

# Unlocking European Onshore Oil & Gas Resources

4 July 2019



#### **Forward Looking Statements**

This document has been prepared by Pura Vida Energy NL (PVD). This document contains certain statements which may constitute "forward-looking statements". It is believed that the expectations reflected in these statements are reasonable but they may be affected by a variety of variables and changes in underlying assumptions which could cause actual results or trends to differ materially, including, but not limited to: price fluctuations, actual demand, currency fluctuations, drilling and production results, reserve and resource estimates, loss of market, industry competition, environmental risks, physical risks, legislative, fiscal and regulatory developments, economic and financial market conditions in various countries and regions, political risks, project delays or advancements, approvals and cost estimates.

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#### **Resource estimates cautionary statement**

The estimated quantities of prospective resources relate to undiscovered accumulations and contingent resources relate to discovered accumulations. These estimates have an associated risk of discovery or appraisal (as the case may be) as well as a risk of development. Further exploration, appraisal and/or evaluation is required to determine the existence of a commercial quantity of moveable hydrocarbons.

#### **Qualified Person's Statement**

As an Australian public company with securities listed on the ASX, the oil and gas reserves and resource estimates in this presentation are prepared in accordance with the PRMS and ASX Listing Rule reporting guidelines.

The reserves and resources information of Pura Vida in this document is based on, and fairly represents, information and supporting documentation prepared by, under the supervision of, or reviewed by Mr Christopher Lewis (Technical Director) Unless otherwise stated, references in this presentation to reserves and resources are as at 19 June 2019 as contained in the NSAI reserves and resources estimate report prepared for Gemini Resources Limited Petroleum reserves and contingent resources reported herein have been prepared using a combination of deterministic and probabilistic methods.

Mr Lewis is a Director of Pura Vida Energy and has a BSc from the Imperial College, University of London and is a member of the American Association of Petroleum Geologists (AAPG) and the European Association of Geoscientists and Engineers (EAGE). The reserve and resource information are consistent with the definitions of proved, probable, and possible hydrocarbon reserves and resources that appear in the ASX Listing Rules. Mr Lewis is qualified in accordance with ASX Listing Rule 5.41 and consents to the inclusion of the Pura Vida reserves and resources figures in the form and context in which they appear in this presentation.

## EXECUTIVE SUMMARY



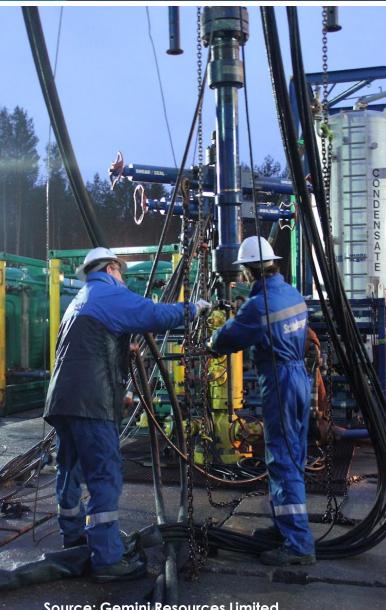
- Earn-in for a 35% interest in the Nowa Sol and Gora onshore Polish oil & gas projects secured via combined spend of A\$6.15million<sup>1</sup> [£3.38m]
- Projects located in Poland's proven and producing Permian basin
- Introduction of lower risk, lower cost, near-term European assets
- **Two existing wells** ready to be fracture tested and stimulated:
  - To confirm the flow rates and commerciality of the Jany-C1 (Oil) and Siciny-2 (Gas) discovery wells
  - De-risking of two unconventional resource plays
  - Independently assessed 2C contingent resources:

1.6 Tcf of gas (Siciny-2)\*

36 MMbbls of oil (Jany-C1)\*

- 210 Bcf of additional conventional prospective resources\* identified with an average CoS of 28%
- Entitlements Offer and Placement to raise a total of A\$3.7 million to support new projects
- Commercial and Technical Executive Director appointments

<sup>\*</sup> Volume estimates in this presentation are from Netherland, Sewell & Associates, Inc, report entitled "Estimates of Reserves and Future Revenue and Contingent Resources and Cash Flow to the Gemini Resources Ltd Interest and Gross (100%) Prospective Resources in Certain Oil & Gas Properties located in the Nowa Sol and Gora Concessions Permian Basin, Onshore Poland as of May 1, 2019" (**Report** or **CPR**). The % CoS in the presentation are estimated by PVD Management.



