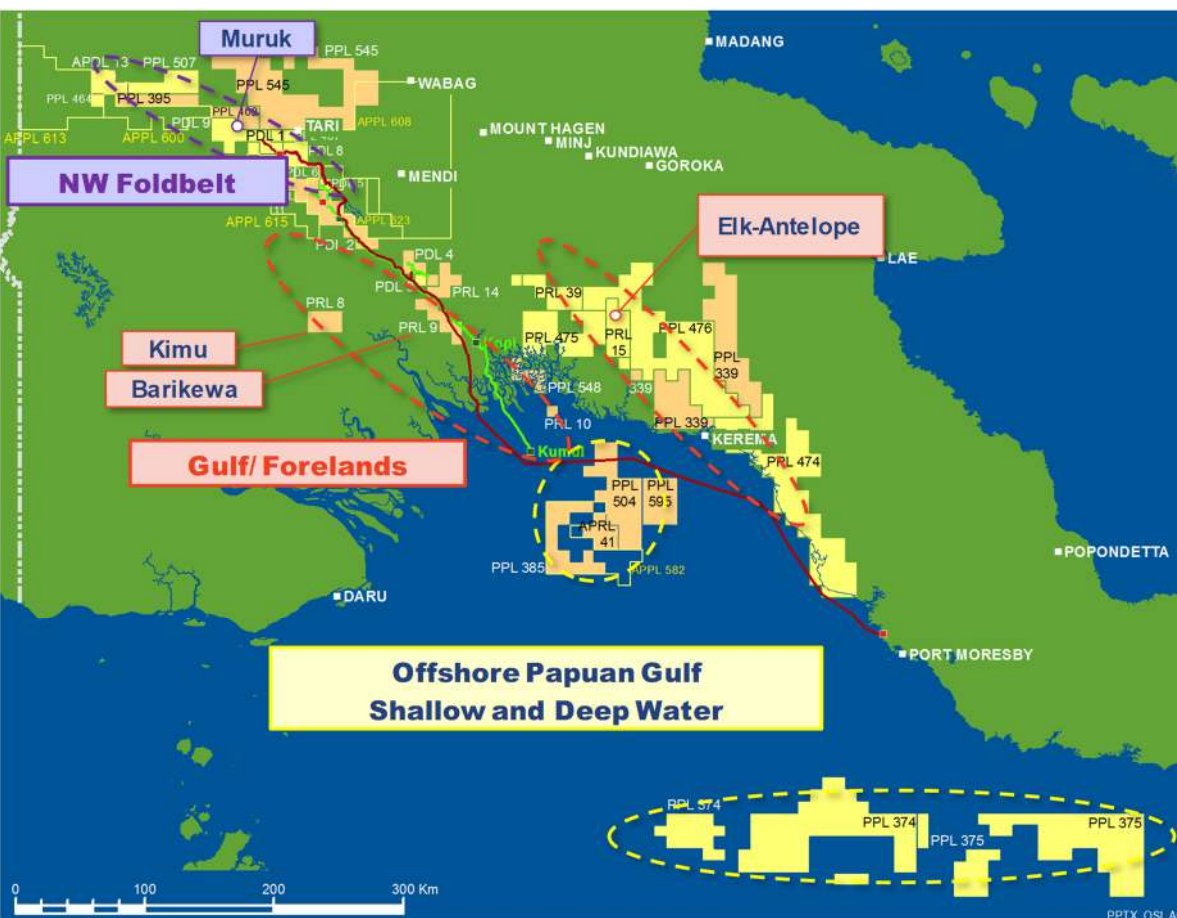
- ❖ Very positive response received from Tier 1 buyers to initial OSH equity marketing from new LNG capacity in PNG
- ❖ Buyers seeking LNG source diversification from new countries and new sellers
- ❖ Renewed interest from buyers for term supply
- ❖ Marketing LNG with attractive high heating value from brownfield expansion
- ❖ Security of supply from proven project to meet growing supply-demand gap from early-2020s
- ❖ As well as significant growth in Asian regional demand, by 2025, 60+ MTPA of LNG contracts expire across JKT. Many expiring contracts with projects that are in decline

