



# ORCA ENERGY GROUP INC.

A Sustainable Tanzanian Natural Gas Business

Corporate Presentation  
December 2021



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# Overview

(\$ denotes United States Dollar, unless otherwise stated. C\$ denotes Canadian Dollar, unless otherwise stated)

## Delivering Economic Growth and Prosperity to Tanzania through the Development and Delivery of Natural Gas Resources

- Long-term partnerships with Tanzanian government entities
- Operator of the Songo Songo gas field through our subsidiary, PanAfrican Energy Tanzania (“PAET”)

## Track Record of Operational Delivery from a World Class Field

- Supplied over 450 billion cubic feet (“BCF”) of conventional natural gas to Tanzanian domestic markets, since 2004
- Proved plus probable conventional natural gas reserves of 229 BCF to October 2026 <sup>1</sup>
- Proactive reservoir management and performance

## Working for the Benefit of all Tanzanians

- Supplied gas for ~60% of gas fired power generation in Tanzania
- 99% local operational team, ahead of Tanzania's Local Content policy
- Estimated to have saved Tanzania more than \$10 billion since 2004, by offsetting imported carbon intensive fuels

## Strong ESG Credentials

- Making a positive social and economic contribution
- Focused on delivering long-term sustainable value whilst transitioning to a lower carbon future

## Solid Financial Position Enabling Delivery of Value to Stakeholders

- Robust and sustainable balance sheet, highly cash generative year-on-year
- \$104.2 million cash at December 31, 2020
- \$71.4 million cash at September 30, 2021, post January 2021 share buy backs at aggregate price of C\$40 million
- Sustainable shareholder returns through a quarterly dividend policy and selective share buy backs
- TSXV listed

<sup>1</sup> Internally Estimated







## Why Tanzania?

### Positive Investment Environment

- Current administration continuing to engage with industries and open for international investment

### Growing Economy

- 2nd largest economy in East Africa with an average GDP growth of 7% p.a. over the past decade

### Rapidly Growing Demand for Energy

- Population growth of 3% per annum since 2004 to c. 60 million people
- Demand for power is expected to increase by 7% per annum

### Set to Become the 'Energy Hub' of East Africa

- Liquefied natural gas ("LNG") negotiations reinvigorated to develop 50 Trillion cubic feet ("Tcf") of deep offshore discovered gas resources
- Agreement for 1,500 km oil export pipeline from Uganda to the Tanzanian port of Tanga
- Memorandum of Understanding ("MOU") with Kenya to build 400 km natural gas pipeline from Dar es Salaam to supply Mombasa
- Strategically placed deep water ports, ideally situated for import and export with Asia
- Dar es Salaam accounts for 14% of the trade of six landlocked neighbors

### Industrial Growth

- Large infrastructure projects undertaken in recent years, with \$19 billion in projects planned, such as The East African Coastal Corridor development project and The Dar es Salaam Maritime Gateway Project

# 2020 and Q1-Q3 2021 Key Highlights

## FINANCIAL

**2020 revenue of \$77.9 million**

Increased 8.6% year-on-year

**Q1-Q3 2021 revenue of \$61.2 million**

Increased 9.5% compared to Q1-Q3 2020

**2020: \$45.7 million of value returned to shareholders  
(Q1-Q3 2021: \$36.7 million)**

Quarterly dividends, Substantial Issuer Bid (“SIB”) and  
Normal Course Issuer Bid (“NCIB”)

**2020 capital expenditure of \$27.0 million**

**Q1-Q3 2021 capital expenditure of \$14.1 million**

Primarily focussed on the compression project

## OPERATIONAL

Conventional natural gas production of 57.7 million  
standard cubic feet per day (“MMcfd”) in 2020  
(Q1-Q3 2021: 57.8 MMcfd)

Careful management by operational team enabled the  
Company to maintain production during COVID-19  
pandemic

Onshore 3 well workover program started in Q4-21 at  
an estimated gross cost of \$21.4 million

Gas compression project scheduled for on-time  
completion in 2022 at an estimated gross cost of \$41.7  
million (\$39.2 spent to date, ~\$2.5 remaining)



# 2022 Outlook

## FINANCIAL

2022 planned capital program - \$50\* million will be funded from existing capital and forecast cashflows

Quarterly dividends, Normal Course Issuer Bid ("NCIB")

## OPERATIONAL

Conventional natural gas production of 60 – 66 million standard cubic feet per day ("MMcfd") forecast in 2022 ("Additional Gas")  
(Q1-Q3 2021: 57.8 MMcfd)

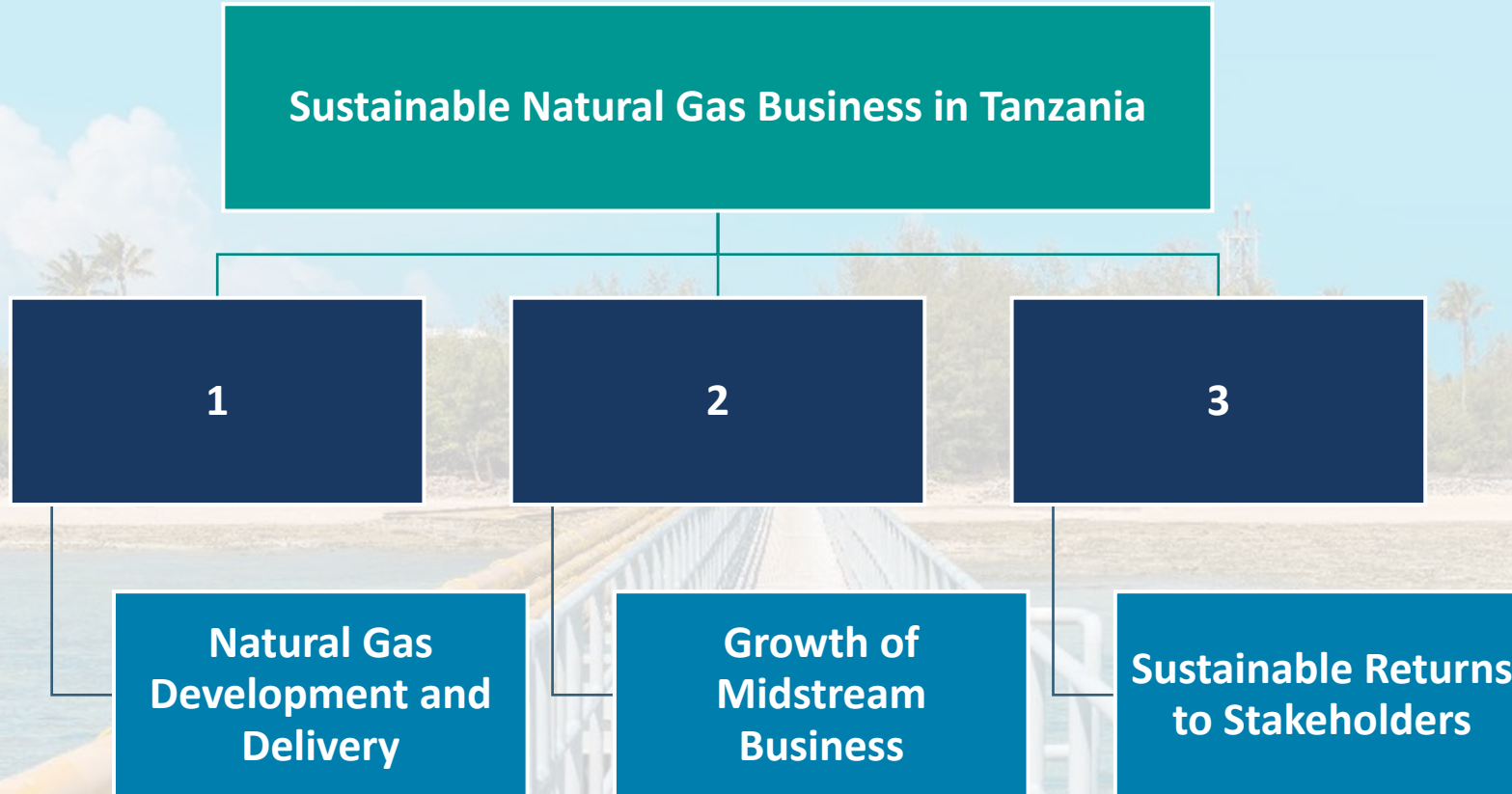
\$20\* million 3D Seismic program over the Songo Songo gas field and additional prospects over the Songo Songo license acreage in 2022

\$11.5\* million budgeted on downstream including expansion of compressed natural gas ("CNG") virtual pipeline in 2022



# Strategy

Focused on Value Creation



**Maximize Value Creation, Prudent Allocation of Capital and Returns to Stakeholders**

# Natural Gas Development and Delivery

## Songo Songo Field Development

- Proactive development to meet growing domestic gas demand
- Access to excess gas processing and downstream pipeline capacity
- Development can be fully funded from existing working capital and internal cash flow

## Licence Extension

- Significant contingent and prospective resource potential to support a licence extension - to address a potential supply/demand deficit
- Engage government to extend Songo Songo licence beyond October 2026 to support development of resources prior to 2026

## Further Growth Potential

- Contingent resources at Songo Songo Main and Songo Songo North
- Large gas exploration prospects at Songo Songo West and Songo Songo extreme North

**A Long-Life Resource that Currently Meets c. 60% of Tanzania's Gas Demand**





# Natural Gas Development and Delivery Production Growth

Since 2004, steady growth of gas sales with the expansion of natural gas power generation and new industrial customers to 2013