Source: Gemini Resources Limited Drilling Operations on Czaslaw SL1 Well

### MANAGEMENT TEAM ADDITIONS



#### Dr Andrew Matharu – Executive Director designate

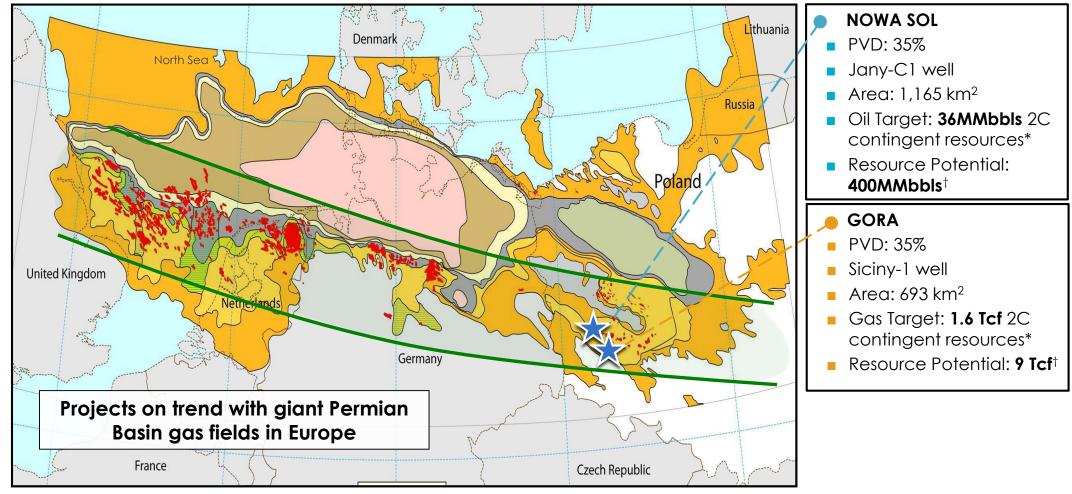
- 24 years experience across the oil & gas industry and equity capital markets.
- Commenced career as a Petroleum Engineer with Chevron and Kerr McGee in the UK North Sea
- Experience gained in capital markets, corporate advisory, strategy, M&A, business development and investor relations
- Experience of financing numerous small and mid-cap E&P and services companies
- VP Business Development at Tower Resources plc corporate and asset M&A and capital raisings exceeding US\$60 million
- BEng(Hons) Chemical Engineering (Sheffield University), PhD Chemical Engineering (Cambridge University), Chartered Engineer

#### Mr Chris Lewis – Technical Director designate

- Over 25 years oil and gas E&P experience with majors, small caps and consultancies
- Geophysicist with experience in senior management and board roles over last 18 years
- o Involvement in multiple, successful small cap E&P start-ups and re-launches in the last 15 years
- During the last 5 years also working as a consultant to private equity provider and E&P companies providing acquisition advice on deals from US\$5 million to US\$10 billion
- Involved in reserves auditing and writing of CPR's since 2002

### EUROPEAN ONSHORE FOCUS AND PROJECTS



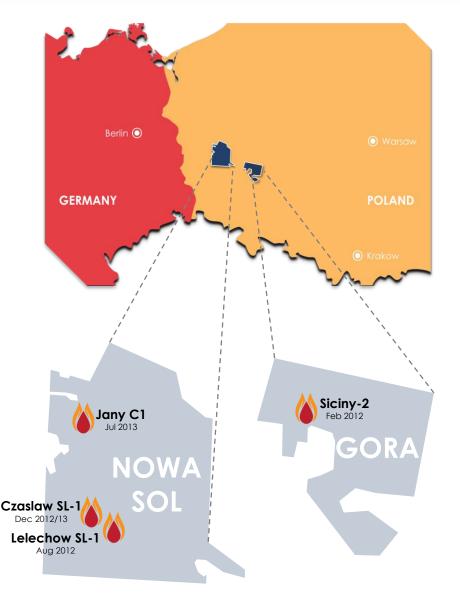


Map source: USGS

- Netherland Sewell & Associates Report (CPR) May 1st 2019
- <sup>†</sup> Gemini Resources management estimates