## CONTRACT EXPIRATIONS BY YEAR



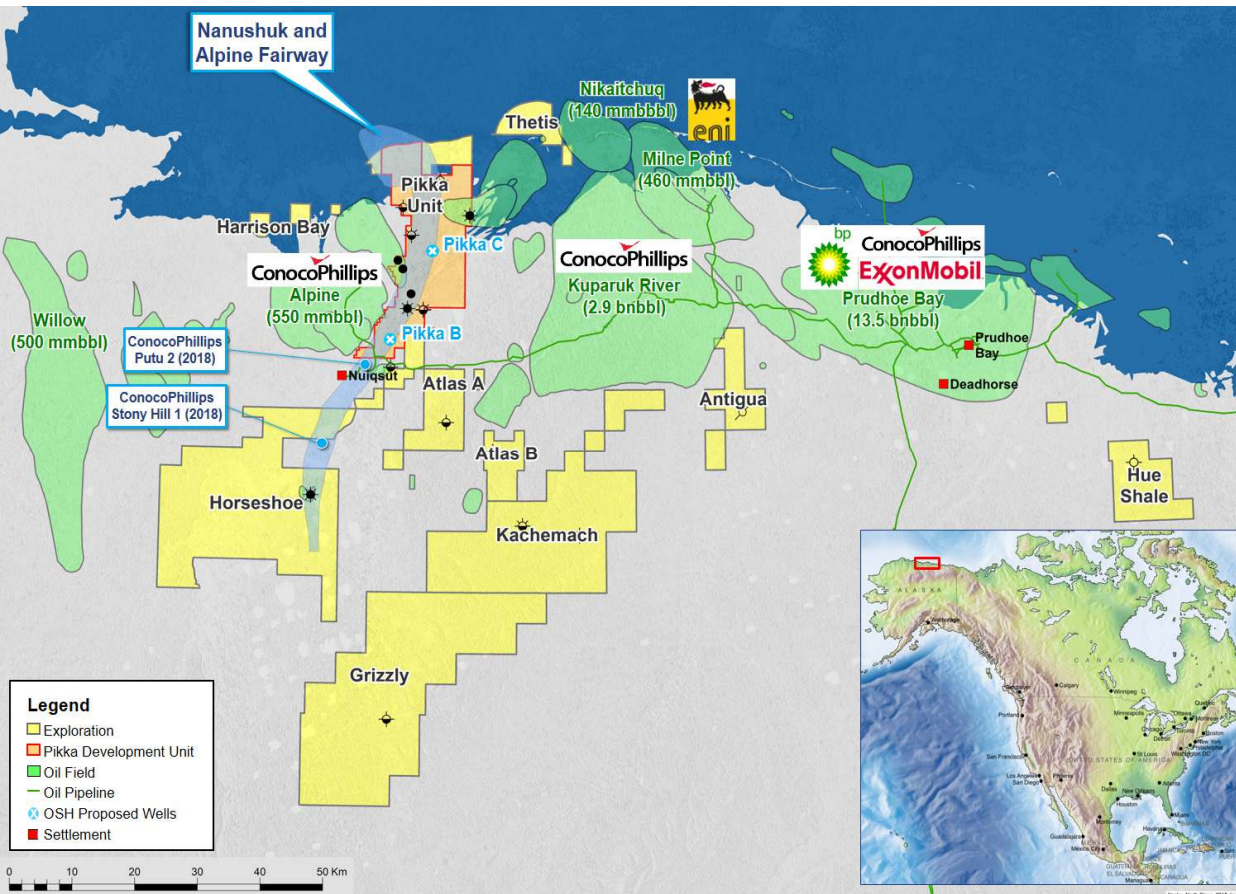
Source: IHS Markit Aug 2018

# PNG EXPLORATION AND APPRAISAL TO SUPPORT NEXT PHASE OF DEVELOPMENT



- ❖ Successful Kimu 2 and Barikewa 3 appraisal wells in PNG Forelands:
  - Evaluation of well results underway to define resource volume and determine optimal commercialisation route
- ❖ Muruk 2 appraisal in NW Foldbelt:
  - 11km step-out to test resource upside, expected to spud 4Q18
- ❖ Expansion of exploration portfolio in onshore Gulf:
  - 25% farm-in to PPLs 474, 475, 476, PRL 39, adjacent to Elk-Antelope fields in PRL 15
- ❖ First phase seismic acquisition in onshore Gulf:
  - Will help define attractive leads and prospects in close proximity to planned Papua LNG infrastructure
  - Operated by OSH on behalf of ExxonMobil and Total