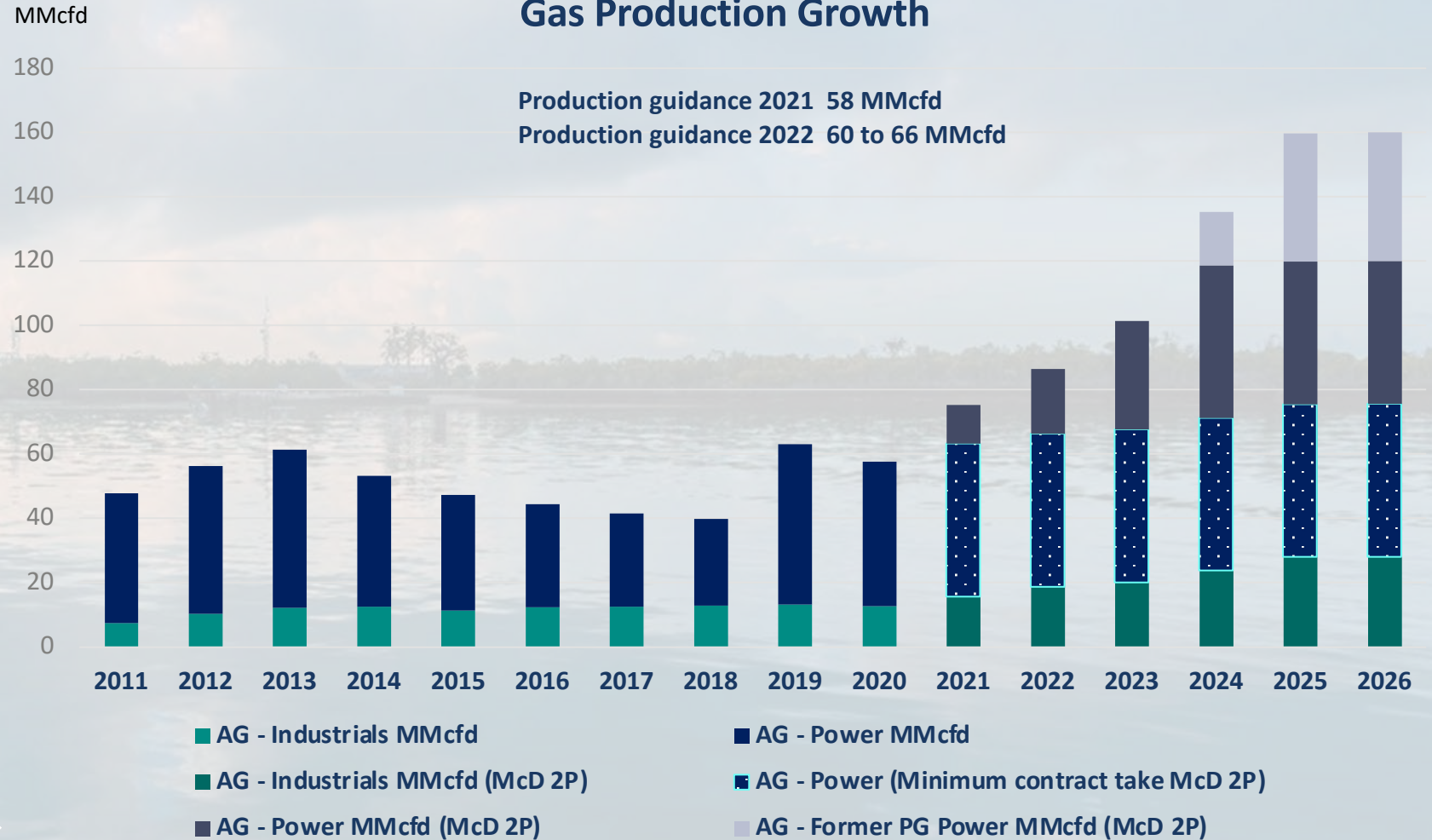
Lower sales to power generation starting in 2015 due to the commissioning of the Tanzanian gas supply system, to meet growing demand

Gas production in 2019 surged to 63 MMcfd due to increased power generation. In 2020, production was slightly muted at 57 MMcfd due to increased hydro power availability.

Q3 2021 production averaged 64.5 MMcfd for the quarter and 57.8 MMcfd Q3 YTD. Production is typically lower in the first half of the year due to seasonal rains and increased hydro power

## Gas Production Growth

Production guidance 2021 58 MMcfd  
Production guidance 2022 60 to 66 MMcfd



Note: Forecast based on Independent McDaniel Reserves Report at 31, December 2020 (end of licence 2026)

# Natural Gas Development and Delivery

## Songo Songo Natural Gas Reserves and Resources

### Conventional Natural Gas Reserves

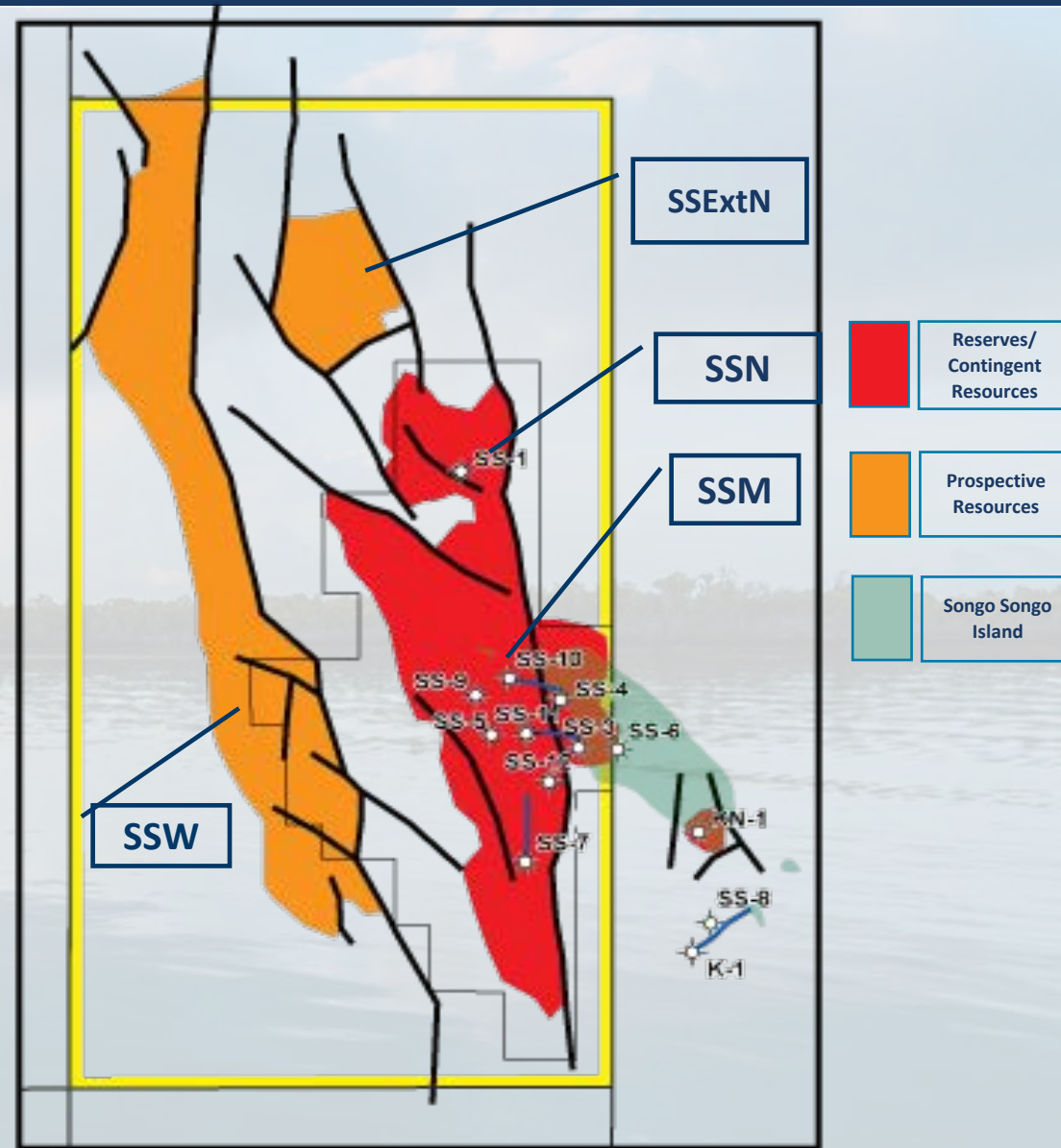
	1P	2P
As at December 31, 2020 (BCF)	203	229
NPV15 reserves (\$million)	188	208

Note - Independent McDaniel Reserves Report effective 31 December, 2020

### Conventional Natural Gas Resources (unrisked)

	Low	Best	High
As at March 31, 2021			
Contingent (BCF)	250	297	346
Prospective (BCF)	118	611	1,437

Note - Independent McDaniel Resource Report effective 31 March, 2021



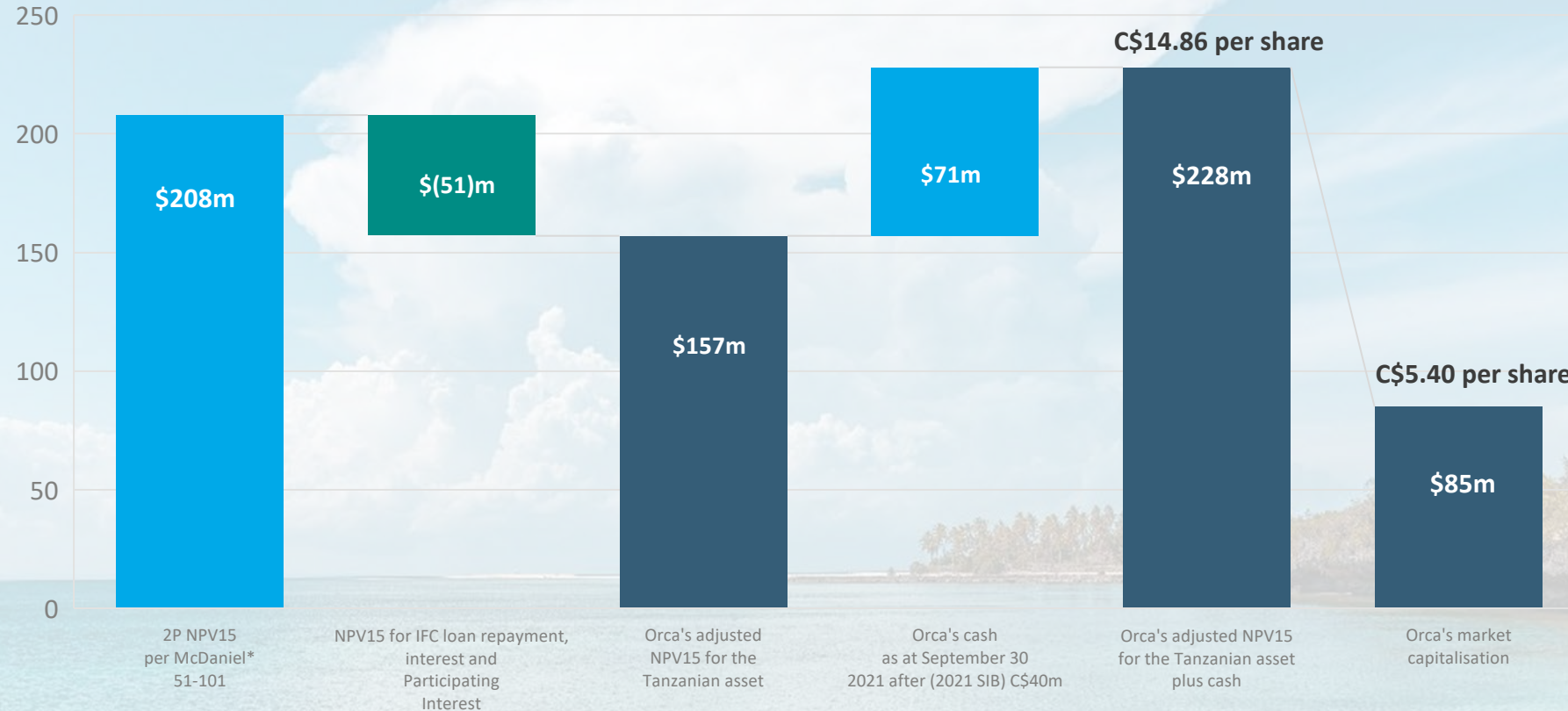
- See attached advisory section for detailed resource summary;
- The reserves and resources information set forth above is based on the Company's 92.07 percent interest in the reserves and resources.
- There is uncertainty that it will be commercially viable to produce any portion of the contingent resources. Further, there is no certainty that any portion of the prospective resources will be discovered. If discovered, there is no certainty that it will be commercially viable to produce any portion of the resources.
- For further information in respect of the reserve and resource estimates set forth above, including applicable definitions, see "Advisories".



