



A Sustainable
Tanzanian Natural
Gas Business



Providing reliable domestic natural gas to support Tanzania's growth

Financial Highlights

Revenue		Net cash flow	
77.9 \$m	-9%	46.5 \$m	+33%
2020	\$77.9m	2020	\$46.5m
2019	\$85.6m	2019	\$34.9m

Adjusted funds flow ¹		Net income attributable to shareholders	
39.1 \$m	-9%	27.8 \$m	+12%
2020	\$39.1m	2020	\$27.8m
2019	\$43.2m	2019	\$24.7m

Cash and short-term investments		Earnings per share	
104.2 \$m	-25%	1.00 \$	+41%
2020	\$104.2m	2020	\$1.00
2019	\$138.7m	2019	\$0.71

Gas sales (average)		Working capital (including cash)	
57.7 MMcfd	-9%	74.2 \$m	-31%
2020	57.7MMcfd	2020	\$74.2m
2019	63.1MMcfd	2019	\$107.0m

Company gross conventional natural gas reserves (2P)		Net present value (2P) discounted at 10%	
230 Bcf	-13%	241 \$m	-15%
2020	230 Bcf	2020	\$241m
2019	265 Bcf	2019	\$283m

Glossary

\$	US dollar
MMcfd	Million standard cubic feet per day
Bcf	Billion standard cubic feet
\$m	Million US dollar
2P	Proved plus probable

¹ Please refer to Non-GAAP measures section of the MD&A for additional information.



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For more information visit our website:
www.orcaenergygroup.com

At a Glance

Partnering to create opportunity in Tanzania

Orca Energy Inc. ("Orca", or the "Company") operates a license in Tanzania which has a total area of approximately 170 km². The license is located on or in shallow water around Songo Songo Island ("SSI") which lies 25 km off the coast of mainland Tanzania and 200 km south of Dar es Salaam.

[Read more on page 10](#)

1. Significant underlying resource potential

An independent evaluation of the Songo Songo field affirms that the license contains 230 billion cubic feet ("Bcf"), Proved plus Probable (2P) conventional natural gas reserves giving the asset a 2P net present valuation (discounted at 10%) of more than \$240 million.

2. Enabling Tanzania to meet its energy demands

Gas production from our facilities continues to play a significant role in Tanzania's energy infrastructure, with the Company's output delivering approximately 39% of all the electrical power generated in Tanzania.

3. Firmly focused on Tanzania

Following a strategic change in direction during the year, the Company is firmly focused on optimizing value at Songo Songo. The license has upside potential which has yet to be unlocked.

Tanzania

Size

950,000 km²

Population

60,000,000

Highlights

Producing wells

5 (Songo Songo license)

Employees

111

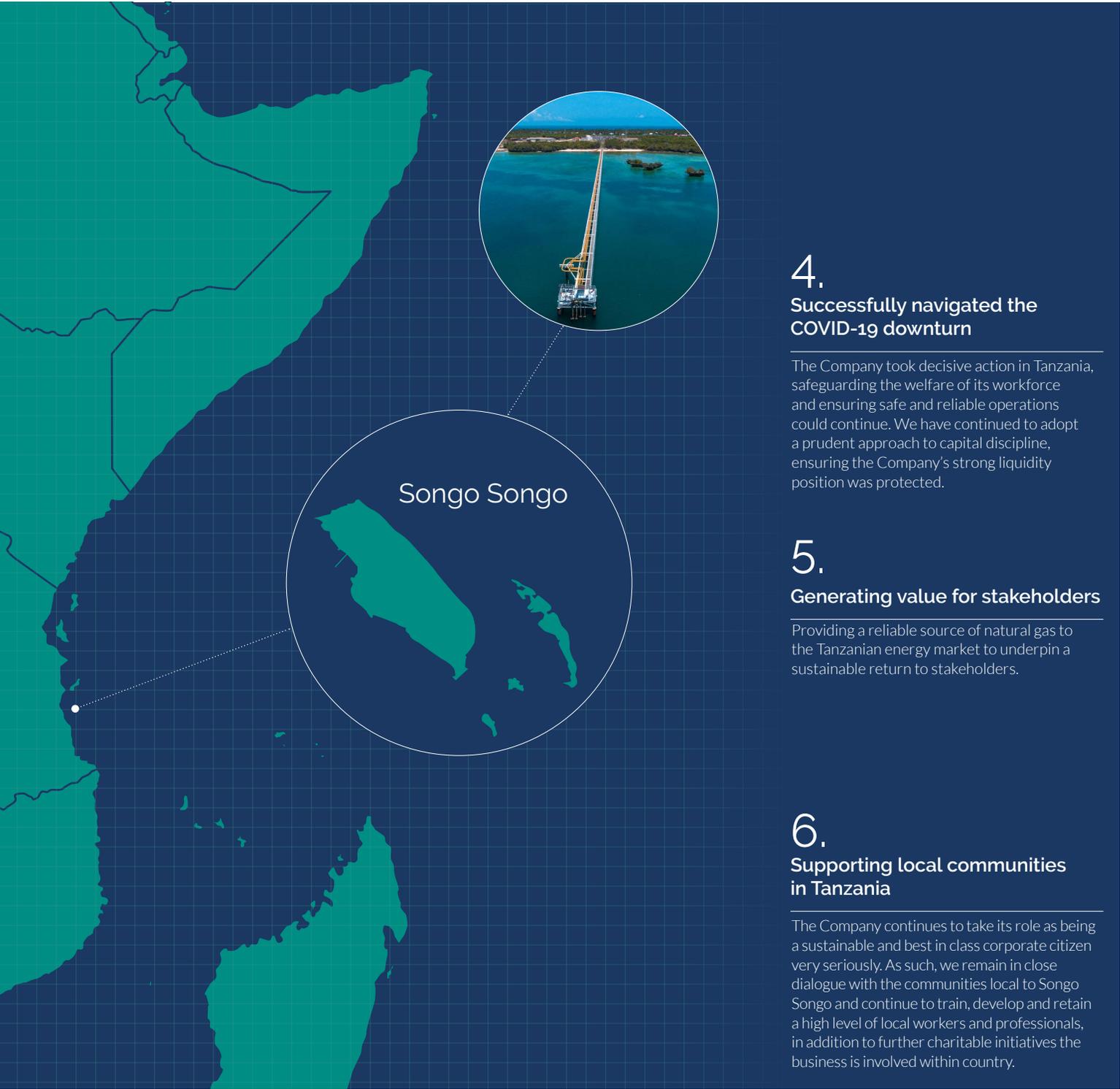
Percentage of Tanzanian employees

90% (99% within Tanzania)

Experience operating the Songo Songo gas field and related infrastructure

16 years





4. Successfully navigated the COVID-19 downturn

The Company took decisive action in Tanzania, safeguarding the welfare of its workforce and ensuring safe and reliable operations could continue. We have continued to adopt a prudent approach to capital discipline, ensuring the Company's strong liquidity position was protected.