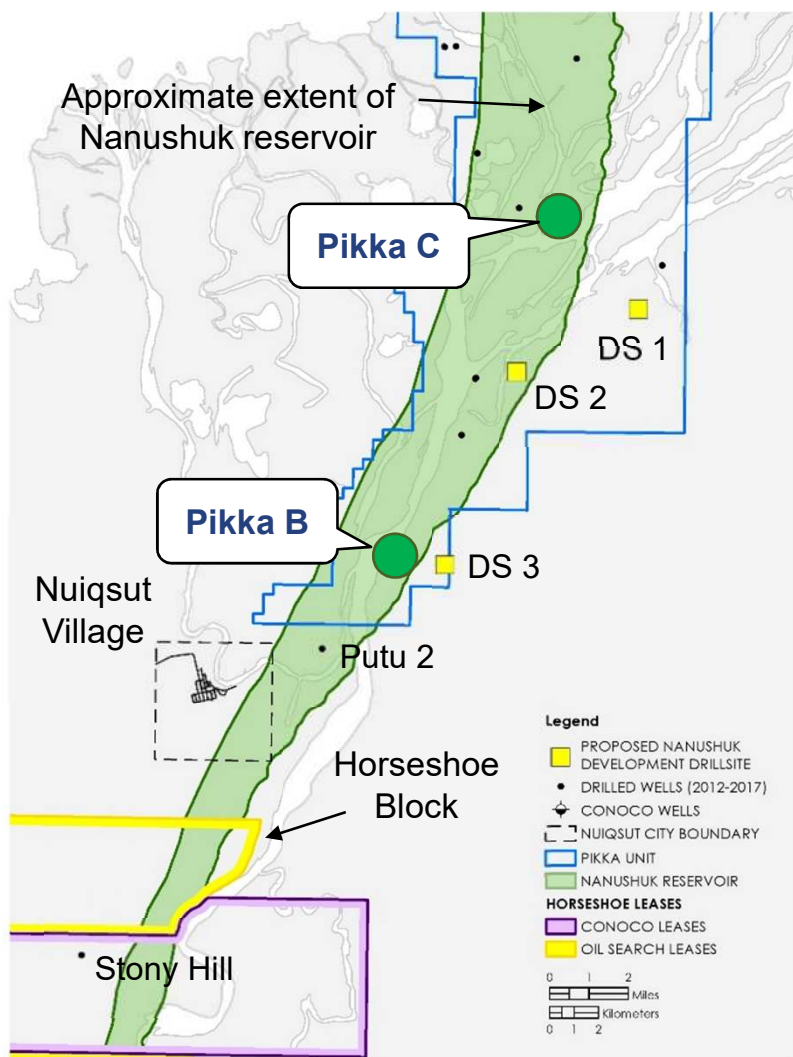
# ALASKA ACQUISITION COMPLETED, 2018 BUSINESS PRIORITIES SET



- ❖ US\$400m acquisition completed Feb '18, operatorship assumed March '18:
  - Quality oil resource with significant upside
  - Compelling entry price at right time in development and oil price cycle
- ❖ Building experienced and empowered team in Anchorage (currently 50 employees, expect ~100 by end 2018)
- ❖ Discussions with key stakeholders (State, JV partners, ConocoPhillips and local Native corporations) to optimise cooperation
- ❖ Commencing process to capture value from Armstrong (AOG) option:
  - Aligning with Repsol to attract quality 3rd parties linked to exercising option and undertaking joint divestment
  - Preparing data room and team to support divestment