### **PROJECTS OVERVIEW**





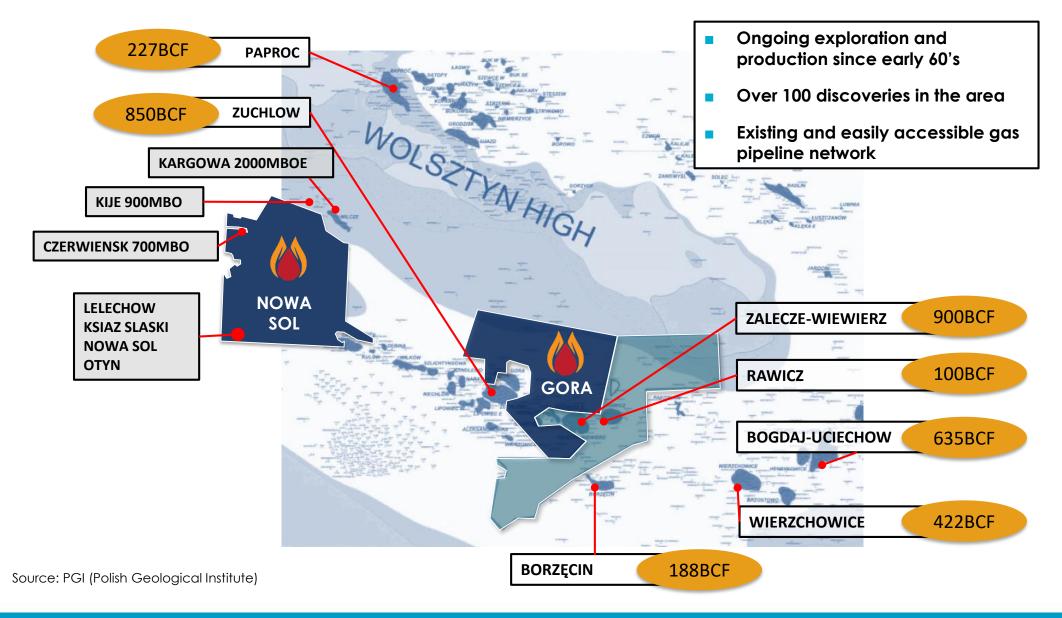
- 35% interest in the Nowa Sol and Gora projects in the prolific Polish Permian Basint
- Both licences have recent discoveries and **multi-Tcf/bbls** potential
- Surrounded by Poland's largest gas fields with over 100 discoveries in the area.
- The assets were acquired from AIM listed San Leon Energy plc by Gemini Resources
- Pre-crash (2014) LOIs from Halliburton and Transatlantic
- Netherland Sewell's CPR estimate a large 2C contingent resource potential:
  - **1.6 Tcf** \*2C contingent resources (tight gas)
  - **36 MMbbls\*** 2C contingent resources (tight oil)
- A\$45m recent historic expenditure incl. four uncompleted wells
- Low onshore drilling costs
- Well located, with nearby infrastructure, refineries and services
- Robust gas pricing (>US\$6 per mscf) and favourable fiscal regime

<sup>&</sup>lt;sup>+</sup>Farm-in excludes working interest in the Czaslaw SL-1 and Lelechow SL-1 wells \* Netherland Sewell & Associates Report (CPR) – May 1<sup>st</sup> 2019

### ADJACENT FIELDS



### Over 7 TCF of gas discovered in the Rotliegend in Poland



### GORA: SICINY-2 TARGETING GAS RESOURCES



- CPR estimate a 2C contingent resource associated with Siciny-2 of 1.6 Tcf\* of gas
  - 2C resource area covers 41.6 km<sup>2</sup>
  - Total Gora area is 693 km<sup>2</sup>
  - Potential for this unconventional play to extend across entire license
- Siciny-2 well drilled in Q4 2011 Q1 2012
  - Encountered **1,460m** of tight Carboniferous sandstone
  - Good and consistent gas shows throughout
  - Bottom 200m had average gas saturation of 71% from log analysis
  - Mini-frac already carried out (Injection test); analysis indicates good commercial potential through horizontal fracc'd development wells

#### **Carboniferous Unconventional Gas Play**

- CPR 2C contingent resource 1.6 Tcf\*
- Much larger potential if the play is proven up blockwide
- Surrounded by multiple large gas fields

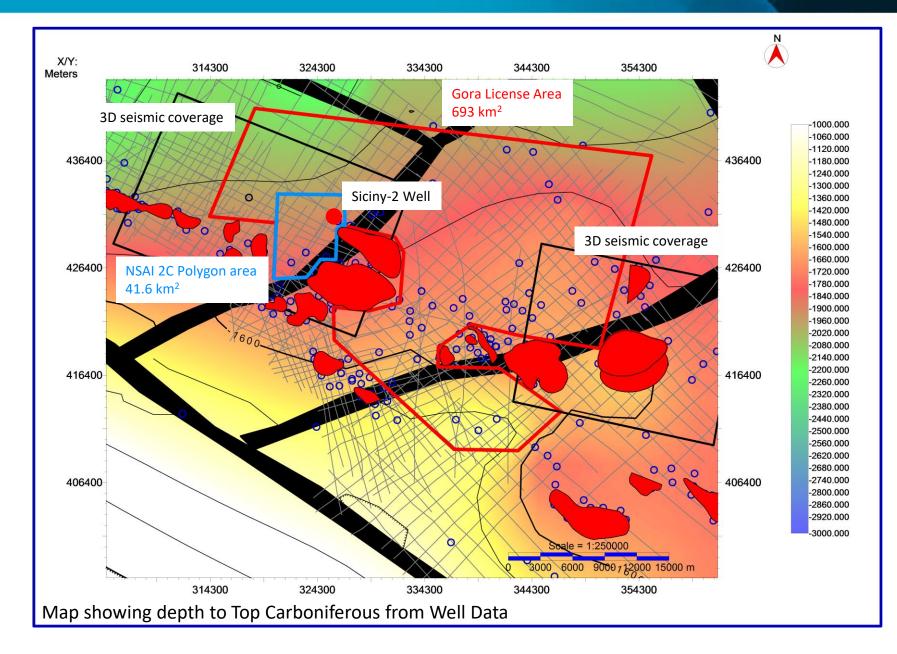
Contingent Resources		1C	2C	3C
Siciny-2	Tcf	0.7	1.6	3.2