5. Generating value for stakeholders

Providing a reliable source of natural gas to the Tanzanian energy market to underpin a sustainable return to stakeholders.

6. Supporting local communities in Tanzania

The Company continues to take its role as being a sustainable and best in class corporate citizen very seriously. As such, we remain in close dialogue with the communities local to Songo Songo and continue to train, develop and retain a high level of local workers and professionals, in addition to further charitable initiatives the business is involved within country.

CEO's Statement

Building a business that provides for the future



To have a successful business, we believe you need to clearly understand your core assets, and from that knowledge, focus your energy on optimizing the value realized for all stakeholders. By incorporating good corporate governance, mechanisms can be installed whereby meaningful stakeholder engagement can happen, resulting in value realization.

Jay Lyons
Interim Chief Executive Officer

Despite the challenges presented by the global pandemic, the Company successfully maintained safe and reliable operations at the world class Songo Songo gas field.

The Company's response to the coronavirus pandemic ("COVID-19") was to ensure the welfare of our team in-country and those we work with, whilst allowing us to continue meeting the demand for natural gas from Songo Songo. We also chose to invest further in this important Tanzanian gas business for the benefit of all our local and international stakeholders.

Although our average sales volumes for 2020 were marginally down year-on-year at 57.7 million standard cubic feet ("MMcfd") compared to 63.1 MMcfd for 2019, we supplied natural gas for approximately 39% of all electrical power generated in Tanzania. The fall in sales was due to prolonged and heavy rainfall early in the year resulting in an increase in hydropower generation and a lower demand for gas fired power generation as well as COVID-19 impacting industrial customers' demand for natural gas in Tanzania.

In September 2020 the Board determined that as a result of the challenges facing the global oil & gas industry combined with Songo Songo's significant potential the Company should remain focused on the optimization and value maximization of its current operations.

Driven by Tanzania's continuing rapid growth trajectory, the country's need for cleaner energy such as natural gas, has never been greater. Over the past decade, the country has experienced 7% growth per annum. Over the same timeframe, the population has increased by 35%, and is predicted to continue to expand at this rate. Dar es Salaam is now the second-fastest growing city in the world. Tanzania has the stated objective of building a more industrialized country in which the contribution of manufacturing to the economy is set to reach at least 40% of GDP over the next four years. To a great extent, this transformation is currently powered by natural gas which accounts for more than half of the country's power generation. The demand for natural gas is only set to increase and will be central in meeting future electricity demand. Alongside hydropower and solar PV, use of natural gas will continue to expand. Natural gas generates approximately 60% of Tanzania's electricity and is therefore integral to the country's ambitious growth plans.

The Songo Songo gas project is very well placed to support Tanzania's journey of economic industrialization, both through energy production, as well as fuelling the country's transportation network. It is widely recognized that natural gas will remain an integral component of the energy transition, the route to a low carbon economy for the foreseeable future, and that gas will play a central role in the development of Tanzania's significant infrastructure projects.

To be able to support Tanzania's energy demand, we continue to invest a significant amount of capital into the business, with 2020 capital expenditure of \$27.1 million. A significant portion of our ongoing investment is on the compression project, which has a total forecast of \$38 million, of which \$24.7 million has been incurred to date. The Company remains on track for installation and commissioning to occur in 2022. Our commitment is not only assisting Tanzania in meeting its rising energy demands but also with its transition to a less carbon intensive economy. Although the sale of Compressed Natural Gas ("CNG") for use in vehicles is expected to be relatively small to begin with, the long-term ambition is for CNG to start to displace the use of petrol and diesel, both of which carry a much larger carbon footprint than our gas.

The Company's financial position remains strong, with a net income attributable to shareholders in 2020 increasing by 12% year-on-year to \$27.8 million, contributing to a cash position of \$104.2 million at year-end. The positive results have enabled the Company to return value to shareholders in the form of dividends and share buybacks. The adoption of a sustainable dividend policy is a core business value, however going forward this needs to be balanced with the growth potential we see in our Tanzanian asset. The overall objective of the business is to balance returns with the growth potential (of the Company) for the benefit of both our shareholders and Tanzanian stakeholders.

The importance stakeholders increasingly place on strong Environmental, Social and Governance ("ESG") protocols running through the business remains high, and we are pleased with our ongoing ESG performance. The Company is deeply committed to making a positive social and economic contribution, to working safely and responsibly and having a minimal impact on the environment. Throughout 2020, Orca deepened its strong track record in Tanzania as a good corporate citizen, building on our history of supporting critically important education and health projects, not only on Songo Songo Island, but also across the wider region.

Since 2004, it is estimated the gas from the Songo Songo field has helped to displace expensive liquid fuel imports, generating savings of \$10 billion for Tanzania. The Company is also a major employer in the region, with our team in Tanzania being made up of 99% local staff. We continue to provide staff training and career development programs.

As a Company, we are proud to be involved in supporting the people of Tanzania during the next phase of industrial growth and increasing prosperity. To ensure the future contribution of Songo Songo, we look forward to a constructive dialogue with the Government of Tanzania to extend the Songo Songo license beyond October 2026. This would allow Orca to continue to partner, invest and support in the development of this important gas resource both prior to and after 2026. Following 16 years of gas production we have developed a deep and valuable understanding of the geology of the license and remain committed to its development and optimization for all its stakeholders. We have the right team and financial structure in place to further develop the Songo Songo asset.

Finally, I would like to thank our stakeholders including the Government of Tanzania for their continued support. I also extend heartfelt appreciation to our staff and contractors who have worked tirelessly during a challenging year.

We look forward to keeping the market apprised on developments over the course of 2021.



Jay Lyons
Interim Chief Executive Officer
21 April 2021

Welcoming Lloyd Herrick

We are delighted to welcome Lloyd Herrick to the Company. He brings more than 40 years' experience to Orca, including 20 years in senior roles at TransGlobe Energy Corporation ("TransGlobe").

Lloyd is highly aligned with Orca's strategy to focus on the optimal development of the Songo Songo gas field in Tanzania. He will play an important advisory and oversight role supporting our operations team and working closely with Orca's management as we continue to capture the value from our flagship asset in Tanzania for the benefit of all stakeholders.

Highlights

	Additional gas sales		MMcfd
2020	12.7	45.0	
2019	13.3	49.8	

■ Industrials
■ Power

	Net income attributable to shareholders	\$m
2020	27.8	
2019	24.7	

	Working capital	\$m
2020	74.2	
2019	107.0	

	TANESCO long-term receivables (fully provided against)	\$m
2020	27.6	
2019	47.5	

Sustainability & Responsibility

Redefining our focus and creating long-term sustainable value





Our main goal is to grow a sustainable business model around our asset in Tanzania. The Company's vision of sustainability is founded on the principle of generating enduring long-term value through the prudent governance of business risk and financial resources. The sustainability of the business is being maintained through our responsibility to minimize our environmental impact, maximize our social and economic investments in our local community through our Corporate Social Responsibility ("CSR") program and support the development of our employees. Orca believes that a combination of strong governance practices, our sustainable business model and a diverse and talented workforce gives us the ability to create value for our shareholders and other stakeholders while contributing to a lower carbon-based future.