# 2018/19 WORK PROGRAMME FOCUSED ON MATURING PIKKA RESOURCE ESTIMATES



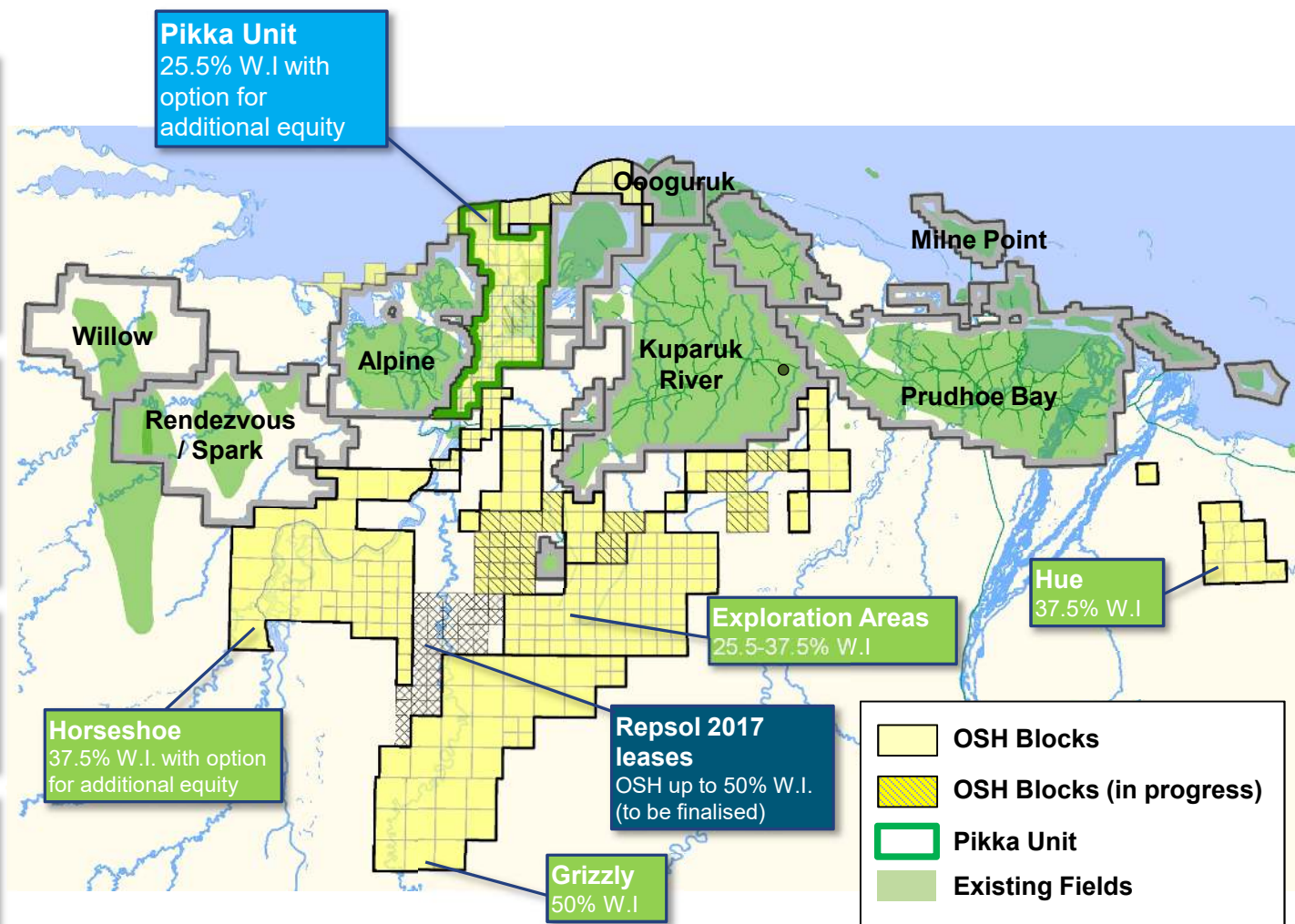
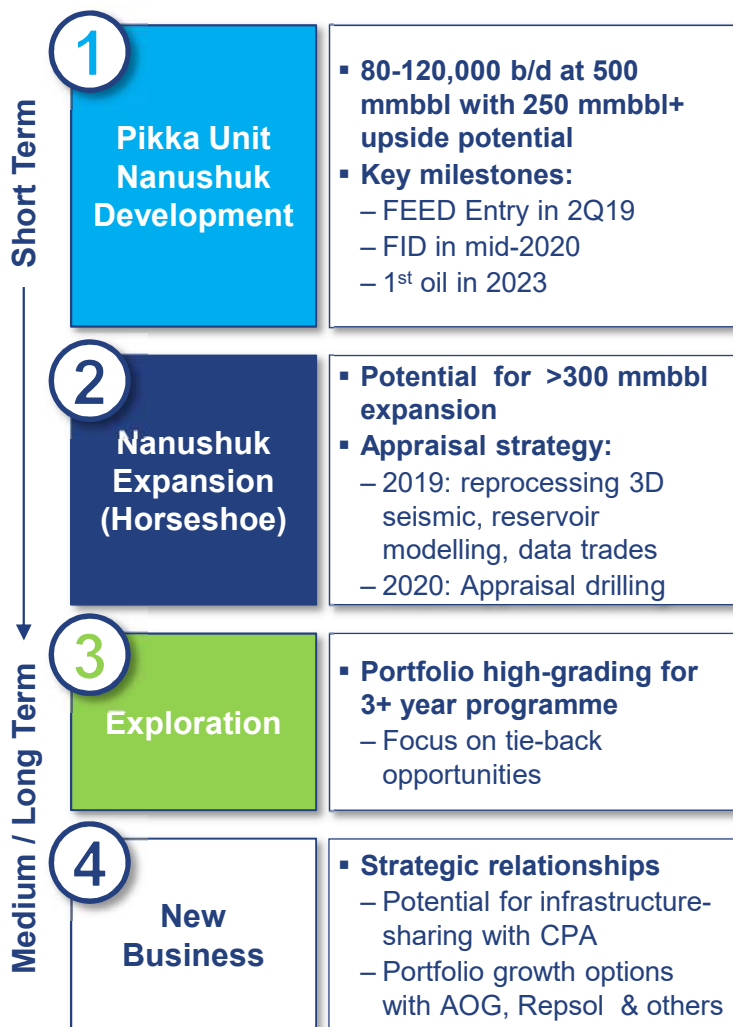
- ❖ Planning to drill two appraisal wells to constrain continuity of Nanushuk reservoir of Pikka Unit:
  - Pikka B and Pikka C locations identified, sites surveyed
- ❖ Aim to add 1C around DS 3 and constrain 2C resources in Pikka Unit
- ❖ Define volumes for FEED decision in 2Q19:
  - Recent subsurface work and results of COP's Putu 2 well indicate potential resource upside in Pikka Unit above OSH estimate of 500 mmbbl gross
  - Learnings from COP's technical advances
  - EIS optimisation and long-term access agreements with objective of Record of Decision in 2Q19
- ❖ Undertake Pre-FEED Optimisation Studies