# Natural Gas Development and Delivery

## Value consideration based on 2P life of licence reserves (October 2026)

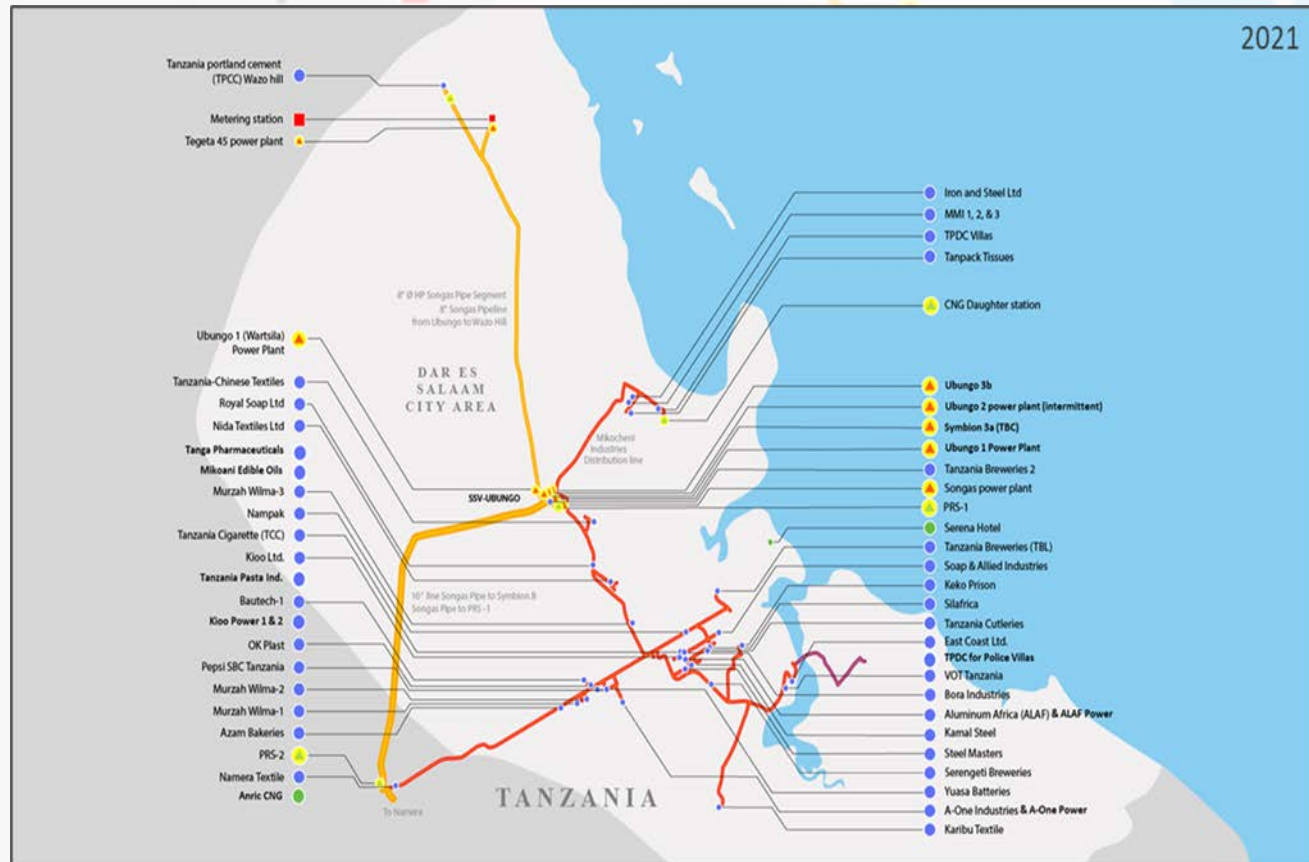
Market capitalization based on outstanding shares after the 2021 SIB of 19.984 million at C\$5.40 per share at a C\$/\$ exchange rate of 0.768 (as at September, 30 2021)



- It should not be assumed that the discounted net present value of future net revenue attributable to the Company's reserves estimated by McDaniel, or the adjusted discounted net present value of future net revenue set forth above, represents the fair market value of those reserves. Such amounts do not represent the fair market value. See "Advisories".
- Additionally, please find further information. See "Advisories".

**Orca's market capitalization is significantly below the value of the Company's adjusted NPV15 for the Tanzanian asset plus cash**

## Growth of Midstream Business Distribution – Fuelling Economic Growth



### Power Sector

- ~ 500 MW of gas fired power generation in Tanzania which Orca supplies ~60% of the gas
- Installed power generation capacity of ~ 1,600 MW (Gas fired and Hydro)
- Power consumption averaging ~ 900 MW/day
- Plans announced to expand power generation and distribution throughout the country

### Industrial Sector

- 50 km low pressure distribution system constructed and operated by Orca's subsidiary, PAET
- 50 industrial customers connected; ongoing negotiations with several others

### Compressed Natural Gas

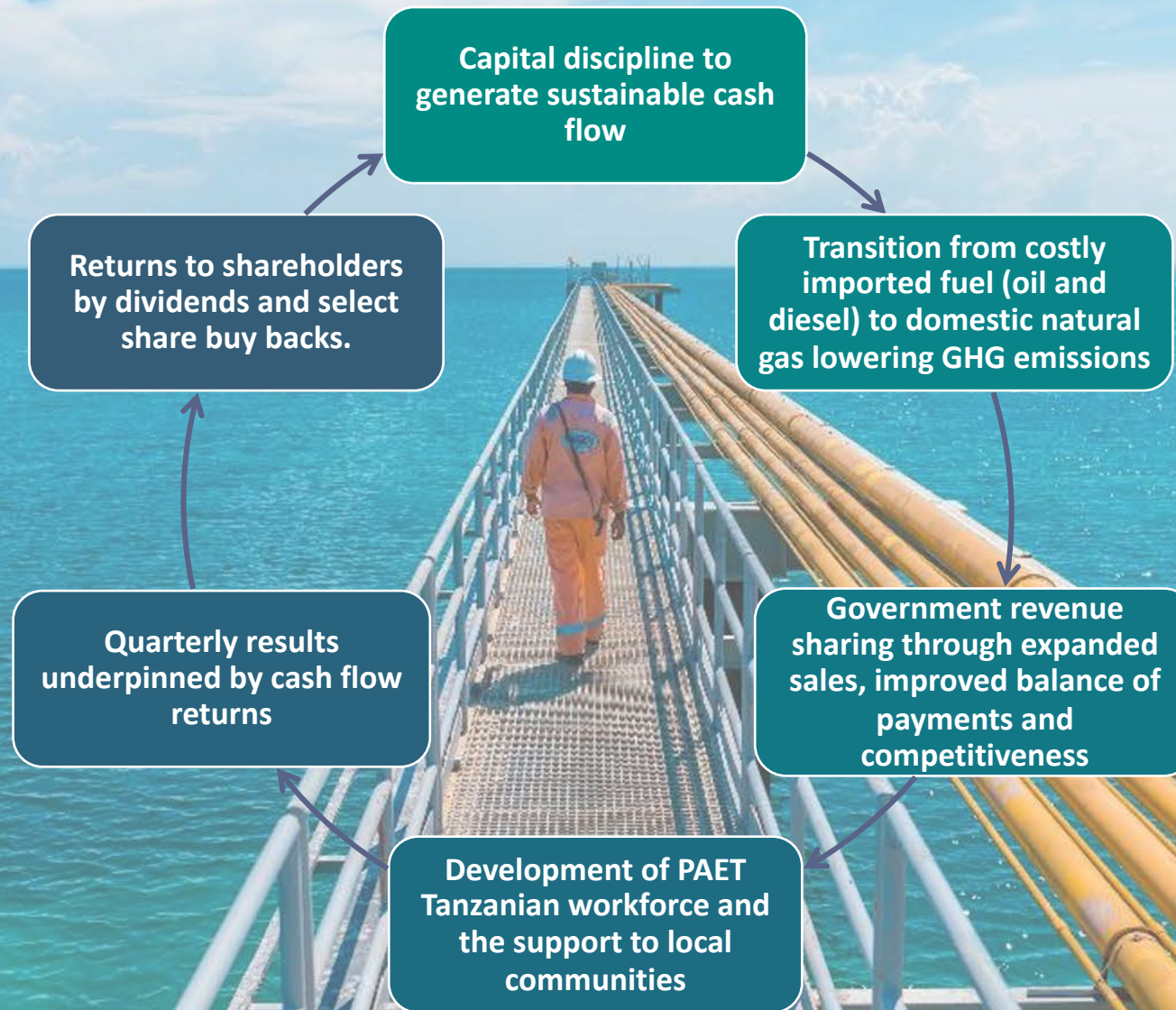
- Transported to industries and hotels not connected to the pipeline system
- Transportation sector – supplying CNG for cars

### Growth

- Positioned to provide a reliable source of Natural Gas for planned power generation expansion in Tanzania
- Expand ring main distribution system targeting industrial customers
- Expand CNG distribution for remote heavy and light industries and the transportation sector



## Sustainable Returns to Stakeholders





## Sustainable Returns to Stakeholders

### Return to Shareholders and Value Creation

**C\$40 million SIB completed in  
January 2021.**

**NCIB initiated June 2021**

**Regular dividends initiated in  
2019. Increased to  
C\$0.10/Share/Q in 2021**  
**C\$6.1 million dividends paid YTD  
(Q1 to Q3 ) 2021**