Orca and Songo Songo fueling the energy transition

Tanzania is the sixth most populous country in Sub-Saharan Africa and its population has nearly doubled to almost 60 million in the last 20 years. Increasing Tanzania's energy supply to meet demand is a high priority. Tanzania's annual energy demand has been growing at 6% to 7% over the last decade.

A major priority moving forward will be developing the country's infrastructure and resources to allow natural gas to meet future power demand. It is widely recognized that natural gas will remain an integral component of the transition to a lower carbon economy for the foreseeable future, a concept that is fast gaining momentum as an abundant, effective, and sustainable energy resource.

With the widely held view of natural gas being a transitional fuel, Orca is strongly placed to support Tanzania's growing energy demand and is well positioned to support the development of Tanzania's transportation, energy production, and economic industrialization, whilst at the same time contributing to the country's commitment to reduce greenhouse gas emissions.

The Company has an experienced management team in place, with a proven record of commercializing gas and the necessary skills to grow the business to deliver long-term value for investors and other stakeholders. Growing production from the Songo Songo gas field in Tanzania is a core focus for the Company and management continue to work with its partners to ensure that affordable gas remains a significant proportion of the energy mix for Tanzania's expanding industrial economy.

Sustainability & Responsibility continued

Our approach

Orca has historically been focused on sustainability and has recently enhanced its strategy and approach.

This includes:

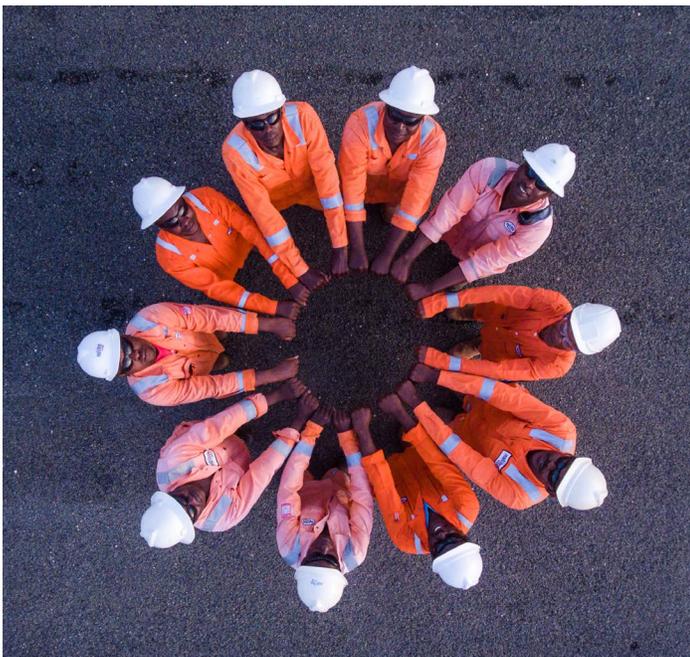
- Stakeholder Engagement
- Review of Materiality Levels
- Selection of appropriate Sustainability Goals
- Creation of a tracking and reporting mechanism that allows focus on progress towards defined targets

The first step involved engaging external expertise to assist with identifying an initial list of potentially material environmental, social and governance features (e.g., emissions, health and safety, etc.) and issues relevant to us, our business and our stakeholders. Our next steps include the further refinement of this list through consultation with our employees, business partners and other key stakeholders, so that focus can be delivered in areas that matter and where value can be added.

Our approach



1. Stakeholder Engagement	Internal and external engagement on material issues
2. Materiality Analysis	Analysis of material issues and alignment with business strategy
3. Strategy Definition	Define principles, policies, reporting and governance structure
4. Objective & Target Setting	Set sustainability goals and targets for long-term value creation
5. Progress Review	End of year review, reporting and refinement



Our stakeholders

We acknowledge that with innovation and new infrastructure comes not only economic prosperity and opportunity, but also a responsibility to safely govern and protect our people and environment.

Investors

In changing our diversification strategy, the Company is better positioned to manage potential risk to enhance value through a measured field development program in line with forecasted natural gas demand.

How we engage

Investor engagement is critical and managed from the highest echelons of the Company. The Company keeps investors updated and engaged in its strategic direction and operational plans via a range of regular reporting, press releases and discussions. The Company listens to our shareholders carefully, values their support, and seeks to address their concerns should they exist. The Company's long-term goal is to maximize the social and economic potential of our asset in Tanzania in a sustainable way, whilst maintaining a regular dividend to shareholders. The Company believes that by growing a sustainable asset in Tanzania we can reward both our shareholders as well as our Tanzanian stakeholders. The Company is looking to provide more regular online updates as both our development and ESG strategies are implemented.

Stakeholder/Regulator Engagement

Tanzanian local regulators are actively engaged through our local team in Tanzania. The Company focuses on consistent proactive engagement to develop strong relationships which helps to cement partnerships and to ensure that all local regulations are adhered to. Stakeholder engagement is important to a philosophy of shared prosperity.

How we engage

The Company interacts with a wide range of stakeholders internal and external to Tanzania, as a continual process of formal and informal engagement. Agility is required to manage a plethora of issues across a number of keystone agreements, while observing protocols and ensuring actions and decisions are accurately recorded and implemented. Having a strategic asset in Tanzania, we seek to ensure 'no surprises' for our stakeholders by wherever possible, adopting a policy of proactive, inclusive and transparent information sharing.

Environment

The Company is aware that the greenhouse gas emissions from our operations contribute to global warming, however this is offset by the displacement of heavy fuel oil. We are making a concerted effort to minimize the environmental impact of water usage and waste generated throughout our operations.

How we engage

Respect for and protection of the environment is central to all that the Company does. We acknowledge that this ensures we retain the goodwill of our hosts and a license to operate our business. We recognize the privilege it is to operate in Tanzania, but also the centrality of the environment and its extraordinary ecological systems to the livelihoods of many of the Tanzanian people. As such, the Company engages regularly with a broad range of stakeholders on environmental matters, from international organizations to locals in the communities in which we operate. The Company invests considerable time and effort in formal reporting, auditing and updating internal controls and regulations, and consulting with communities to ensure their and the nation's best interest are protected alongside the Company's good reputation.

Local Communities

The Company remains socially responsible and is working with the local communities to ensure that the benefits of our operation flow to the local communities. Our primary focus being education, health and wellbeing.