#### Work Program

- Re-enter well and perform two-stage hydraulic frac
- Objective to prove commercial flow rate at well
- Approximately one month operation to frac and test
- Budget A\$3.9 million<sup>1</sup>

### GORA: SICINY-2 TARGETING GAS RESOURCES





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# NOWA SOL: JANY-C1 TARGETING OIL RESOURCES



- Jany-C1 drilled in 2013 by copper company
- Entire section was logged in addition to recovering 45m of whole core
- Petrophysical analysis and core data indicate oil saturation. Good shows during drilling
- FMI log interpretation indicates good fracture density and porosity in upper and lower fracture zones
- Due to well construction (target in Copper Shale) drilled with heavy mud
- 2D seismic implies no structural trap present
- Two open hole DST runs:
  - Short duration well tests returned oil and gas in drilling mud
  - Well test analysis indicates sufficient permeability for frac and commercial flow
- Two fields within the license have historic oil production from the main dolomite

#### Main Dolomite Unconventional Oil Play

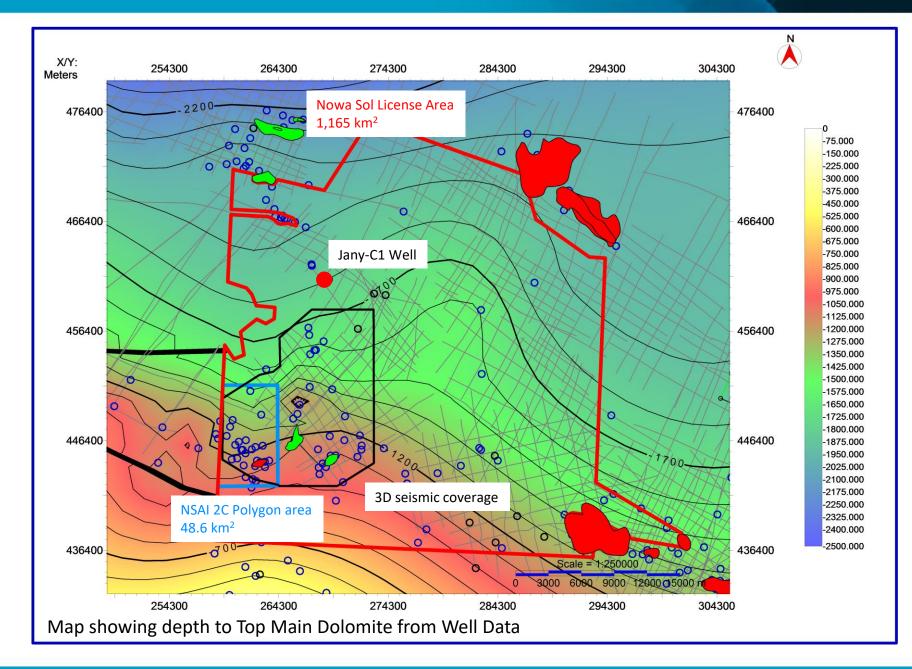
- Target: Mid-case STOIIP 238 MMbbls\* oil in tight Dolomite reservoir with 2C contingent resources of 36 MMbbls\*
  - o 2C resource area covers 48.6 km<sup>2</sup>
  - Total Nowa Sol area is 1,165 km<sup>2</sup>
- Numerous wells drilled through reservoir, finding ~40m tight oil dolomite at 1,100–1,800 metres depth
- Jany-C1 well likely drilled off-structure found 40 metres of oil saturated dolomite. To be re-entered, fracked and tested
- Budget \$A2.25 million<sup>1</sup>