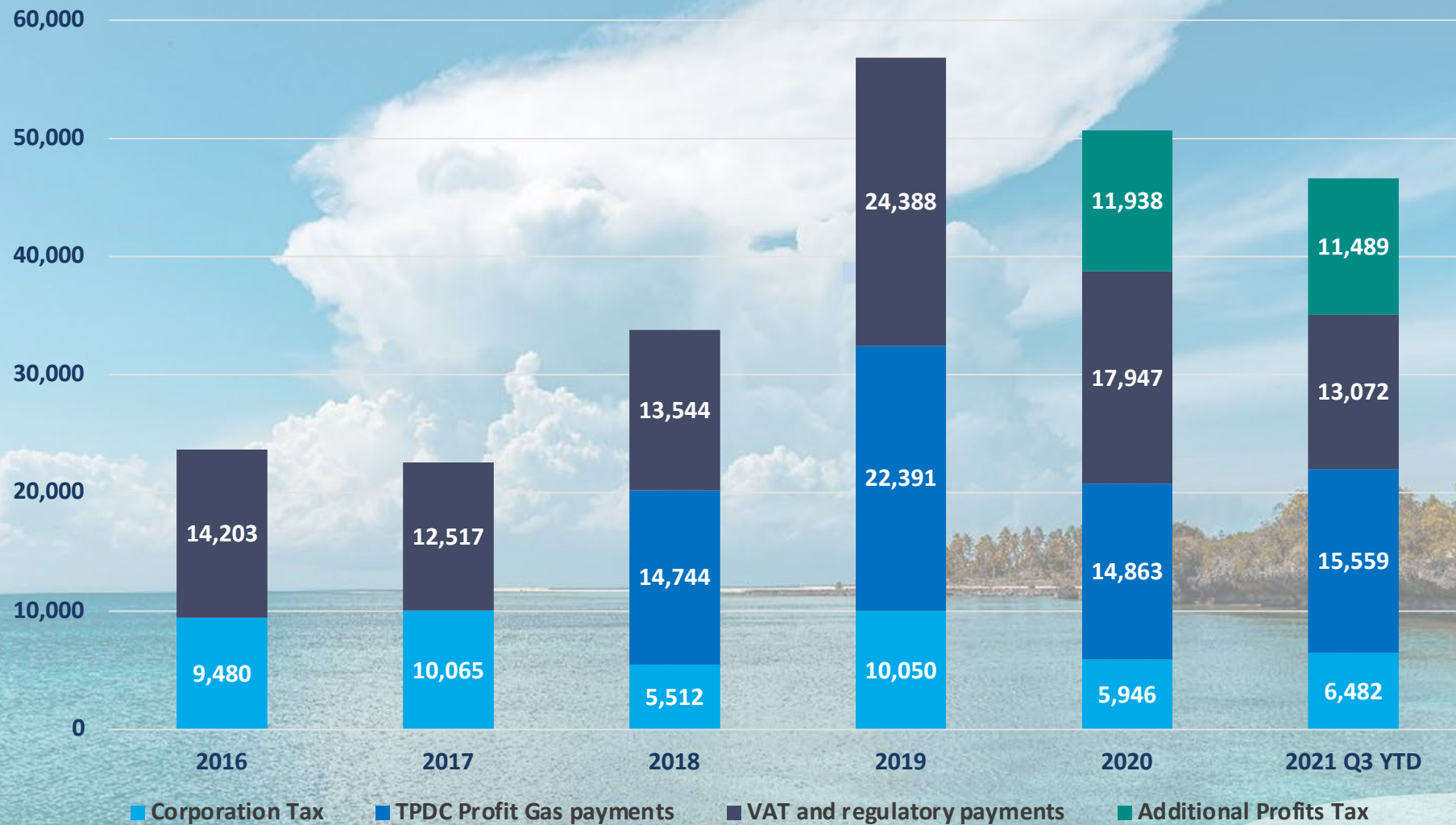
**Funded from cash flow and  
working capital**

**Assets continue to generate  
significant cash flow providing  
future flexibility**



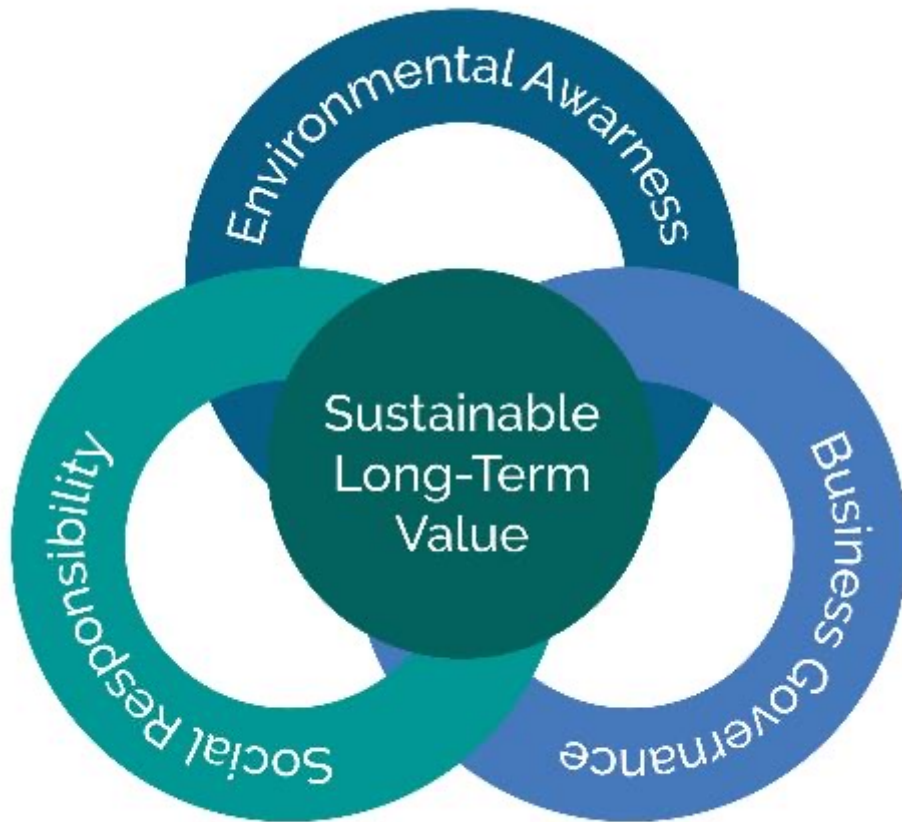
## Sustainable Returns to Stakeholders

### Returns to Tanzanian Stakeholders (\$'000'S)



## Sustainable Returns to Stakeholders

Committed to Operating in a Sustainable and Responsible Way



- A sustainable business generating enduring long-term value through the prudent governance of business risk and financial resources.
- Sustainability maintained through minimizing environmental impact, maximizing social and economic investments in our local community through our Corporate Social Responsibility (“CSR”) program and supporting development of employees.
- Board and management team recognize success is enhanced by being a good corporate citizen within Tanzania. Sound governance is a fundamental principle within the Company.
- Working to ensure best practice throughout all activities.



## Sustainable Returns to Stakeholders

### Committed to Operating in a Sustainable and Responsible Way

#### ESG Program

- Environment - Natural gas will remain an integral component of the energy transition. Utilization of gas to displace oil and coal has a material beneficial impact on CO2 emissions and air pollution (NOx, SOx and particulates) and is also a solution to the intermittency issues inherent with renewable energy.
- Social – Focusing on our workforce, partners, local communities and the wider society.
- Governance – Our status as a thoughtful corporate citizen along with being a responsible, transparent operator.

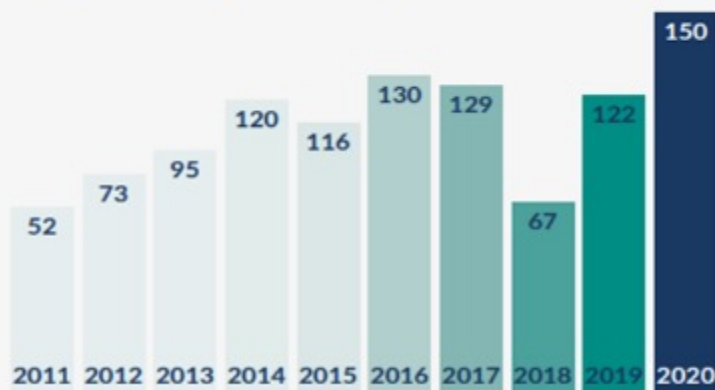
#### Local Employment and Career Development

- Staff turnover is very low generally, staff leave the Company through succession planning. In 2020, there were once again very few departures (4%).
- The Company takes the continued professional development of its staff very seriously and has spent more than \$1.2 million on staff training in the past seven years.
- Orca is a major employer in the region
- Orca's operational workforce is made up of 99% local staff, reflecting a steady increase year on year.
- 2021 third prize in National Local Content Forum, for excellence in delivering against local content in the investors and contractors' category.