How we engage

As stated, we take very seriously our responsibility to the local communities in which we operate. We invest considerable time in engaging with community leaders at all levels, not only on operational matters or new projects, but also on social matters. We believe that to support a community we must first understand it, and so the Company has embedded two staff members into the local community to live and work alongside the people. The Community Liaison Officers, who understand Company operations and community requirements, are vital in the effective and timely sharing of information. It is this approach, alongside our regular interaction with leaders, that has allowed the Company to develop and implement a highly effective, impactful and respected CSR program across the region, and has ensured we maintain excellent community relations and cooperation.

Employees

The health, safety and development of our staff is core to the Company's value. The Company's focus is on employee retention and the development of our employees, a key feature being "Tanzanian First".

How we engage

Employee engagement is based on trust and integrity. The Company strives to make our employees feel part of a team by communicating clear goals, supporting them in the development of new skills, providing regular and constructive feedback and rewarding effort. The annual bonus being reflective of both the individual performance and that of the overall Company. This approach has been successful and is reflected in the low staff turnover. The formal annual reviews as well as providing two-way communication on past year performances looks to set goals for the following year. The Company believes that all goals set should be, specific, measurable, attainable (but stretching), realistic and time bound.

Sustainability & Responsibility continued

Realizing value for both Stakeholders and Investors



We engage, listen and respond to our stakeholders to improve our operations.

Stakeholder Payments and Investor Returns

The careful stewardship of our Tanzanian asset has resulted in significant returns for our Tanzanian stakeholders. Over the last five years a total of \$187.6 million has been paid to Government of Tanzania and our partner the Tanzania Petroleum Development Corporation ("TPDC") by the way of taxes and their share of revenue in accordance with the terms of the Production Sharing Agreement ("PSA"). Over the same period a total of \$71.7 million has been returned to our shareholders in the form of dividends and share buybacks.

In 2020 the Company paid Additional Profits Tax ("APT") for the first time in relation to the 2019 results. APT is payable when the Company has earned a cumulative cash return greater than 25% plus an annual indexation allowance. The \$11.9 million APT payment made in 2020 is a reflection of the continued commitment to the development of the Songo Songo asset, which has rewarded both stakeholders and investors. In addition to these monies, the Company has invested in a number of sustainable health and education projects in Tanzania.

The Company continues to monitor the business risks that could affect the future performance of the business and actively engages with our local Tanzanian stakeholders to address such risks and to work with them to mitigate their potential impact on the business.

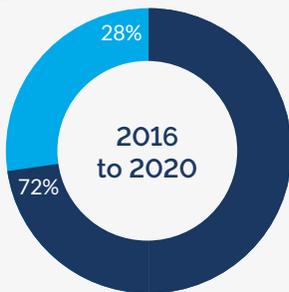
Environment

We recognize the impact of the business on the environment and undertake an environmental impact assessment when commencing capital projects.

The figures disclosed in the diagrams opposite relate only to the total conventional natural gas that is produced and distributed via the Songas Infrastructure and the Company's downstream operations in Dar es Salaam. The figures do not include natural gas sold via the National Natural Gas Infrastructure ("NNGI"), nor do they include the energy consumption and the greenhouse gas emissions of our customers.

Whilst there has been a 15% reduction in the gas produced annually via the Songas Infrastructure to 24,128 MMcf from 28,422 MMcf, there has been a 38% increase in the overall energy consumption from 4.48 GWh to 6.22 GWh. The contributing factor is the energy required to power the refrigeration unit at the Songas plant that has been operational through 2020. The electricity required to run the refrigeration unit is powered by one of the three gas fired generators on SSI. The refrigeration unit was installed to sustain gas production until the completion of the compression project, whereupon both systems will work harmoniously to further sustain gas production and increase production potential.

Stakeholder Payments and Investor Returns

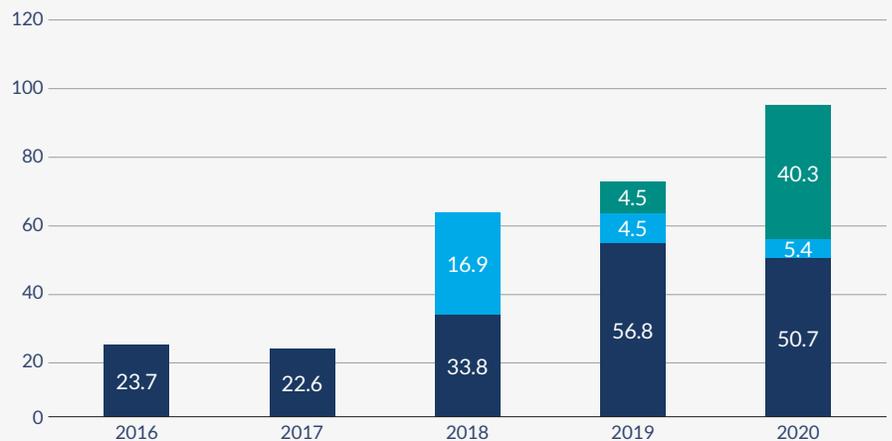


■ Stakeholder payments* \$187.6m

■ Investor returns \$71.7m

* Stakeholder payments include: Income Tax, Value Added Tax, Additional Profits Tax, TPDC share of revenue and regulatory payments to the Energy and Water Utilities Regulatory Authority ("EWURA") and the Petroleum Regulatory Authority ("PURA").

Stakeholder and Investor Returns \$m



■ Stakeholder Payments ■ Shareholder Dividends ■ Share Buybacks



Ultimately through this approach we are focused on maximizing the natural gas reserves produced and therefore the value realized for all stakeholders.

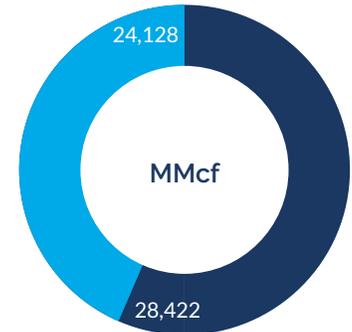
The compressor itself will be powered by the gas fired generators on SSI. The installation of compression will necessitate the installation of a fourth gas fired generator. The compression will enable the Company to meet the power demand growth within Tanzania until 2026.

CO₂ emissions have fallen by 11% to 3,654 tonnes compared to 4,126 tonnes (t) in 2019.

The fall in CO₂ emissions has been predominantly driven by the impact of COVID-19 on international travel, as well as the reduction in engineering work on SSI following the installation of the refrigeration unit. The CO₂ emissions from operations have remained constant between 2019 and 2020, with the fall in production volumes being offset from the increased CO₂ emissions from gas required to run the refrigeration units.

The Songo Songo project has generated approximately \$10 billion in savings for Tanzania and improved the Country's balance of payments* since 2004, with the displacement of expensive liquid fuel imports. There has also been a significant positive environmental impact with the reduction in associated CO₂ emissions.