Contingent Resources		1C	2C	3C
Jany-C1	MMbbls	9.3	36.1	85.8

\* Netherland Sewell & Associates Report (CPR) – May 1st 2019

# NOWA SOL: JANY-C1 TARGETING OIL RESOURCES





# GORA: CONVENTIONAL PROSPECTIVITY\*



- CPR estimate Rawicz North prospective resource of 110 Bcf
  - Structure defined by 3D and 2D seismic
  - Reservoir, seal and charge proven in offset fields
  - Proven Rotliegendes gas fields in close proximity
    - Adjacent to Rawicz field (produced 100 Bcf)
    - Close to Zalecze field (produced 746 Bcf)
- Additional prospectivity
  - CPR estimates additional **100 Bcf** of prospective resources
  - Siciny-2 well has 21m gas pay in Rotliegendes with 16% porosity
  - Addition prospects de-risked in success case
    - Total prospective resource 209 Bcf
    - CoS from 42% to 24% (average CoS 28%)

#### **Rotliegendes Conventional Gas Play**

- CPR Prospective Resource **210 Bcf** (best estimate)
- Largest prospect 110 Bcf with 24% CoS
- Surrounded by multiple large gas fields
- Logged gas pay in Rotliegendes in the Siciny-2 well

Prospective Resources		Low	Best	High
Bronow	Bcf	16.0	21.4	28.1
Rawicz North	Bcf	80.1	109.7	148.8
Rawicz South	Bcf	37.8	51.8	70.4
Siciny	Bcf	9.5	13.1	17.8
Zuchlow West	Bcf	10.0	13.3	17.6
TOTAL	Bcf	153.4	209.3	282.7

### WORK PROGRAM





- Well Status: Suspended Ca2 cased with 7" liner
- Plan foward: Proppant frack, test, and put on production
- **Goal:** Success in Jany-C1 will prove the viability of a Bakken style unconventional resource play in the Main Dolomite and provide early cash flow

### Commences Q4 2019/Q1 2020



Siciny-2

Budget: A\$3.9m [£2.15]

### Commences Q4 2019

- Well status: Suspended, 5 ½" casing to surface. Perforated at top of lower tight gas section
- Plan foward: 2-stage proppant frack with well-test in tight gas section. Possibly perforate and test conventional Rotliegendes sandstone
- Goal: Success in Carboniferous Tight Gas Sand would prove a multi-TCF play

# FISCAL TERMS & COMMERCIALISATION



#### **Robust Gas Demand**

- Poland is heavily dependent upon oil and gas imports – particularly from Russia
- Seasonal domestic gas prices in excess of US\$10 per mscf during winter

#### **Nearby Infrastructure**

- Gas pipeline infrastructure is extensive and has spare capacity
- Gaz System S.A. transmitted 607.2 Bcf for [year to December 2018]

#### **Supportive Fiscal Terms**

- Overriding royalty of 5% of net profits
- Government tax and royalty regime
  - Government royalties of:
    - o 6% conventional oil
    - o 3% unconventional oil
    - 3% conventional gas
    - o 1.5% unconventional gas
  - Production tax of
    - US\$0.39 per bbl for oil
    - US\$0.187 per mscf for gas

#### **Indicative Development Scenarios**

 Successful frack and flow tests will advance horizontal development programs for the two tight oil and gas plays

#### Nowa Sol Tight oil play

- 1,290m horizontal wells with 16 stage fracks, with estimated 2C ultimate recovery per well of 384,000 barrels
- indicative individual horizontal well cost of US\$7.094 million (base case estimate)
- 128 acre well spacing and 94 wells across 48.6km<sup>2</sup>

### Gora Tight gas play

- 1,290m horizontal wells with 16 stage fracks, with estimated 2C ultimate recovery per well of 8,240 MMCF
- indicative individual horizontal well cost of US\$10.4 million (base case estimate)
- 160acre well spacing and 192 wells across 41.6km<sup>2</sup>

# ESTIMATED USE OF FUNDS



- Proposed capital raise of A\$3.7 million (before costs) from a combination of:
  - **Placement** of 55,555,556 Shares to sophisticated investors at issue price of **A\$0.018** to raise **A\$1.0m**
  - An Entitlements issue to offer a total of 151,783,212
    Shares to shareholders on a 1:2 basis at an issue price of A\$0.018 per Share to raise A\$2.732m
- PVD will carry GRL through work programs totalling
  A\$6.15m<sup>1</sup> [£3.38m] on the Siciny-2 & Jany-C1 wells.