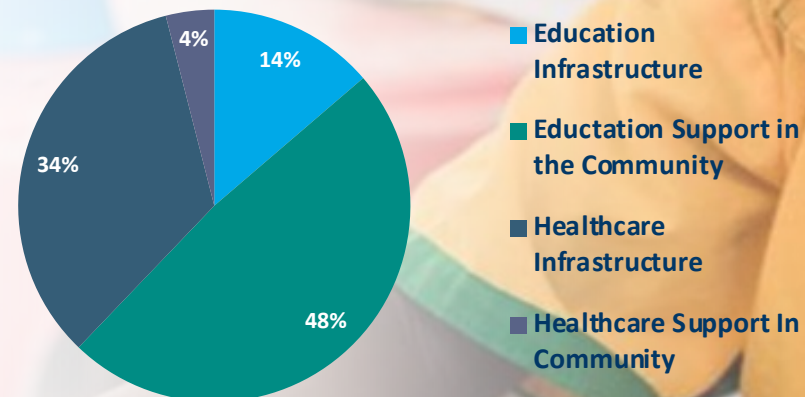
#### Health and Education Projects

- Orca has sought to develop a number of self-sustaining education and health projects on SSI and in the surrounding regions, such as;
- Construction of educational buildings schools, kindergartens etc.
- English Language training courses to students and teachers
- Scholarship program
- A girls' dormitory at Songo Songo Island Secondary School
- Construction of large scale, comprehensive medical facilities

Pupils attending SSI kindergarten



\$2.4 Million Funding (to date)  
Health and Education Program



# 2021 and 2022 Guidance

## Capital Expenditure

	<u>000's</u>
3D Seismic/Acquisition*	\$20,000
Expansion of Downstream Distribution - includes CNG Virtual Network*	\$11,500
Maintenance and Facilities Projects	\$7,000
Compression and Workovers from 2021	\$11,500
	<u>\$50,000</u>

- 3D seismic planned to properly image the Songo Songo gas field and additional contingent/prospective resources over the Songo Songo license acreage (commencing H2 2022). Processing and interpretation H1 2023
- Compression project nearing completion allowing production volumes to be sustained through the Songas Limited ("Songas") infrastructure of ~102MMcfd (Q1 2022)
- Well workover program includes reactivation/recompletion of two wells SS-3 and SS-4 to access incremental reserves in the Songo Songo East pool (Q1 2022)
- Expansion of CNG virtual pipeline to potential industrial customers in the transportation sector

\* Subject to Government of Tanzania approval






## Summary

- **Well established, reliable and ESG focused producer of Songo Songo natural gas from wellbore to end users, since 2004**
- **Prudent fiscal management with a focus on stakeholder returns supported by strong cash flow**
- **Significant conventional natural gas reserves of 229 BCF 2P (Year End 2020) to end of licence, October 2026**
- **Excess processing and pipeline capacity on Songo Songo Island available for accelerated resource development**
- **Access to near and mid-term gas sales growth potential in Tanzanian market through expanded CNG mid-stream business**
  - Significant improvement in international investor sentiment associated with the current administration
- **Shareholder returns through quarterly dividends and select share buy backs**
- **TSXV listed company (ORC.A and ORC.B) with ~ 20.0 million shares outstanding**
  - Current market cap ~ C\$101 million @ C\$5.07/share as @ November 22, 2021
  - Current dividend of C\$0.10 share/quarter represents an annual yield of ~ 8%/share
  - Cash, debt and 2P Reserves NPV15 Year End 2020 of ~ C\$297 million or C\$14.86/share
- **Option for additional upside potential with a possible licence extension beyond 2026**
  - Updated independent Resource report effective March 31, 2021
  - Contingent Resource Best estimate of 297 Bcf unrisks (148 BCF risked)
  - Prospective Resource Best Estimate of 611 Bcf unrisks (106 BCF risked)



## ORCA ENERGY GROUP INC.

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An offshore oil rig stands in the middle of a vast, blue ocean under a clear sky. The rig is a complex of metal structures, including a platform with railings, a tall derrick, and various pipes and tanks. The water is a deep blue with gentle ripples. The sky is a lighter blue with some faint clouds. The overall scene is serene and industrial.

# APPENDIX

# Directors

<p><b>David Ross</b> Non Executive Chairman</p>	<ul style="list-style-type: none"> <li>• Extensive experience in international tax law</li> <li>• Partner in the Calgary-based law firm of Burnet, Duckworth &amp; Palmer LLP</li> <li>• Secretary to the Board since the Company was formed in 2004</li> </ul>
<p><b>Jay Lyons</b> Executive Director and Chief Executive Officer</p>	<ul style="list-style-type: none"> <li>• Joined the Company in May 2019 as Non-Executive Director</li> <li>• Took on the role of Interim Chief Executive Office in 2020, and Chief Executive Officer in 2021</li> <li>• Private investor with considerable experience in the oil and gas industries in both Canada and the United States</li> <li>• Worked in a range of roles for both private and public companies in the upstream and downstream sectors</li> </ul>
<p><b>Linda Beal</b> Non Executive Director Chair of Audit Committee</p>	<ul style="list-style-type: none"> <li>• Extensive tax advisory and accounting experience in the natural resources sector</li> <li>• Tax partner at PriceWaterhouseCoopers and Grant Thornton UK LLP for 17 years</li> <li>• Non-executive director at Kropz PLC</li> </ul>
<p><b>Dr. Frannie Leautier</b> Non Executive Director Chair of ESG Committee</p>	<ul style="list-style-type: none"> <li>• Extensive global and African development, infrastructure and project finance experience</li> <li>• Chief Operating Officer for the Trade and Development Bank based in Nairobi</li> <li>• Infrastructure Director, World Bank</li> <li>• Vice President of the World Bank Institute</li> <li>• Senior Vice President at the African Development Bank</li> <li>• PhD in Infrastructure and Masters degree in Transportation from the Massachusetts Institute of Technology</li> </ul>
<p><b>Lloyd Herrick</b> Advisor to the Board and Management</p>	<ul style="list-style-type: none"> <li>• Four decades of international energy experience and following a 20 year career at TransGlobe Energy Corporation (“TransGlobe”) where he was Vice President, Chief Operating Officer and Director.</li> <li>• Prior to TransGlobe, he served as President, Chief Executive Officer and a member of the board of Moibus Resource Corporation, which was acquired by TransGlobe.</li> <li>• Worked at Ranger Oil Limited, holding technical, management and executive positions, and was a petroleum engineer with Rupertsland Resources Ltd. And Hudson’s Bay Oil &amp; Gas Ltd.</li> <li>• During his time as a member of the TransGlobe executive team and board, Lloyd Herrick acquired a wealth of experience in direct government negotiations, including concession agreement amendments and extensions to achieve optimum resource development.</li> </ul>





# Management

<p><b>Jay Lyons</b> Chief Executive Officer</p>	<ul style="list-style-type: none"> <li>• Joined the Company in May 2019 as Non-Executive Director</li> <li>• Took on the role of Interim Chief Executive Office in 2020, and Chief Executive Officer in 2021</li> <li>• Private investor with considerable experience in the oil and gas industries in both Canada and the United States</li> <li>• Worked in a range of roles for both private and public companies in the upstream and downstream sectors</li> </ul>
<p><b>Lisa Mitchell</b> Chief Financial Officer</p>	<ul style="list-style-type: none"> <li>• 25 years experience in senior financial management roles</li> <li>• Chief Financial Officer and Executive Director for San Leon Energy plc, Lekoil Limited, Nigerian focussed Aim quoted Oil and Gas companies</li> <li>• Chief Financial Officer and Executive Director for Ophir Energy plc (FTSE 250 listed)</li> <li>• Fellow of the Certified Practicing Accountants (Australia)</li> </ul>
<p><b>Andrew Hanna (MBE)</b> Managing Director, Tanzania</p>	<ul style="list-style-type: none"> <li>• 30 years in the public sector leading engineering, logistics and security projects around the world</li> <li>• Nine years in Orca leading the development of strategic and operational development</li> <li>• Masters Degree in Military Science from Cranfield University</li> <li>• Fellow of the Chartered Management Institute and Member of the Institute of Royal Engineers</li> </ul>
<p><b>Derrick Tarrant</b> Chief Technical Officer</p>	<ul style="list-style-type: none"> <li>• 25 years of onshore and offshore oil and gas operations, engineering and management of field developments inclusive of drilling, well testing, EPC, commissioning and the critical interfacing with surface and subsurface facilities</li> <li>• Extensive FPSO experience through the successful deployment of three FPSOs in the UK and Norwegian North Sea</li> <li>• For six years, technical consultant for Sasol as part of the Engineering, Field Development and start-up teams for the supply of natural gas to the GTL plants in South Africa</li> <li>• Other technical operations positions held at Qatar Petroleum, Hamilton Brothers, Kerr McGee, Brovig Reservoir Development Services, Halliburton, Petrofac and Kellogg Brown &amp; Root</li> </ul>
<p><b>Stephen Huckerby</b> Chief Accounting Officer</p>	<ul style="list-style-type: none"> <li>• Group Financial Controller of PanOcean Energy and integral to the negotiation and subsequent sale of the company to Addax Petroleum in 2006</li> <li>• Extensive exposure to fund raising including private equity, private placements, production backed lending facilities and IFC loan</li> <li>• Asset acquisitions, economic evaluations and scheme of arrangements</li> <li>• Extensive involvement in government PSC negotiations both at PanOcean and Orca Energy Group, including gas price negotiations</li> <li>• Chartered Accountant (Institute of Chartered Accountants England and Wales), BA (Hons) Economic graduate, post qualification 5 year work experience in the telecoms industry and 22 years experience in the Oil and Gas industry</li> </ul>