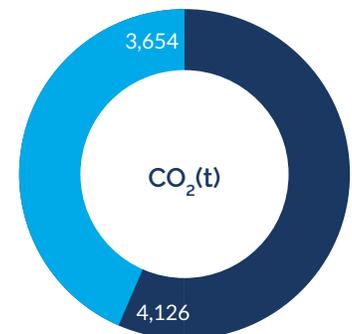
Total Gas Produced via Songas Infrastructure



Energy Consumption

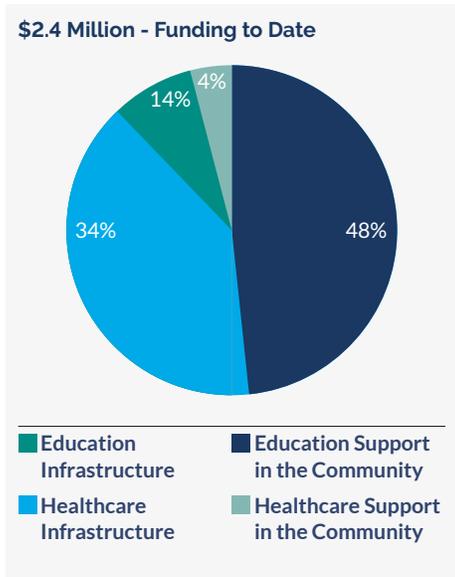


Emissions



■ 2019
■ 2020

Sustainability & Responsibility continued



Community Engagement and Social Investment

The Company contributes to the economic and social success of the people in the districts where we operate, recognizing and reinforcing the inseparable relationship between a healthy business and a healthy society.

We conduct development projects, economically, legally and ethically sharing the concern of our communities and dedicating our capabilities, resources and people to create a better future for all. The projects are assessed and adopted based on the enduring themes of education, health and wellbeing.

The Company has made, and continues to make, significant social investment in Tanzania. Implementing innovative, effective and sustainable projects that deliver genuine and measurable benefit to Tanzania.

Our four focus areas



Education



Health



Scholarships



Life Skills Program

Education

Investing in early childhood development

The Company funded the construction of the kindergarten on SSI which opened in September 2011. Since opening, we have continued to provide support with books and other items to enhance learning. The kindergarten proves to be a fundamental first step in improving the educational prospect for children within SSI's remote community, delivering a significant increase in the availability of first stage education. To date, more than 1,050 of the island's children have attended, with the highest attendance figures throughout 2020.

Secondary

Island culture has not always placed the same emphasis on the education of women. Women have historically been kept from school or made to return home to focus on domestic chores as opposed to schoolwork. To support this change, along with the continual aim to provide equal opportunity, the Company constructed a girl's dormitory, able to accommodate 55 students within a learning orientated environment. The dormitory was opened in 2013 and has seen over 187 students utilize the facility since 2015.

In 2015, the Company funded the construction of a multi-purpose science laboratory for the SSI Secondary School. A national target had been set, which required each secondary school to have access to this facility. Alongside this the Company donated 1,500 bags of cement to the Kilwa District Council to support other schools in the district hit this target. We have seen a steady increase of usage, with the highest numbers recorded in 2020, of 193 students.

Scholarship Program

The Company runs an annual scholarship program for selected students, with the aim of improving the educational experience for the children of SSI. This initiative funds students through a full secondary education program in a selected school in Dar es Salaam. The Company covers all travel costs, school fees, boarding costs along with other educational requirements.

Since 2011, more than 55 students have benefited from this program. Currently through the program, nineteen students are undertaking O (Ordinary) Level courses, and four are attending university or higher educational facilities.

In 2020 we saw the first two students from SSI graduate from University. Haji Omari Naoda graduated from the University of Dodoma and Fahadi Juma Likwena graduated from Mzumbe University.



Fahadi Juma Likwena
Graduate SSI Scholarship Program

Scholarship Program

Case Study

In 2020 Fahadi graduated from the Mzumbe University with a Bachelor of Business Administration in Procurement and Logistics Management.

Fahadi is the sixth child born in a family of six boys and one girl. All his siblings have only attained primary school level of education, his father is a fisherman, and his mother is a housewife.

In 2011, when the Company introduced its scholarship program, Fahadi was one of the first 10 beneficiaries. The Company paid for Fahadi to attend secondary school in Dar es Salaam where he excelled. He went on to do equally well in his A levels, and in 2017 attained sufficient pass marks to qualify for university. Throughout, the Company has covered the costs of Fahadi's travel to and from SSI during school breaks, all school fees, boarding costs, uniform, textbooks and all other school requirements.

Even with his obvious intellect, it is highly unlikely Fahadi would have followed this path without the Company's support. Always eager to learn, in 2019 Fahadi also completed an internship within the Company in the Logistics Department in Dar es Salaam and SSI. Logistics Manager, Stella Ndossi, has praised Fahadi as he has been able to execute his assignments very well and even suggested on how to improve the Company systems and procedures based on what he has learned at school.

Immediately after graduation Fahadi was hired by Coca Cola Tanzania in their Mbeya Plant as a Logistics Assistant. Fahadi is very grateful to the Company for its support throughout his journey and with the employment he obtained he will be able to support his family.

Fahadi is a role model for other students on the island. When he is on vacation, he uses his spare time to volunteer and teach English and Commerce at the SSI Secondary School.

Pupils attending SSI Kindergarten

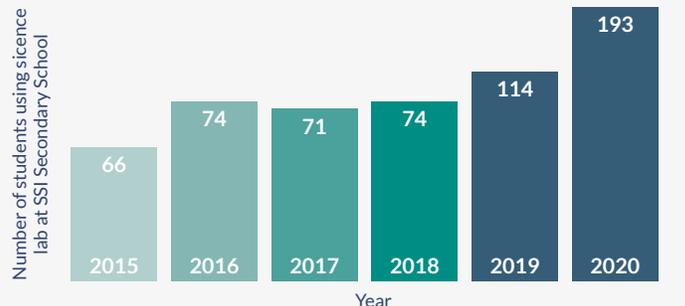


Girls dormitory usage



Total: 187

Science laboratory at SSI secondary school



Total: 592

Sustainability & Responsibility continued

Healthcare

In many of Tanzania's remote communities, timely access to good quality healthcare is not always guaranteed. The country's health system is developing; however, many hospitals and medical centers are privately run and unaffordable. Particularly in Kilwa District, the Company has made investments to develop accessible, clean, well equipped and properly staffed medical centers in the areas that need them the most.

Kilwa is one of the five districts of the Lindi Region of Tanzania. It is bordered to the north by the Pwani Region, to the east by the Indian Ocean, to the south by the Lindi Rural District and to the west by the Liwale District. The district includes the historical sites of Kilwa Kisiwani and Songo Mnara which are part of the World Heritage and the former main town of Kilwa Kivinje.