	\$(AUD)	
SOURCE OF FUNDS		
Cash as at 1 <sup>st</sup> April, 2019	\$6,700,000	
Gross proceeds from Capital Raising	\$3,732,098	
ΤΟΤΑΙ	\$10,433,098	
USE OF FUNDS		
- Work program for Siciny-2 <sup>1</sup>	\$3,900,000	
- Work program for Jany-C1 <sup>1</sup>	\$2,250,000	
Capex Sub-Total	(\$6,150,000)	
Costs of the offer	\$300,000	
Working Capital	\$3,983,098	
TOTAL	\$10,433,098	



Proforma Capital Structure					
	Ratio	Pricing	Shares on Issue	Cash	Market Cap
Shares currently on issue		\$0.018	248,010,868	\$6,700,000	\$4,464,196
Placement		\$0.018	55,555,556	\$1,000,000	
Rights Entitlement Issue	0.500	\$0.018	151,783,212	\$2,732,098	
Advisory Fee			25,000,000		
Facilitation & Introduction Fee			5,000,000		
Capital Raising Fee		6%		-\$223,926	
TOTAL		\$0.018	485,349,635	\$10,208,172	\$8,736,293
Options			20,000,000		
Tranche 1 Performance Rights			20,000,000		
Tranche 2 Performance Rights			20,000,000		
Tranche 3 Performance Rights			20,000,000		

### INDICATIVE TRANSACTION TIMETABLE



Announcement and Presentation Released on ASX
Announce completion of Placement*
Post NOM To Holders
Lodge Entitlements Issue Prospectus with ASIC
Ex Date for Entitlements Issue
Record Date for Entitlements Issue
Opening Date for the Entitlements Issue Offer
General Meeting
Satisfied with Conditions Precedent/DD
Completion of Acquisition
Board Appointments
Closing Date for Entitlements Issue Offer
Entitlements Issue Underwriting Completed
Issue of Securities under the Rights Issue
Dispatch of holding statements

Thursday, 4 July 2019 Thursday, 4 July 2019 Friday, 19 July 2019 Friday, 2 August 2019 Monday, 5 August 2019 Tuesday, 6 August 2019 Thursday, 8 August 2019 Monday, 19 August 2019 Friday, 23 August 2019 Friday, 23 August 2019 Friday, 23 August 2019 Friday, 23 August 2019 Wednesday, 28 August 2019 Friday, 30 August 2019 Friday, 30 August 2019

\* Voluntary holding lock applied to prevent secondary sales until Prospectus lodged



#### Bevan Tarratt – Non-Executive Chairman

- Chairman of ASX-Listed Protean Energy, Non Executive Chairman of ASX-listed Fenix Resources and Non Executive Director of ASX-Listed Jacka Resources
- Extensive experience in primary and secondary capital raising and corporate strategic consulting
- Over 15 years experience in accounting and broking firms

#### Dr Andrew Matharu – Executive Director

- 24 years experience across the oil & gas industry and equity capital markets.
- Commenced career as a Petroleum Engineer with Chevron and Kerr McGee in the UK North Sea
- Experience gained in corporate advisory, strategy, M&A, business development
- Experience of financing numerous small and mid-cap E&P and services companies
- VP Business Development at Tower Resources plc corporate and asset M&A and capital raisings

#### **Chris Lewis – Executive Director**

- Geophysicist and oil & gas professional with 25 years+ experience
- Experience gained with a spectrum of oil majors, small-mid caps, start-ups and consultancies
- Executive and board experience with geographical expertise in Africa, North Sea, CEE and Australasia
- Successful exits with Centric Energy, Lion Petroleum, ZETA Petroleum and Blackstar Exploration

#### Nathan Lude – Executive Director

- Broad experience in asset management, mining and energy sectors
- Operates Advantage Management which introduces capital and new management to public and private vehicles
- Previous roles include business development in a Canadian mining company and MD of an ASX-listed exploration company

#### Bruce Lane - Non-Executive Director

- Leadership roles with a number of ASX listed companies and blue-chip companies in Europe & Australasia
- Experience in industries incl resources, consumer/industrial products
- Successfully managed the acquisition of new assets for a number of ASX listed companies
- Numerous private and public capital raisings including initial public offerings, mergers and reverse takeovers

# APPENDIX II-A – GORA COMPETENT PERSONS REVIEW (LEWIS PETROLEUM CONSULTING LIMITED)



- Siciny-2
  - Both mud log and petrophysics indicate substantial gas pay within the Carboniferous
    - Petrophysics indicates there may be >20m of conventional pay in lowermost tight reservoir
  - Mini-frac results
    - No attempt to flow to surface
    - Very limited intervals perforated (3,272 2,273m & 3,463 3,466m)
    - o DFIT indicates predominantly tight reservoir
    - Multiple versions of analysis and modelling all indicate conventional frac will return a positive result
  - Very large gas column present at the well
    - o Indicative of a large, unconventional, basin wide accumulation
    - Consistent with NSAI analysis
    - Independent volumetric QC consistent with NSAI volumes
- Development of Contingent Resource
  - Production forecasts for a single well appear reasonable (NSAI)
  - o Commercial analysis indicates forecast well performance will be commercially viable
  - One of the key risks associated with re-certifying contingent resource as reserves
- Gora Summary
  - High probability of gas pay at the well
  - High probability this is related to large unconventional resources
  - Volumes calculated by NSAI appear reasonable
  - Good chance of success at Frac operation at well
  - High probability, in success case, that this will constitute a commercial development