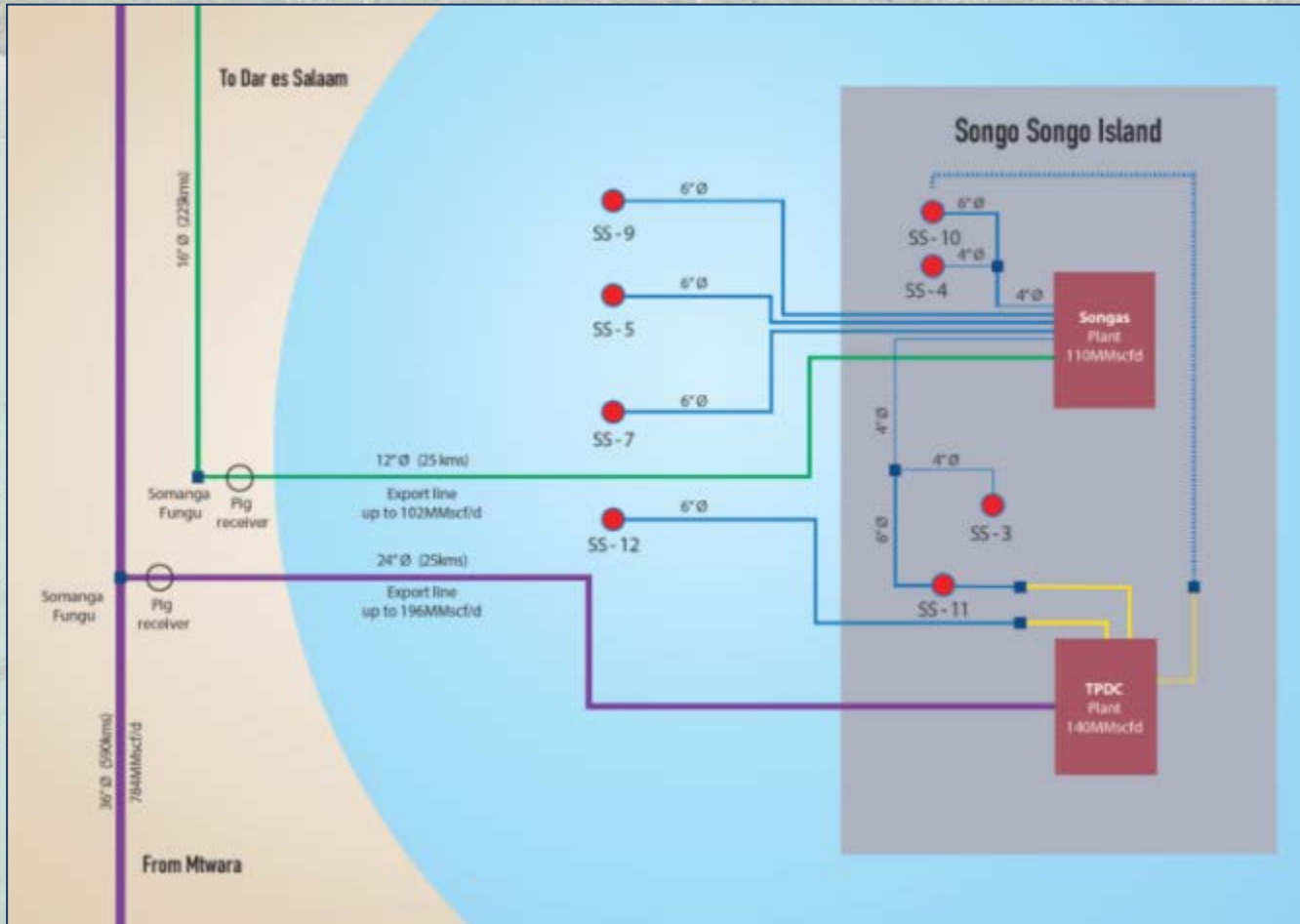
## Glossary

<b>TPDC =</b>	<b>Tanzania Petroleum Development Corporation</b>
<b>GSA =</b>	<b>Gas Sales Agreement</b>
<b>TPCC =</b>	<b>Tanzania Portland Cement Company</b>
<b>AG =</b>	<b>Additional Gas</b>
<b>PG =</b>	<b>Protected Gas</b>
<b>NNGI =</b>	<b>National Natural Gas Infrastructure</b>
<b>TANESCO =</b>	<b>Tanzania Electric Supply Company</b>
<b>PGSA =</b>	<b>Portfolio Gas Sales Agreement</b>
<b>ARGA =</b>	<b>Amended and Restated Gas Agreement</b>



# Growth of Midstream Business

## SSI – An Integrated Gas Project



### Songo Songo Island

- 25 km offshore mainland Tanzania
- c. 200 km south of Dar es Salaam

### Wells

- 8 wells (4 onshore, 4 offshore)
- Current productive capacity of the wells is c. 120 MMcfd
- Post compression and workovers production capacity anticipated ~ 160 MMcfd

### Gas Processing Facilities (250 MMcfd)

- Songas: 110 MMcfd
- TPDC/NNGI: 140 MMcfd

### Export Pipelines (298 MMcfd)

- Songas: 102 MMcfd
- TPDC : 196 MMcfd (feeding into 784MMcfd capacity transportation line to Dar es Salaam)

### Upcoming Work Program

- Onshore workover program Q4 2021/Q1 2022
- SS-10 well tubing replacement
- Reactivation of SS-4 and SS-3 wells

# Growth of Midstream Business

## Growing Demand for Natural Gas

### Natural Gas will Fuel Economic Growth in Tanzania and East Africa

- Tanzania has several gas generation projects under consideration with the requisite gas processing and pipeline infrastructure already in place to supply the facilities
- Access to electricity in Tanzania is estimated at just 33% (i.e. approx. 40 million people are not connected)
- MOU signed May 2021 between Tanzania and Kenya extend natural gas pipeline from Dar es Salaam to Mombasa (~400 km)

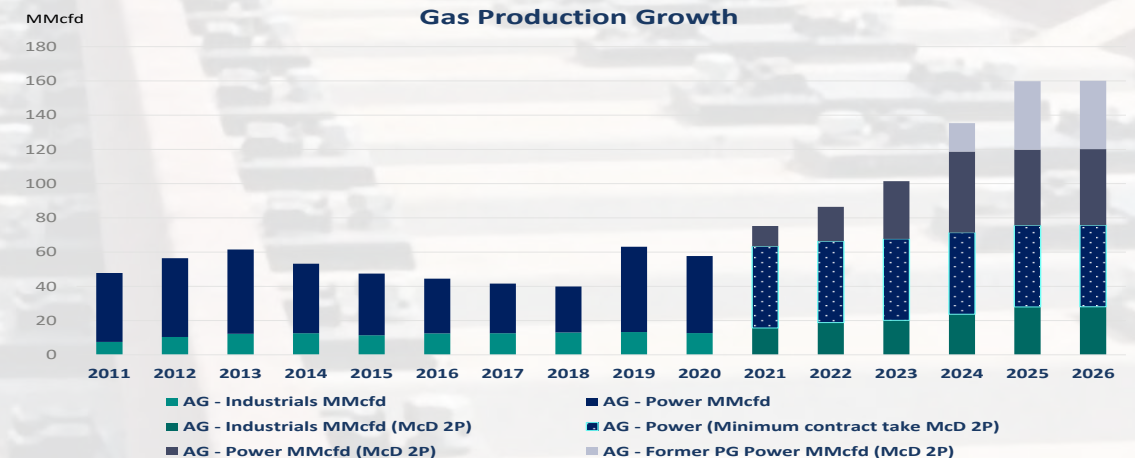
### Gas is Integral to the Development of Tanzania's Infrastructure Projects



### Tanzanian Gas-Fired Generation Capacity

Installed	MW	MMcfd	Location
Songas	180.0	36.0	Dar es Salaam
Ubungo 1 (Wartsilla)	100.0	20.0	Dar es Salaam
Ubungo 2 (Jacobsen)	129.0	25.8	Dar es Salaam
Tegeta 45	45.0	9.0	Dar es Salaam
Kinyerezi 1	150.0	30.0	Dar es Salaam
Kinyerezi 2	240.0	36.0	Dar es Salaam
Mtwara	22.0	4.4	Mtwara
Somanga	7.5	1.5	Somanga Funga
	<b>873.5</b>	<b>162.7</b>	
<b>Pending/under consideration</b>			
Kinyerezi 1 (Phase B)	185.0	30.0	Dar es Salaam
Kinyerezi 3 (300 + 300)	600.0	120.0	Dar es Salaam
Kinyerezi 4	300.0	60.0	Dar es Salaam
Somangafungu	330.0	66.0	Lindi
Mtwara	300.0	60.0	Mtwara
	<b>1,715.0</b>	<b>343.0</b>	

### Historical and Forecast 2P Sales<sup>1</sup> from the Songo Songo Field

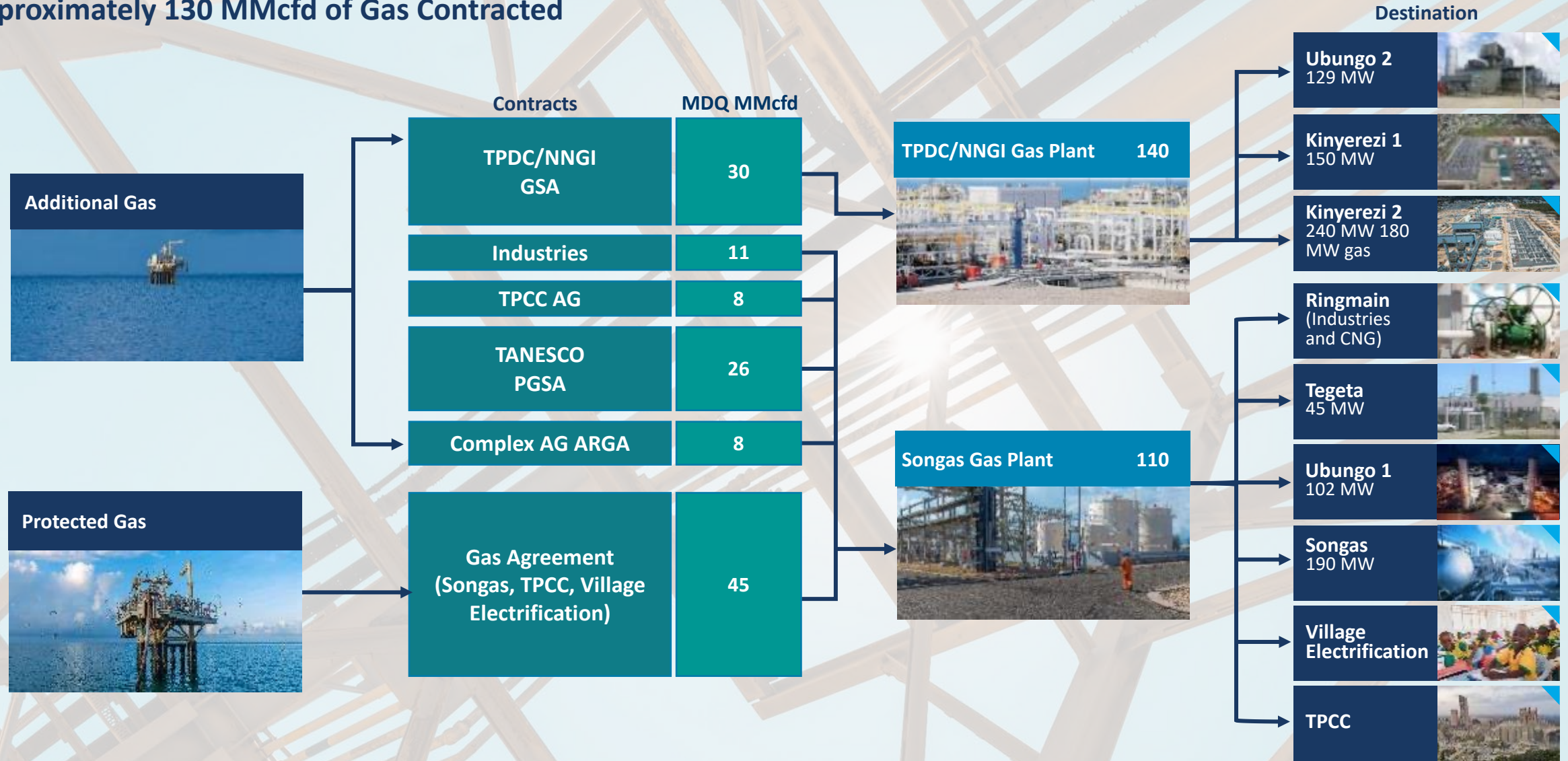


<sup>1</sup> Independent McDaniel Reserves Report at 31 December 2020



# Contracts Destinations

Approximately 130 MMcfd of Gas Contracted



## Advisories

### Forward-Looking Statements

Certain information regarding Orca set forth in this presentation contains forward-looking statements that involve substantial known and unknown risks and uncertainties. The use of any of the words "plan", "expect", "prospective", "project", "intend", "believe", "should", "anticipate", "estimate" or other similar words, or statements that certain events or conditions "may" or "will" occur are intended to identify forward-looking statements. Such statements represent Orca's internal projections, estimates or beliefs concerning, among other things, future growth, results of operations, revenue and customer growth, future capital and other expenditures (including the amount, nature and sources of funding thereof), business prospects and opportunities, and the ability of Orca to drill additional wells and/or negotiate license extensions with the Tanzanian government. These statements are only predictions and actual events or results may differ materially. Although management believes that the expectations reflected in the forward-looking statements are reasonable, it cannot guarantee future results, levels of activity, performance or achievement since such expectations are inherently subject to significant business, economic, competitive, political and social uncertainties and contingencies. Many factors could cause Orca's actual results to differ materially from those expressed or implied in any forward-looking statements made by, or on behalf of, Orca.