The Company, in collaboration with Tumaini La Maisha ("TLM") a Children's cancer charity, has continued to fund the ongoing support for the expansion of childhood cancer services in Sokoine Referral Hospital in the Lindi Region. The Company support has funded the establishment of a new treatment center, which we believe will make a substantial contribution to the continued success of increasing the survival rate of childhood cancer in Tanzania.

The Company support has also resulted in:

- 31 children treated with childhood cancer from Lindi
- 189 health professionals given training on childhood cancer treatment in the Lindi Region
- 250 chemotherapy drugs supplied to the Sokoine Lindi Regional Hospital
- 300 arlight's purchased to aid early diagnosis of children with certain cancers



Mortuary Building

Kinyonga District Hospital, Kilwa Kivinje

The Kinyonga District Hospital at Kilwa Kivinje is a referral center that receives patients from health centers and clinics in rural and urban areas of the wider Kilwa District. The hospital is located close to the main road that leads from Mtwara in the south to Dar es Salaam in the north. It is approximately 360 km from Dar es Salaam and 200 km from the Lindi Regional Hospital. The catchment area for Kinyong District Hospital is therefore vast, making it a vital support hub for a large swathe of the district community, and for travelers who use the main road from Dar es Salaam to the Mtwara and Ruvuma regions.

For many years, the hospital has had a dilapidated mortuary facility with poor infrastructure which made it unfit for purpose. Recognizing the health and compassionate requirements for an operable mortuary, in 2020 the Company funded the construction of a modern facility, which is now completed, and the building handed over to the Kilwa District Council.



District Pharmacy Block

Kilwa Kivinje

The Government of Tanzania recently directed that each council establishes a pharmacy to ensure the availability of reliable medicines for community members receiving service at all district hospitals and health centers. In line with this, the Company in 2020 funded the construction of a pharmacy block at Kilwa Kivinje.

The Pharmacy block building is now completed and the building handed over to the Kilwa District Council for use. This support is expected to reduce incidences of medicine deficiency in district hospitals and health centers, provide easier access to medicines, create employment, and generate revenues to improve other healthcare services, including infrastructure for rehabilitation.



Somanga Health Centre.



Kilwa District Commissioner Christopher Ngubiagai receiving keys of the completed Somanga Health Centre.

Somanga Health Centre

The remote area of Somanga comprises five villages with a population of approximately 10,000. The distance from Somanga to the Kilwa District Hospital is 62 km therefore, localized medical facilities were critical. Somanga Health Centre construction began in Q3 2019 and was completed in 2020.

Somanga Health Centre has been one of the Company's largest healthcare projects to-date. The facility is well equipped, and the Government of Tanzania will also contribute X-ray machines, surgery equipment, beds, mortuary equipment and laboratory equipment. The completed facility will allow all community members, along with an additional 2,000 people from surrounding villages, access to a broad range of high-quality healthcare.

Governance

The Company is committed to operate in a sustainable and responsible way. Both the Board and management team recognize that the Company's success is enhanced by being a good corporate citizen within Tanzania. Sound governance is a fundamental principle within the Company. We work to ensure that we are following best practice throughout all of our activities.

We strive to maintain the highest standards of ethical conduct, reporting results with accuracy and transparency and maintaining full compliance with the laws, rules and regulations that govern the business. Our governance structure, policies and processes aid employee, customer and community needs, promoting a culture of accountability and ethical conduct across the organization. We ensure that we support our commitment to address global challenges through our core business.

Our Board committees play a critical role in providing oversight to ensure responsible business practices.

The Company maintains an active dialogue with employees, communicating key corporate objectives and soliciting comments and feedback on ways to improve operations and workplace conditions.

[Read more on page 27](#)

Company Operations

Maintaining a reliable energy source for Tanzania during global supply challenges

Introduction

It is reasonable to say that 2020, and in particular the first half of the year, was a challenging time for the Company in Tanzania. Extraordinarily heavy and protracted rains, normally seen in March and April, commenced before the year began and lasted until well into the middle of the year.

Gas production was affected dramatically as the nation quite rightly prioritized hydropower generation over gas fired generation, with average daily hydro generation reaching 379MW for the first five months, compared to only 297MW for the same period in 2019, the difference being the equivalent of around 16-20 MMcfd of gas production. The Tanzania Electric Supply Company managed their hydro resources very effectively, sustaining their surpluses through the year, resulting in an average daily hydropower generation for the year of 356MW, versus only 277MW for 2019.

The resultant impact on the Company was clear, although a sizeable portion of the reduced production was absorbed by reduced production of Protected Gas ("PG"), for which the Company does not receive revenues. PG production for the year averaged 33.4MMcfd, while in 2019 it averaged 40MMcfd. Nonetheless, production numbers were down for the year and were further exacerbated by the impact of COVID-19. Tanzania took a very strong stance towards the pandemic, and consequently, most businesses continued to operate, and the service industry, while impacted by global travel restrictions, remained open. Unfortunately, the contrary stance adopted by many of the world's nations meant international trade, imports and exports suffered in the country and the demand for services declined. This led to a further decline in industrial activity and subsequent gas demand. Ultimately, however, while gas production and sales for the year were not as strong as the previous year, the Company ended the year with sales returning close to anticipated levels.

COVID-19

The Company immediately recognized the potential impact any form of sustained virus could have on its workforce and subsequently on our ability to operate and produce gas. As such, we immediately established robust protective measures, particularly for staff working at the operational site on Songo Songo Island.

Initially, without testing facilities being readily available, the Company relied on rigidly enforced personal hygiene and protective measures, social distancing and compulsory quarantine for 14-days for anyone returning to work or visiting the island. All unessential travel to and from the island was stopped immediately and a new isolation camp was constructed to house anyone showing signs of COVID-19 while on the island.

The Company's staff, who face many weeks away from their families through the year, were asked to face two additional weeks in hotel-based quarantine during each of their six annual rotations. Each and every member of staff accepted the situation willingly, unselfishly recognizing the importance of the natural gas we produce in underpinning Tanzania's economy.

Clearly the measures undertaken made some projects more challenging and forced the Company to rethink its priorities. Several projects were deferred, including the workovers of three onshore wells, and all non-essential maintenance tasks were delayed whenever a consultant or service company was unwilling to travel or adhere to our defensive posture to combat COVID-19. Despite this, the Company ensured production remained on-stream throughout the year, uninterrupted for all except essential maintenance.

At the Company's headquarters in Dar es Salaam the Company took different but equally protective measures. Initially the Company moved to a 50:50 rotation of staff working from the office or working from home, to ensure essential support remained available to the operational site, while reducing the interaction of staff and the requirement for some staff to use public transport.



Eventually, however, having introduced additional IT enablers, the Company moved to a 100% working from home policy; where staff had to attend the office they were provided with sanitized Company transport to and from home if their only viable alternative was public transport systems. It is testament to the dedication of the staff that the company was able to continue its operations upstream and downstream, uninterrupted and without a single member of staff being identified with COVID-19, or any member of staff taking prolonged sick leave as a consequence of unidentified illness.