## Current OSH estimate

Reservoir	2C (mmbbl)
Nanushuk	400
Satellite Reservoirs	100
<b>Total</b>	<b>500</b>

*2018/09 appraisal programme targeting moving >250mmbbl from 3C to 2C and appraising material upside, as recognised by joint venture partners*

# ALASKA – BALANCED PORTFOLIO WITH FOUR STAGES OF GROWTH

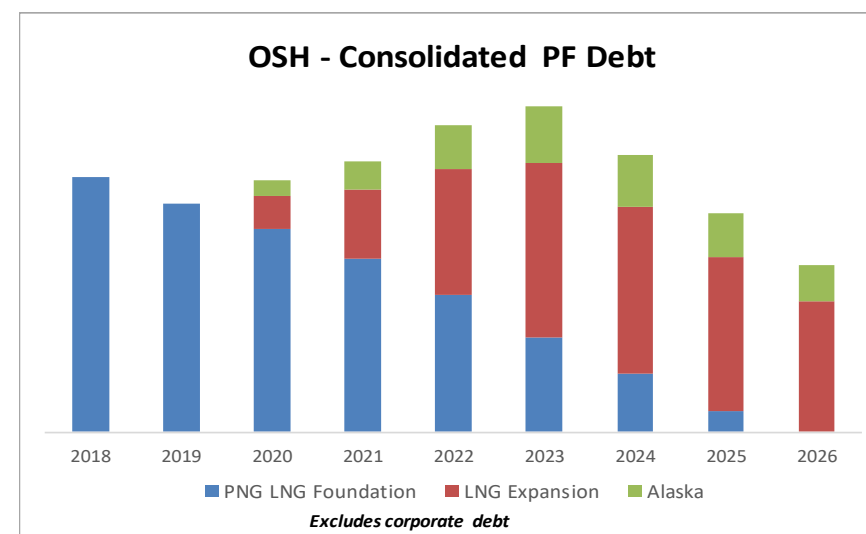
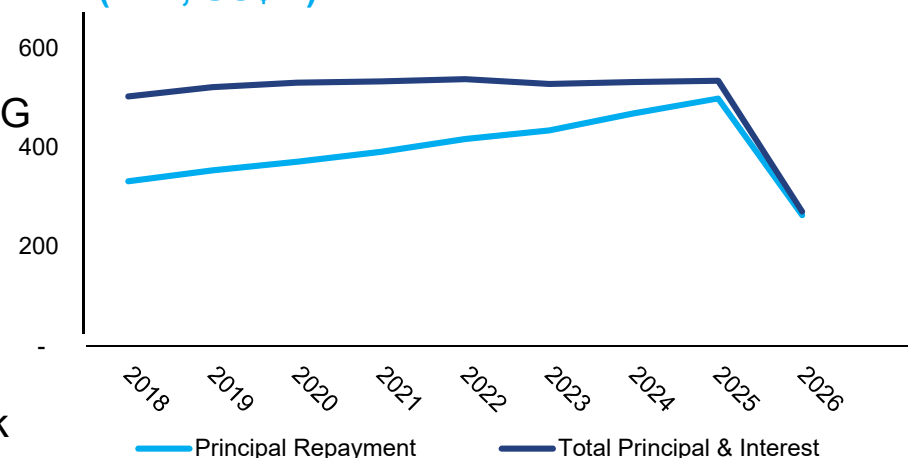


# BALANCE SHEET CAPACITY TO SUPPORT LNG EXPANSION AND ALASKA



- ❖ Liquidity of US\$1.26bn (as at end June 18):
  - US\$850m corporate facilities, US\$412m cash
  - Operating cashflow benefiting from higher oil and LNG prices
- ❖ Extensive modelling supports ability to fund LNG and Alaska North Slope developments without need to raise equity:
  - Based on conservative medium-term oil price outlook
  - Exploration and other discretionary spend can be curtailed, DRP introduced, if needed
- ❖ Key financial metrics forecast to remain comfortably within lender covenants:
  - Gearing peaks in 40-45% range, similar to 42% peak gearing for PNG LNG in 2015 and well below 55% covenant
  - Interest Cover forecast always >3.5x vs 3.0 covenant

INDICATIVE PNG LNG REPAYMENT PROFILE (NET, US\$M)