More particularly, this presentation may contain, without limitation, forward-looking statements pertaining to the following: the Company's expectations regarding supply and demand of natural gas and power; anticipated power sector revenues; the Company's expectations regarding timing for the completion of installation of compression on the Songas infrastructure; the Company's belief that development of the Songo Songo field can be fully funded from existing working capital and internal cash flow; statements regarding the extension of Orca's Songo Songo license; expectations regarding future development of resources and the Songo Songo field; forecast production for 2021 to 2026; the Company's ability to access new markets; the Company's plans and ability to expand the Dar es Salaam ring main distribution system; the Company's ability to enter into gas sales agreements with new industrial customers; the Company's plans to target customers with remote CNG systems and develop/partner and expand CNG distribution for remote heavy and light industries and transportation sectors; the current and potential production capacity of the Songo Songo field; the expected increase in demand for gas; the Company's belief that it is positioned to meet increases in demand; the demand for CNG and its ability to displace the use of oil and coal; the Company's ability to expand into the CNG midstream business; expectations regarding amounts and frequency of future dividends; the Company's ability to produce additional volumes; the size and existence of gas exploration prospects at Songo Songo West and Songo Songo extreme North; and other forward-looking statements. In addition, statements relating to "resources" and "reserves" are by their nature forward-looking statements, as they involve the implied assessment, based on certain estimates and assumptions that the resources and reserves described can be profitably produced in the future. The recovery and reserve estimates of the Company's reserves provided herein are estimates only and there is no guarantee that the estimated reserves will be recovered. As a consequence, actual results may differ materially from those anticipated in the forward looking statements. Although management believes that the expectations reflected in the forward-looking statements are reasonable, it cannot guarantee future results, levels of activity, access to resources and infrastructure, performance or achievement since such expectations are inherently subject to significant business, economic, operational, competitive, political and social uncertainties and contingencies.

These forward-looking statements involve substantial known and unknown risks and uncertainties, certain of which are beyond the Company's control, and many factors could cause the Company's actual results to differ materially from those expressed or implied in any forward-looking statements made by the Company, including, but not limited to: the impact of general economic conditions in the areas in which the Company operates; civil unrest; the susceptibility of the areas in which the Company operates to outbreaks of disease; industry conditions including changes in laws and regulations, and changes in how they are interpreted and enforced; competition; lack of availability of qualified personnel; risks related to obtaining required approvals of regulatory authorities; risks associated with negotiating with governments and other counterparties; fluctuations in commodity prices, foreign exchange rates and/or interest rates; stock market volatility; competition for, among other things, capital, drilling equipment and skilled personnel; failure to obtain required equipment for drilling; delays in drilling plans; failure to obtain expected results from drilling of wells; changes in laws and regulations including the adoption of new environmental laws and regulations, impact of new local content regulations and changes in how they are interpreted and enforced; imprecision in reserve estimates; the production and growth potential of the Company's assets; obtaining required approvals from regulatory authorities; risks associated with obtaining an extension to the Songo Songo license; changes in income tax laws or tax rates; ability to access sufficient capital from internal and external sources; failure of counterparties to perform under the terms of their contracts; reduced global economic activity as a result of the COVID-19 pandemic, including lower demand for natural gas and a reduction in the price of natural gas; the potential impact of the COVID-19 pandemic on the health of the Company's employees, contractors, suppliers, customers and other partners and the risk that the Company and/or such persons are or may be restricted or prevented (as a result of quarantines, closures or otherwise) from conducting business activities for undetermined periods of time; the impact of actions taken by governments to reduce the spread of COVID-19, including declaring states of emergency, imposing quarantines, border closures, temporary business closures for companies and industries deemed non-essential, significant travel restrictions and mandated social distancing, and the effect on the Company's operations, access to customers and suppliers, availability of employees and other resources; risk that contract counterparties are unable to perform contractual obligations; the potential negative effect on the Company's rights under the Songo Songo Production Sharing Agreement and other agreements relating to its business in Tanzania as a result of the Petroleum Act, passed in 2015 (the "Act"), and other recently enacted and future legislation, as well as the risk that such legislation will create additional costs and time connected with the Company's business in Tanzania; risks regarding the uncertainty around evolution of Tanzanian legislation; and unanticipated changes to legislation; the effect on the Company's operations, including, but not limited to, the Act and the Natural Gas Pricing Regulation made under Sections 165 and 258(l) of the Act;





failure to install compression on Songo Songo Island on the timeline anticipated; failure to increase production volumes and capabilities; risk that the Company will not be successful in appealing claims made by the Tanzanian Revenue Authority ("TRA") and may be required to pay additional taxes and penalties; and other factors, many of which are beyond the control of the Company. Readers are cautioned that the foregoing list of factors is not exhaustive.

Such forward-looking statements are based on certain assumptions made by the Company in light of its experience and perception of historical trends, current conditions and expected future developments, as well as other factors the Company believes are appropriate in the circumstances, including, but not limited to, that the Company will have sufficient cash flow, debt or equity sources or other financial resources required to fund its capital and operating expenditures and requirements as needed; that the Company will have adequate funding to continue operations; that the Company will successfully negotiate agreements; receipt of required regulatory approvals; the ability of the Company to increase production at a consistent rate; infrastructure capacity; commodity prices will not further deteriorate significantly; the ability of the Company to obtain equipment and services in a timely manner to carry out exploration, development and exploitation activities; future capital expenditures; availability of skilled labour; timing and amount of capital expenditures; uninterrupted access to infrastructure; the impact of increasing competition; conditions in general economic and financial markets; effects of regulation by governmental agencies; that the Company's appeal of various tax assessments will be successful; that the enactment of the Act and new legislation in Tanzania will not impair the Company's rights under the PSA to develop and market natural gas in Tanzania; current or, where applicable, proposed industry conditions, laws and regulations will continue in effect or as anticipated as described herein; and other matters.

Additionally, statements regarding resources are subject to the assumption that Orca will receive an extension of the Songo Songo license. Orca has not yet commenced discussion regarding such an extension and no guarantee can be made that: an application for an extension will be made; if such application is made, an extension will be granted; or if an extension is granted what the terms of such extension will be and their impact on Orca's business and operations (*including the time period*). Additionally, the forward-looking statements regarding the Company's expectations of future Tanzanian gas demand are based on certain assumptions made by the Company as discussed above as well as additional assumptions including, but not limited to the increase in industrial and residential demand; Tanzania's continued population and GDP growth; and other matters.

The amount of future cash dividends, if any, and repurchases of shares will be subject to the discretion of the Board of Directors and may vary depending on a variety of factors and conditions existing from time-to-time, including fluctuations in commodity prices, production levels, capital expenditures, debt service requirements, operating costs and other burdens, foreign exchange rates and the satisfaction of solvency tests imposed by the applicable corporate requirements.

Management has included the above summary of assumptions and risks related to forward-looking information provided in this presentation in order to provide stakeholders with a more complete perspective on the Company's current and future operations and such information may not be appropriate for other purposes. Orca's actual results, performance or achievement could differ materially from those expressed in, or implied by, these forward-looking statements and, accordingly, no assurance can be given that any of the events anticipated by the forward-looking statements will transpire or occur, or if any of them do, what benefits Orca will derive. These forward-looking statements are made as of the date of this document and Orca disclaims any intent or obligation to update publicly any forward-looking statements, whether as a result of new information, future events or results or otherwise, other than as required by applicable securities laws. The forward looking statements contained in this presentation are expressly qualified by this cautionary statement.

### **Oil and Gas Information - General**

The estimates of the Company's December 31, 2020 reserves and March 31, 2021 resources set forth in this Presentation have been prepared by McDaniel & Associates Consultants Ltd. ("McDaniel"), an independent qualified reserves evaluator, in accordance with the definitions, standards and procedures contained in the Canadian Oil and Gas Evaluation Handbook ("COGE Handbook") and National Instrument 51-101 – *Standards of Disclosure for Oil and Gas Activities* ("NI 51-101"). The preparation dates of the independent reserves evaluation (the "Reserves Report") and the independent natural gas resource assessment report (the "Resources Report") each prepared by McDaniel were February 23, 2021 (effective as of December 31, 2020) and June 17, 2021 (effective as of March 31, 2021), respectively. The reserves estimates contained herein are based on McDaniel's forecast prices and costs as at January 1, 2021. Please see Orca's Form 51-101F1 – *Statement of Reserves Data and Other Oil and Gas Information* prepared on February 23, 2021 and effective December 31, 2020 for more information concerning the Reserves Report and the Company's press release dated June 17, 2021 titled "*Orca Announces Updated Independent Natural Gas Resource Report*" (the "June 17 Press Release") for more information concerning the Resources Report, each of which are available on [www.sedar.com](http://www.sedar.com). All of the references to gas production in this Presentation are to conventional natural gas production, and all references to reserves, contingent resources and prospective resources, are to conventional natural gas reserves, contingent conventional natural gas resources and prospective conventional natural gas resources.

There are numerous uncertainties inherent in estimating quantities of proved and probable reserves, quantities of contingent resources and prospective resources and future net revenues to be derived therefrom, including many factors beyond the Company's control. The reserves, contingent resources, prospective resources and estimated financial information with respect to certain of the Company's assets have been independently evaluated by McDaniel. These evaluations include a number of factors and assumptions made as of the date on which the evaluation is made such as geological and engineering estimates which have inherent uncertainties, the effects of regulation by governmental agencies such as initial production rates, production decline rates, ultimate recovery of reserves and contingent resources, timing and amount of capital expenditures, marketability of production, current and forecast prices of crude oil and natural gas, Orca's ability to transport its product to various markets, operating costs, abandonment and salvage values and royalties and other government levies that may be imposed over the producing life of the reserves and contingent resources. Many of these assumptions are subject to change and may not, over time, prove to be accurate. Actual production and cash flow derived from the Company's assets may vary from these evaluations, and such variations may be material. Estimates with respect to reserves and prospective resources that may be developed and produced in the future are often based upon volumetric calculations, probabilistic and deterministic methods and analogy to similar types of reserves and contingent and prospective resources, rather than upon actual production history. Estimates based on these methods generally are less reliable than those based on actual production history. Subsequent evaluation of the same reserves or prospective resources based upon production history will result in variations, which may be material, from current estimated reserves and prospective resources. Reserves and prospective resources estimates may require revision based on actual production experience. Such figures have been determined based upon assumed commodity prices and operating costs. Market price fluctuations of crude oil and natural gas prices may render the recovery uneconomic.