Our workforce

Case Study

Peter Sololo

Operations Manager

The Company in Tanzania sees very limited staff turnover, and generally staff only tend to leave the Company through succession planning.

This year, there were once again very few departures, although a landmark was achieved when the Company appointed its first ever Tanzanian Operations Manager. Taking over from a line of experienced expatriates, Peter Sololo quickly demonstrated that the Company had made the right decision in putting its faith in local talent. Peter joined the Company in 2012 as a field operator having graduated from the University of Dar es Salaam with a BSc in Chemical and Process Engineering.

He was soon talent spotted and promoted to trainee engineer supporting well services, before becoming the Company's well services engineer. Finally, before his promotion to Operations Manager, his talent, work ethic and capacity to manage complex projects saw him appointed to Projects Engineer providing on site and office-based oversight to all upstream operational tasks.

Peter becomes the latest Tanzanian manager within the Tanzanian Company, and sees the business complete its succession planning from a broad expatriate management organization to one that is, with the exception of the Managing Director, entirely found on Tanzanians. The majority of our Tanzanian managers have been trained and promoted from roles within the Company which demonstrates the Company's commitment to local content and developing Tanzanian talent.



In this Company I feel honored and appreciated from top management. It gives me the assurance that if you work hard and you are devoted to your work you will get the recognition that you deserve.

Peter Sololo

Operations Manager

Interns

2020 saw the Company adopt a formal internship program, offering up to five places per annum to carefully selected Tanzanians with particular potential and relevant talent and interest.

Of the four selected in 2020, the Company placed an environmentalist, a marketeer and two technical staff. Three of the four interns were female. Particular focus of the intern program was to ensure that not only did the interns gain direct and relevant experience of the only true upstream to downstream International Oil Company ("IOC") operating in Tanzania, but that they were able to add genuine value to the Company during their year with us.

The program is considered to be widely successful with very positive feedback from the interns, and all managers or mentors requesting extensions of the program; this will be examined in 2021 against the overall staff budget.

Company Operations continued

Our Workforce

Case Study

Rehema Shija

Compliance and Local Content Manager

Rehema was recruited into a brand new role within PanAfrican Energy Tanzania Limited (“PAET”) following the introduction of strict Local Content Regulations in the country, followed by increased regulation in the upstream and downstream sectors.

With a strong background in law, Rehema is responsible for remaining conversant with the breadth of new laws and regulations introduced and ensuring the Company remains compliant. Rehema was very much responsible for developing her role herself and she quickly became one of the key managers within the Company. Not only is she required to operate across every department in the Company, she must understand in detail their roles, risks, decisions and limitations.

Rehema also spends a great deal of time managing the many and varied reporting requirements of PURA and EWURA. The role she has filled and subsequently developed requires someone with exceptional communication skills, an eye for detail, patience and the ability to get people to meet tight deadlines that may not always correlate with their own priorities. The role of Compliance and Local Content Manager is relatively new, but one that the Company depends upon greatly.



I liaise with other departments on procedures, supporting management by advising what to do and when.

Rehema Shija

Compliance and Local Content Manager

Q&A with Rehema Shija

When did you join the Company

I joined the Company three years ago in December 2017.

Where did you work and what is your work experience before PAET?

Just before I joined PAET, I was employed by UN-ILO for a short period of time. Prior to this, I worked for an oil and gas exploration company for five years called PETROBRAS, this is where I developed my understanding and passion for compliance.

Why did you want to get into local content and compliance?

When I joined PETROBRAS, I was a junior legal officer with little work experience in this sector having come from the mining industry. I realized the legal framework within the oil and gas industry was relatively new and under developed. I found the compliance element of this job really interesting, no one knew at this stage what was to be done, and we built everything from scratch, local content was a new concept. At this point, I knew then that this was what I wanted to do.

What made you join PAET above any other company?

The role looked really interesting, everything PAET was looking for was what I felt that I could do, it was like PAET was looking for me. I didn't know a great deal about the Company then, other than a little bit of information about the Songo Songo project that I had heard over the news. When I saw the job advertised it really spoke to me. I interviewed and received an offer, unfortunately I was unable to join. Four months later, I found out the position was still vacant and here I am over three years later growing and thriving in the position.

What are the daily activities you get involved with?

My main activity involves report writing, ensuring I get and distribute the right information. As a compliance officer, the most important task is to get it right. I liaise with other departments on procedures, supporting management on advising what to do and when. I also attend daily operational meetings to make sure I understand all elements of what is being done, that way I can support the team more efficiently.

Do you feel you add value to the Company? If so, how?

I do. It is the knowledge that I bring to the table. I advise management, and they make the decisions, it really adds great value to me, my role and the Company. When I joined the Company three years ago, local compliance was a foreign concept. Everyone within the Company now understands the significance of it. We discuss the principles of compliance and the importance of procedures and having the correct documentation on a daily basis.

What do you enjoy most about your role?

I enjoy my role and feel supported within it. When I first joined, a number of my colleagues didn't always understand the need for the role which meant it could be a challenge to get the necessary information. However, after a short period of time this changed significantly and my colleagues, even during the planning stage of whatever project they are undertaking consider local content, they offer information and ask for advice. When it comes to reporting, it's far easier because I have the correct information. This has made my role enjoyable, I must say. I also enjoy opportunities that the Company opens up for growth. I don't remember a time I have asked to attend a course or seminar for my personal growth and been denied. The training, workshops and seminars really give me as a professional a chance for growth.

How do you as a female leader feel you are seen within the Company?

I feel that I get support and respect within the Company, this is particularly apparent from other managers. At times, some junior members of the team may not quite understand my role and the importance of the information they hold and which I need. That is improving and it is part of my job to ensure they do understand this. I also feel valued as I take part in all key management meetings, I am listened to, contribute and very much feel part of the team. It feels rewarding in that respect, particularly when I influence discussions and decision.

What other life matters compete for your time and how do you manage that?

Mainly family, like many other women at my age young families and small children can be a challenge when working full time. However, PAET has always been a supportive and flexible employer which has enabled me to have the work life balance needed to support both areas. I don't remember a single time when I've needed to take time off and couldn't.

Where do you see yourself in 5-years time?

I want to become someone with vast expertise in local content and compliance in the oil and gas sector. When someone is talking about local content and compliance, my name should come up. I would eventually like to have a more senior role within the organization, if that opportunity arises. I have worked with amazing managers and directors and certainly a lot of what I have learned I would like to take to a senior role.

Company Operations continued

Upstream operations

Through the year the Company has undertaken a range of projects to sustain and where possible increase production potential from the existing producing well stock.