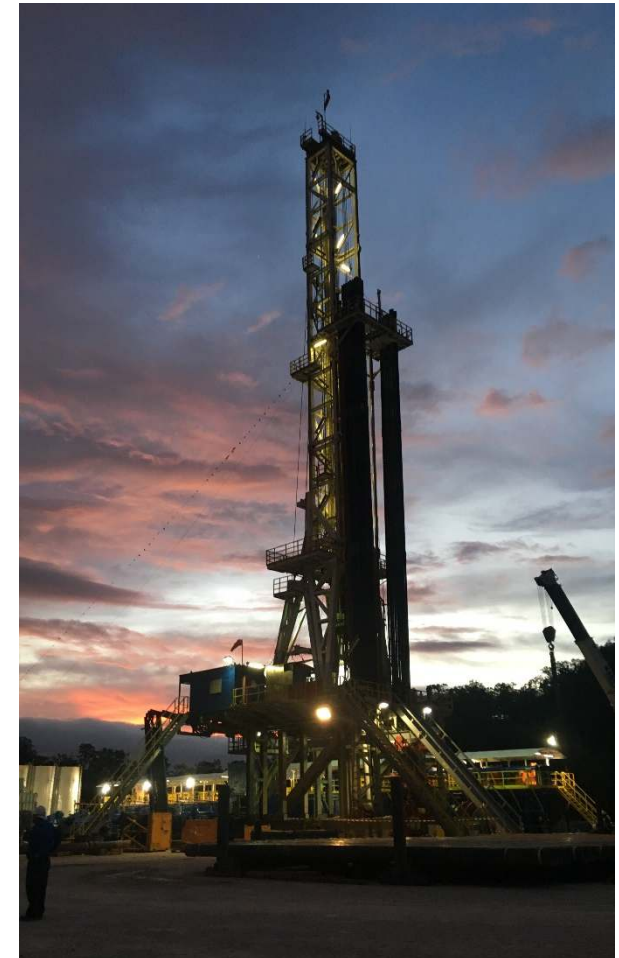






## FUNDING ASSUMPTIONS FOR LNG EXPANSION AND ALASKA

- ❖ OSH total share of development costs (including capitalised interest and financing fees) for 2018–2023 expected to be ~US\$4bn comprising LNG expansion ~US\$3bn and Alaska North Slope (Pikka) ~US\$1bn (25.5% interest). Numbers will be updated during FEED
- ❖ Recent discussions with lenders indicate improved debt/equity terms available for project financing given strength in oil and LNG prices
- ❖ US/international debt markets offer range of financing options for US conventional oil developments
- ❖ OSH total equity contributions ~US\$1.2bn, funded from:
  - Existing cash balances
  - Cash from operations (~US\$1+bn pa, depending on oil prices)
  - Existing/new corporate facilities
- ❖ When onstream, PNG LNG, LNG expansion and Alaska will generate free cash flow >US\$2 – 3 billion pa, with large uplift from 2026 when PNG LNG debt is fully repaid





# ONGOING RELIEF ACTIVITIES FOLLOWING HIGHLANDS EARTHQUAKE

- ❖ Following 7.5 magnitude earthquake in Feb '18, OSH and Oil Search Foundation (OSF) played critical 'First Responder' role:
  - UN estimates OSH delivered ~80% of total food supplies to impacted areas in first four weeks after earthquake
- ❖ Communities in Hela, Southern Highlands and Western Provinces continue to be impacted:
  - Thousands dislocated, basic services unavailable, schools closed, roads blocked
- ❖ Long-term term recovery and restoration activities underway:
  - OSF leading major immunisation programme to combat communicable diseases, rehabilitation of health facilities, addressing water, sanitation and hygiene needs
  - Working with Government and others on rebuilding essential infrastructure