# APPENDIX II-B – NOWA SOL COMPETENT PERSONS REVIEW (LEWIS PETROLEUM CONSULTING LIMITED)

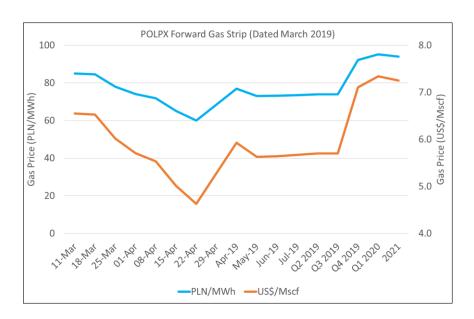


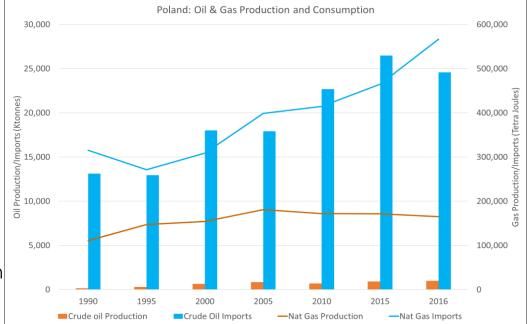
- Jany-C1
  - o Both mud log and petrophysics indicate oil pay within the main Dolomite
    - FMI log interpretation indicates substantial natural fracturing
  - o DST results
    - No flow to surface on test
    - HCs detected in mud during testing
    - Lilkelihood is that this is related to drilling practices used
      - Heavy mud causing formation damage
    - Independent DST analysis indicate
      - Frac will return positive result
      - Permeabilities are consistent with range used by NSAI
  - Oil pay in well is likely related to an unconventional trap
    - Independent volumetric QC consistent with NSAI volumes
    - Multiple other wells throughout the block with oil within Dolomite
- Development of Contingent Resource
  - Production forecasts for a single well appear reasonable (NSAI)
  - o Commercial analysis indicates forecast well performance would be commercially viable
  - One of the key risks associated with re-certifying contingent resource as reserves
- Nowa Sol Summary
  - High probability of oil pay at the well
  - High probability this is related to large unconventional resources
  - Volumes calculated by NSAI appear reasonable
  - Good chance of success at Frac operation at well
  - o Probability, in success case, that this will constitute a commercial development



# APPENDIX III - POLAND GAS MARKET AND PRICING

- Poland's energy diet is heavily dependent on oil and gas imports with gas demand growing strongly
- Security of supply and desire to reduce dependency on Russian gas imports is high on the political agenda
- Gas pipeline infrastructure is extensive and has spare capacity (Gaz System S.A. data at 31 Dec 2018):
  - o Length 10,743 km
  - Gas volume transmitted **17.2 bcm** (607.2 Bcf)
- Seasonal gas pricing (spot market) historicals between
  \$4.6 per mscf (summer) and US\$9.6 per mscf (winter)





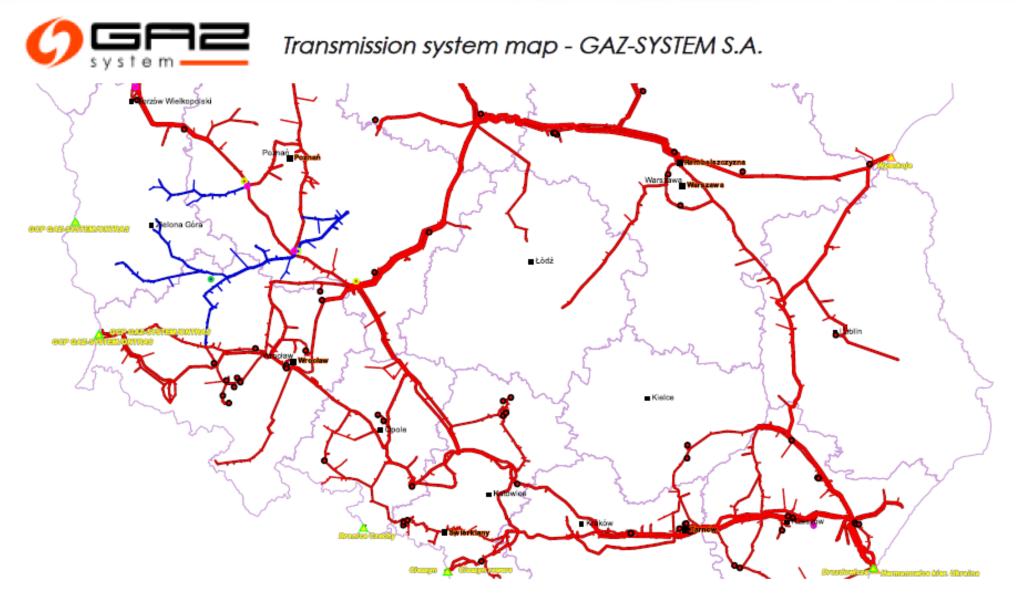
Source: International Energy Agency (IEA)