"Proved" reserves (or 1P Reserves) are those reserves that can be estimated with a high degree of certainty to be recoverable. It is likely that the actual remaining quantities recovered will exceed the estimated proved reserves. "Probable" reserves (or 2P Reserves) are those additional reserves that are less certain to be recovered than proved reserves. It is equally likely that the actual remaining quantities recovered will be greater or less than the sum of the estimated proved plus probable reserves. The net present value of future net revenue attributable to the Company's reserves is stated without provision for interest costs and out of country general and corporate administrative costs, but after providing for estimated royalties, production costs, development costs, other income, future capital expenditures, and well abandonment costs for only those wells assigned reserves by McDaniel. In this Presentation NPV15 represents the net present value of net income discounted at 15%. It should not be assumed that the undiscounted or discounted net present value of future net revenue attributable to the Company's reserves estimated by McDaniel or set forth in this presentation represent the fair market value of those reserves. Such amounts do not represent the fair market value of the Company's reserves. The recovery and reserve estimates of the Company's conventional natural gas reserves provided herein are estimates only and there is no guarantee that the estimated reserves will be recovered. Actual reserves may be greater than or less than the estimates provided herein.

This presentation contains several oil and gas metrics, including Cash and Debt Adjusted 2P Reserves NPV15 and Cash and Debt Adjusted 2P Reserves NPV15 per share. These oil and gas metrics have been prepared by management and do not have standardized meanings or standard methods of calculation and therefore such measures may not be comparable to similar measures used by other companies and should not be used to make comparisons. Such metrics have been included herein to provide readers with additional measures to evaluate the Company's performance; however, such measures are not reliable indicators of the future performance of the Company and future performance may not compare to the performance in previous periods and therefore such metrics should not be unduly relied upon. Management uses these oil and gas metrics for its own performance measurements and to provide investors with measures to compare the Company's operations over time. Readers are cautioned that the information provided by these metrics, or that can be derived from the metrics presented in this presentation, should not be relied upon for investment or other purposes.

### ***Additional Information Concerning Resources***

The Resource Report is based on the Company's 92.07 percent interest in the Songo Songo resources located within the southern area of the offshore Tanzanian Coastal basin. The Resource Report focused on the contingent and prospective natural gas resources identified in the SSM, SSN, SSExt-N and SSW structures assigned to the Neocomian and Cenomanian formations within the Songo Songo PSA. The following table contains certain additional information required by NI 51-101 in respect of the resource estimates contained in this presentation. For additional information, see "Background to the 2021 Resource Evaluation", "Future Plans", "Further Information regarding the Company's Resources", "Risks and Significant Positive and Negative Factors" and "Factors regarding Development of Resources" in the June 17 Press Release.



Structure	Classification	WI <sup>(9)</sup> (%)	Resources - Unrisked <sup>(1)(2)</sup>			Chance of Discovery % <sup>(7)</sup>	Chance of Development % <sup>(7)</sup>	Risked
			Low MMcf	Best MMcf	High MMcf			Resources
								Best <sup>(2)</sup> MMcf
SSM/N - Neocomian	Contingent (Development Unclassified)	92.07	250,190	296,659	345,789	100.0	50.0	148,330
<b>Sub-Total Contingent Resources<sup>(3)</sup></b> <small>(4)(8)</small>			<b>250,190</b>	<b>296,659</b>	<b>345,789</b>			<b>148,330</b>
SSW - Cenomanian	Prospective	92.07	785	15,962	44,982	16.8	50.0	1,341
SSW - Neocomian	Prospective	92.07	22,206	333,035	900,521	31.6	50.0	52,603
SSN+Ext-N - Cenomanian	Prospective	92.07	2,317	11,841	26,475	27.0	50.0	1,598
SSExt-N - Neocomian	Prospective	92.07	93,521	249,947	465,424	41.0	50.0	51,177
<b>Sub-Total Prospective Resources</b> <small>(4)(5)(6)(8)</small>			<b>118,829</b>	<b>610,785</b>	<b>1,437,402</b>			<b>106,719</b>

1. See definitions for "contingent resources", "prospective resources", "Low Estimate", "High Estimate", "Best Estimate", "risky", "unrisky" and "developed unclassified" below. (
2. The Songo Songo License expires October 11, 2026 and it is expected that a license extension would be required for development of the resources to be justified. The license extension approval would correspondingly result in the extension of the Songo Songo PSA. There is no guarantee a license extension will be granted and the volumes presented above assume that such extension is granted.

3. There is no certainty that it will be commercially viable to produce any portion of the resources.
4. The risked resources have been risked for chance of discovery and for the chance of development. The chance of development is defined as the probability of a project being commercially viable. Quantifying the chance of development requires consideration of both economic contingencies and other contingencies, such as legal, regulatory, market access, political, social license, internal and external approvals and commitment to project finance and development timing. As many of these factors are extremely difficult to quantify, the chance of development is uncertain and must be used with caution. See "Risks and Significant Positive and Negative Factors" discussed below.
5. There is no certainty that any portion of the prospective resources will be discovered. If discovered, there is no certainty that it will be economically viable or technically feasible to produce any portion of the resources.
6. This volume is an arithmetic sum of multiple estimates of prospective resources, which statistical principles indicate may be misleading as to volumes that may actually be recovered. Readers should give attention to the estimates of individual classes of resources and appreciate the differing probabilities of recovery associated with each class as explained in the "Chance of Discovery and Development Risk" section of this press release.
7. As all contingent resources are considered to be discovered, the chance of commerciality for contingent resources is equal to the chance of development. The chance of commerciality for prospective resources is equal to the product of the chance of discovery and the chance of development. "Chance of discovery" is the estimated probability that exploration activities will confirm the existence of a significant accumulation of potentially recoverable petroleum. "Chance of development" is the estimated probability that, once discovered, a known accumulation will be commercially developed. (8) The Unrisked Sub-Total is not representative of the Portfolio Unrisked Total and is provided to give an indication of the resources range assuming all the prospects are successful. (9) "WI" means working interest. Company gross resources are based on Orca's working interest share of the property gross resources. On January 16, 2018 Orca sold 7.933 percent of the Class A common shares of its wholly owned subsidiary PAE PanAfrican Energy Corporation ("PAEM"), a Mauritius registered Company and sole shareholder of PanAfrican Energy Tanzania Limited ("PAET"), a Jersey registered company, to a wholly owned subsidiary of Swala Oil & Gas (Tanzania) plc ("Swala"). The Songo Songo PSA is held by PAET. While Swala has no management or control of PAEM and no shareholding in, or management or control of, PAET, the Resource Report was prepared based on Orca's effective ownership of 92.07 percent of the resources attributable to PAET.



In this presentation, the following terms have the following meanings:

- "contingent resources" are those quantities of petroleum estimated, as of the given date, to be potentially recoverable from known accumulations using established technology or technology under development but which are not currently considered to be commercially recoverable due to one or more contingencies. Contingent resources may be divided into the following project maturity sub-classes: (1) "Development Pending" is assigned to contingent resources for a particular project where resolution of final conditions for development is being actively pursued (high chance of development); (2) "Development on Hold" is assigned to contingent resources for a particular project where there is a reasonable chance of development, but there are major non-technical contingencies to be resolved that are usually beyond the control of the operator; (3) "Development Unclassified" is assigned to contingent resources for a particular project where evaluation is incomplete and there is ongoing activity to resolve any risks or uncertainties; and (4) "Development Not Viable" is assigned to contingent resources for a particular project where no further data acquisition or evaluation is currently planned and there is a low chance of development.
- "economic" means those contingent resources that are currently economically recoverable.
- "prospective resources" are those quantities of petroleum estimated, as of a given date, to be potentially recoverable from undiscovered accumulations by application of future development projects. Prospective resources have both an associated chance of discovery and a chance of development.
- "resources" encompasses all petroleum quantities that originally existed on or within the earth's crust in naturally occurring accumulations, including Discovered and Undiscovered (recoverable and unrecoverable) plus quantities already produced.
- "risked" means the applicable reported volumes or revenues have been risked (or adjusted) based on the chance of commerciality of such resources in accordance with the COGE Handbook. In accordance with the COGE Handbook for contingent resources, the chance of commerciality is solely based on the chance of development based on all contingencies required for the re-classification of the contingent resources as reserves being resolved. Therefore, risked reported volumes and values of contingent resources reflect the risking (or adjustment) of such volumes or values based on the chance of development of such resources.
- "Uncertainty Ranges" are described by the COGE Handbook as low, best, and high estimates for resources. The range of uncertainty of estimated recoverable volumes may be represented by either deterministic scenarios or a probability distribution. Resources are provided as low, best and high estimates, as follows: (1) Low Estimate – This is considered to be a conservative estimate of the quantity that will actually be recovered. It is likely that the actual remaining quantities recovered will exceed the low estimate. If probabilistic methods are used, there should be at least a 90 percent probability that the quantities actually recovered will equal or exceed the low estimate; (2) Best Estimate – This is considered to be the best estimate of the quantity that will actually be recovered. It is equally likely that the actual remaining quantities recovered will be greater or less than the best estimate. If probabilistic methods are used, there should be at least a 50 percent probability that the quantities actually recovered will equal or exceed the best estimate; and (3) High Estimate – This is considered to be an optimistic estimate of the quantity that will actually be recovered. It is unlikely that the actual remaining quantities recovered will exceed the high estimate. If probabilistic methods are used, there should be at least a 10 percent probability that the quantities actually recovered will equal or exceed the high estimate.
- "unrisked" means applicable reported volumes or values of resources have not been risked (or adjusted) based on the chance of commerciality of such resources. In accordance with the COGE Handbook for contingent resources, the chance of commerciality is solely based on the chance of development based on all contingencies required for the re-classification of the contingent resources as reserves being resolved. Therefore, unrisked reported volumes and values of contingent resources do not reflect the risking (or adjustment) of such volumes or values based on the chance of development of such resources.