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**K16m (US\$5m)**

COMMITTED IN CASH AND KIND  
TO SUPPORT DISASTER RELIEF  
EFFORTS IN HELA AND SOUTHERN  
HIGHLANDS PROVINCES

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**>200 TONNES**

FOOD AND SUPPLIES DELIVERED  
INTO VILLAGES, REACHING  
>200,000 PEOPLE

---

**~2,400**

MEDICAL TREATMENT CASES  
UNDERTAKEN

---

**~100**

HEALTH CENTRE KITS  
DELIVERED



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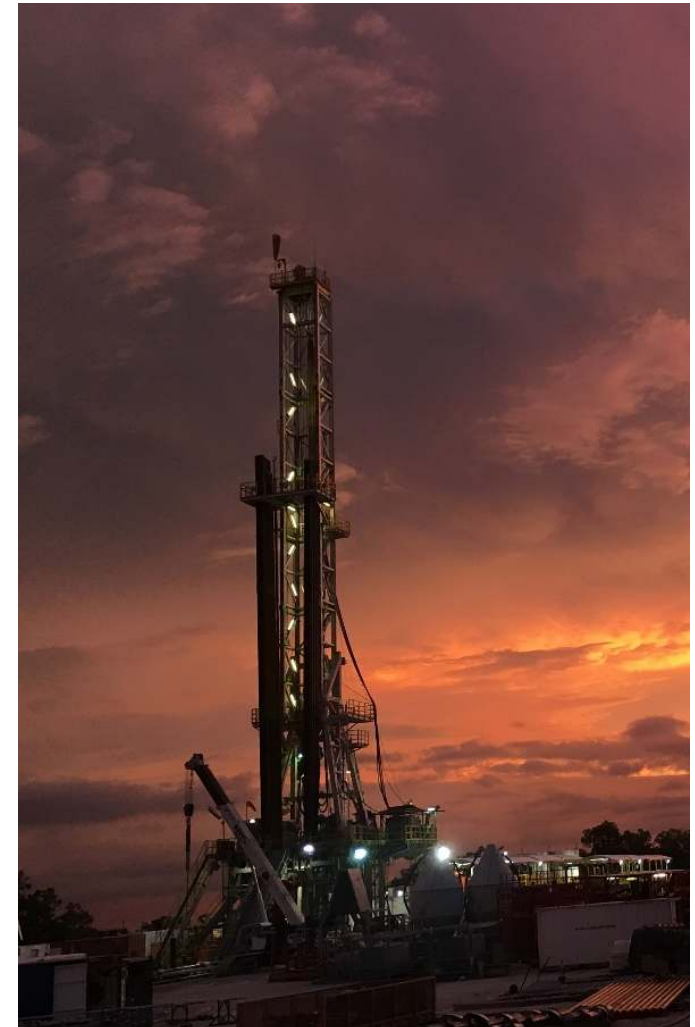
## OTHER PNG INITIATIVES

- ❖ Providing support to Government to resolve remaining issues related to PNG LNG benefits distribution to landowners
- ❖ Construction of 58MW power station in Port Moresby, due onstream early 2019
- ❖ Construction of APEC Haus, recently handed over
- ❖ Development of Papua New Guinean workforce and support of new diversity goals
- ❖ Ongoing social programmes, directly and through Oil Search Foundation:
  - Support of Hela Provincial Hospital and Health Authority – provision of world-class health care
  - Women's empowerment and addressing gender-based violence with new programmes
  - Champions for Change
- ❖ Support of rugby league in PNG:
  - Including promoting women through sponsorship of PNG Orchids



# SUMMARY

- ❖ Strong recovery following devastating earthquake in PNG in February
- ❖ Positive production outlook for 2H18, with profitability supported by higher oil and LNG prices
- ❖ Three train development concept represents excellent technical, commercial and financial outcome and is highly cost competitive:
  - Targeting decision on FEED entry in 2H18
- ❖ Global LNG demand continues to strengthen, significant interest from tier one NE Asian customers in OSH's equity volumes from proposed Papua LNG Project and from PNG LNG/P'nyang development
- ❖ Alaska asset – material uplift in value since initial investment. Focus on 2018/19 drilling programme, ahead of FEED entry in 2Q19, option exercise strategy and build-up of Alaskan operation/capacity
- ❖ Strong balance sheet, despite impact of earthquake, and excellent cash generation from operations, to support next phase of growth







# THANK YOU

## COMPANY UPDATE September 2018

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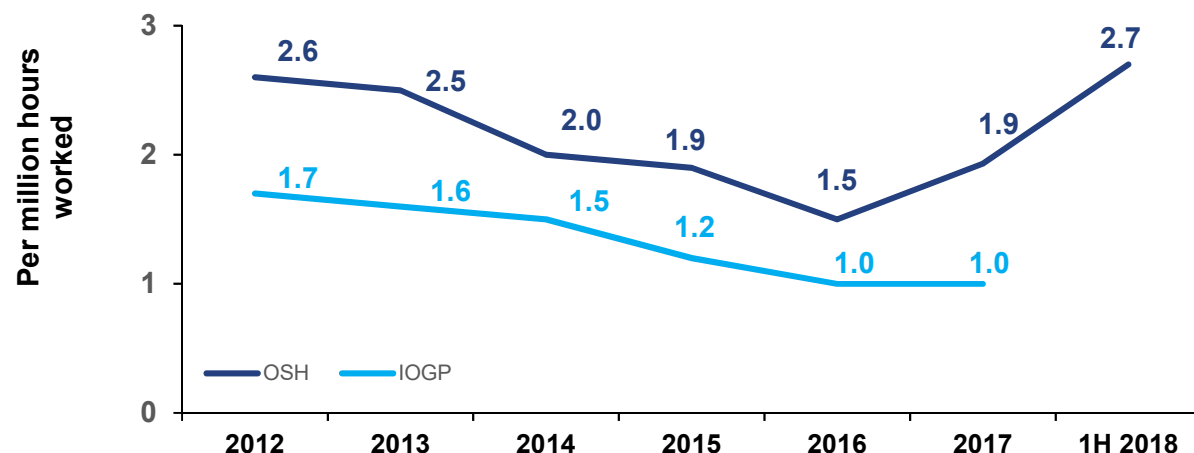
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# APPENDIX 1: SAFETY AND ENVIRONMENTAL PERFORMANCE