Source: POLPX Monthly Reports (April 2018)

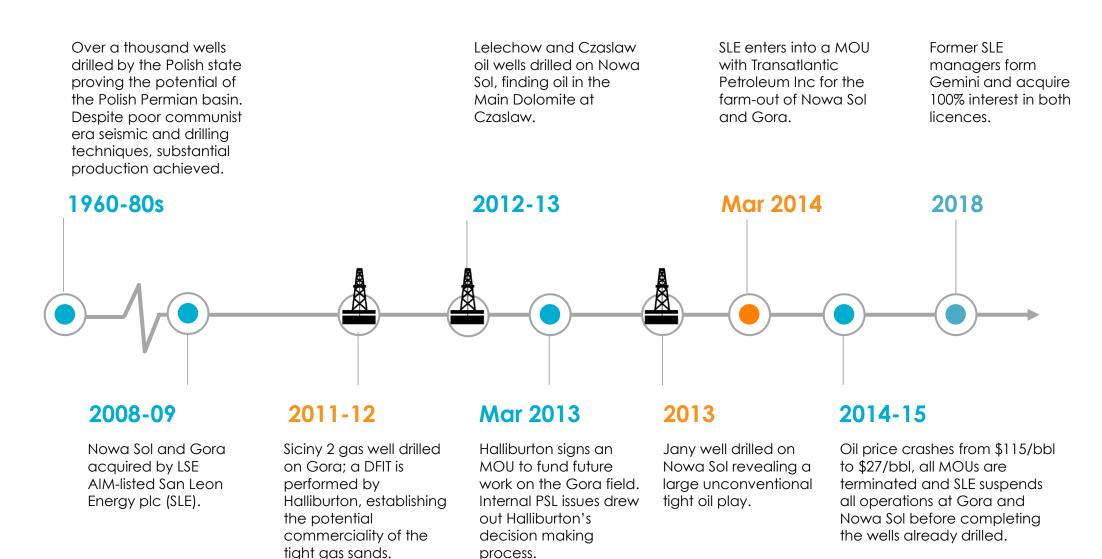
### APPENDIX IV: POLAND GAS INFRASTRUCTURE





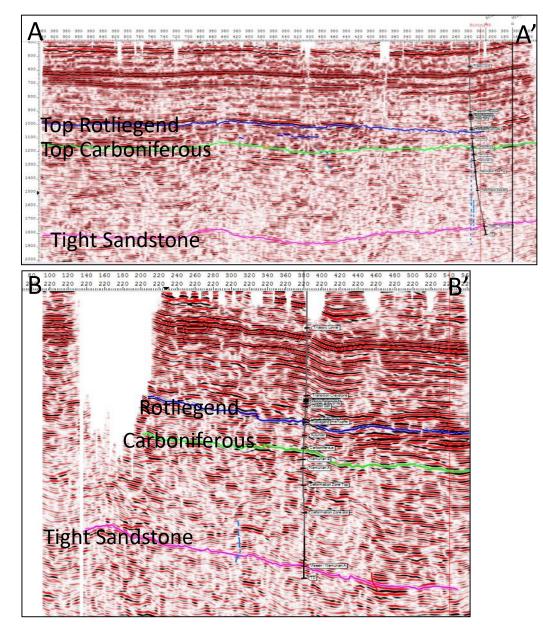
### APPENDIX V: LICENCE HISTORY





# APPENDIX VI: GORA: SICINY-2 WELL





- Siciny-2 is on the flank of a very large anticline structure. Entire structure is not imaged by 3D.
- Rotliegendes fields are located at the top of the structure.
- The area is covered with 3D seismic, however, imaging of individual layers in the Carboniferous is difficult.