## TOTAL RECORDABLE INCIDENT RATE (TRIR)

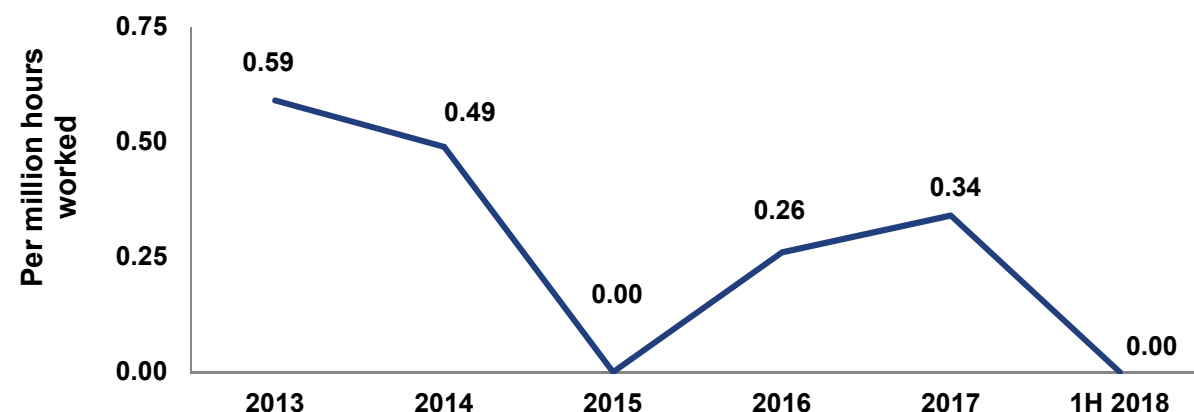


❖ No major injuries to OSH staff and contractors due to earthquake and aftershocks

❖ However, TRIR increased to 2.7 per million hours worked:

- Largely associated with seismic operations in onshore Gulf, all minor, no LTIs
- Improvement plan introduced end 1Q, resulting in decrease in reported incidents (5 in 2Q vs. 9 in 1Q)

## LOST TIME INJURY FREQUENCY



❖ No material environmental incidents

❖ No loss of hydrocarbon containment as a result of earthquake

# APPENDIX 2: 2018 FIRST HALF FINANCIAL PERFORMANCE



US\$m	1H 2018	1H 2017
Sales volume (mmboe)	9.77	14.18
Revenue	557.8	676.2
Production costs	(143.8)	(126.2)
Other operating costs	(55.0)	(55.0)
Other income	4.7	5.6
EBITDAX <sup>1</sup>	363.7	500.5
Depreciation and amortisation	(131.4)	(186.3)
Exploration costs expensed	(12.3)	(24.9)
Net finance costs	(99.6)	(98.5)
Profit before tax	120.3	190.8
Tax	(41.1)	(61.7)
Net profit after tax	79.2	129.1

<sup>1</sup> EBITDAX (earnings before interest, tax, depreciation/amortisation, non-core activities, impairment and exploration) is a non-IFRS measures that are presented to provide a more meaningful understanding of the performance of Oil Search's operations. The non-IFRS financial information is derived from the financial statements which have been subject to review by the Group's auditor.

# APPENDIX 3: 2018 FULL YEAR GUIDANCE<sup>1</sup>



Production (mmboe)	Current Guidance
Oil Search-operated PNG oil and gas <sup>2,3</sup>	3 – 4
Total PNG LNG Project <sup>2</sup>	21 – 22
<b>Total production</b>	<b>24 – 26</b>

Operating Costs	
Production costs	US\$11.0 – 13.0 / boe
Other operating costs <sup>4</sup>	US\$140 – 150 million
Depreciation and amortisation	US\$12.0 – 13.0 / boe

Capital Costs	
Exploration and Evaluation <sup>5</sup>	US\$270 – 330 million
Development	US\$40 – 50 million
Production	US\$25 – 30 million
Other PP&E	US\$50 – 55 million
Power	US\$50 – 65 million
<b>Total</b>	<b>US\$435 – 530 million</b>

1. Numbers may not add due to rounding.
2. Gas volumes have been converted to barrels of oil equivalent using an Oil Search specific conversion factor of 5,100 scf = 1 boe, which represents a weighted average, based on Oil Search's reserves portfolio, using the actual calorific value of each gas volume at its point of sale.
3. Includes SE Gobe gas sales.
4. Includes gas purchase costs, royalties and levies, selling and distribution costs, rig operating costs, power expense and corporate administration costs (including business development), other expenses and inventory movements.
5. Excludes Alaska acquisition costs.





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