Despite inevitable delays in their execution due to reduced shipping options or availability of technical experts, the team completed the decoupling of SS-10 and SS-11 wells from SS-4 and SS-3 wells respectively. The wells shared a 4" flowline, tied into the Songas processing plant on SSI, reducing their combined production potential. Following some internal modeling, a decision was taken in 2019 to decouple the wells and install dedicated 6" flowlines to SS-10 and SS-11, directly to the Songas plant. The project was all but completed by the middle of the year, but the final tie-in to the plant required a total plant shutdown. A decision was taken therefore to complete the works alongside planned works to replace an Emergency Shut Down valve on the plant, which was completed in Q1 2021, unlocking a further 10 MMcfd in production potential subject to reservoir pressure decline.

Recognizing the increasing likelihood that major new demand is likely to come via the state owned NNGI, the Company also tied in SS-10 well to the NNGI plant adjacent to the Songas plant on SSI. This completed plans to tie-in three wells (SS-11, SS-12 and now SS-10) to the plant, with production potential of around 120 MMcfd, but equally importantly allowing two of the three wells (SS-10 and SS-11) to flow to both plants simultaneously. Subject to ongoing approvals from the Tanzania Petroleum Development Corporation (TPDC), the project has provided the Company with significant redundancy in processing capacity, and enhanced flexibility in delivery to end users. The project as a whole has made gas delivery and sustainability of power generation in Tanzania considerably more robust.

2020 also saw the Company complete the delayed testing and acceptance of the refrigeration project installed in the Songas processing facility. COVID-19 and the delivery of a replacement motor delayed the process until September of the year. However, the system was operational prior to this and has been fundamental in sustaining gas production throughout. When performance testing was finally conducted, the system met performance criteria.



Gas engines ready for assembly in China.

The delay to the acceptance testing of the refrigeration project saw it overlap phase two (Compression) of the overall project to sustain gas production as reservoir pressures decline with production. Having selected and been approved to employ the China Petroleum Technology Development Corporation ("CPTDC") in 2019, the first half of the year saw them undertake Basis of Design ("BOD") and Front End Engineering Design ("FEED") verification work, for which, alongside the commencement of Detailed Engineering, the Company entered a Letter of Intent (LOI) with CPTDC and paid an advance of \$5.7 million.

There followed several months of challenging negotiations, conducted entirely remotely, across three different languages and eight time zones, to establish a lump sum turnkey agreement for a total of \$38 million, including the advanced payment under the LOI. Following BOD and FEED verification, a gas-engine driven reciprocating compressor package was considered most suitable for the operating conditions and requirements on SSI. By the end of the year CPTDC had largely completed detailed engineering and fabrication or assembly of some machinery in China. They also commenced mobilization of personnel and assets to SSI. The project is expected to be completed by the end of Q2-2022 subject to further complications

from the global pandemic.

Despite the global pandemic, the Company was also able to successfully complete annual calliper logging of the SS-10 well, alongside gauge pulling from all producing wells. As expected, the calliper logging indicated further corrosion in the SS-10 well necessitating its firm workover in 2021. The works also indicated further change in reservoir pressure leading to expansion of sub-surface studies as discussed elsewhere in this report.

Following the completion of the aforementioned studies towards the end of the year, the Company was able to develop its planning for the rehabilitation of the three onshore wells (SS-10, SS-3 and SS-4), with a view to conducting the work in 2021. The Company has received all necessary approvals for the recompletion of SS-10 which we intend to carry out in Q3-2021 and are in discussions with our partners for the further recompletion of SS-3 and the side-track of SS-4. Should the Company receive such approvals we expect to conduct those works contiguously with SS-10.

Case Study

Tanzania Breweries Limited

Tanzania Breweries Limited ("TBL") is the oldest and largest company engaged in the production, distribution and sale of malt beer, non-alcoholic malt beverages and alcoholic fruit beverages in Tanzania.

The Company manufactures locally revered brands such as Kilimanjaro lager, Castle Light, Ndovu, and Safari beer and water. Its products are generally contained in the bottles produced by one of PAET's other and oldest customers, indicative of the impact the Company's operations have across Tanzanian industry.

TBL switched to natural gas in September 2004. They use natural gas for steam generation from their boilers. From September 2004, TBL has enjoyed consistent production, with its produce in very high demand across the country. One of TBL's energy and fluids utilities specialists stated,

"We are running with 98% natural gas and 2% Biogas generated from Anaerobic Process during wastewater treatment."

Before switching to natural gas, TBL's source of energy for Boiler firing was Heavy Fuel Oil ("HFO"). They still use it today, but only in the rarest of emergency situations. The utilities specialist was quoted as saying,

"HFO is used only in absence of natural gas which is not happening frequently. For the past three years we have only experienced one natural gas unplanned shutdown. This was due to a pipe leaking at Buguruni following damage by a construction company."

He went on to say,

"Natural gas is very reliable to us, environmentally friendly and it is burning with less damage to the environment. Also, we are using less natural gas compared to HFO as gas burns at a much higher temperature."

Looking to the future, he talked of plans to extend their use of gas, saying,

"We intend to extend natural gas usage to our canteen area which is currently being served by LPG. We will switch to natural gas as it is cheaper and delivered more reliably."



Receiving a reliable supply of natural gas, that is produced in an environmentally sustainable manner is very important to us.

Prima Peter
Utilities Manager
Tanzania Breweries Limited

Company Operations continued

Downstream Operations

The Company also remained very active in progressing downstream operations through the year, including the connection of new customers, replacement of cathodic protection and a significant amount of pipeline/ring main relocation to make way for ongoing national strategic projects such as the Standard Gauge Railway and Rapid Bus Transportation system. Work was conducted alongside some significant adjustments to meet new regulations, including the establishment of a Customer Services Charter, decommissioning planning and distribution development plans, required by the Regulator.

Production

As previously stated, production through 2020 was significantly impacted by high hydropower generation and the onset of COVID-19 limiting industrial activity and power demand in the country. Graph 1 shows the impact of the protracted rains experienced in the first half of the year, that allowed TANESCO to sustain high hydro production throughout the year, compared to hydropower production through 2019. Graph 2 shows the concomitant impact on Songo Songo gas fired power production through the same period, while Graph 3 shows the combined relative production where it can be seen that in 2020 hydropower generation was dominant from the beginning of the year until August.

Understandably, COVID-19 invoked considerable uncertainty in the business community in Dar es Salaam and wider Tanzania, which led to delay or cancellation of a range of expansion projects amongst our existing industrial customers, and hesitation amongst some new customers the Company had hoped to contract with in 2020. As a consequence, industrial sales largely stagnated through the year. The graph below, which includes sales to the Tanzania Portland Cement Company at Wazo Hill, shows that despite the nervousness, and despite a significant dip in February when COVID-19 was new and the impact unknown, the nation's decision to remain open for business led to improved sales in the first half of 2020 over 2019. Unfortunately, the final quarter of the year saw something of a downturn in demand which resulted in a year on year drop in industrial gas consumption of 0.06 MMcfd in 2020.

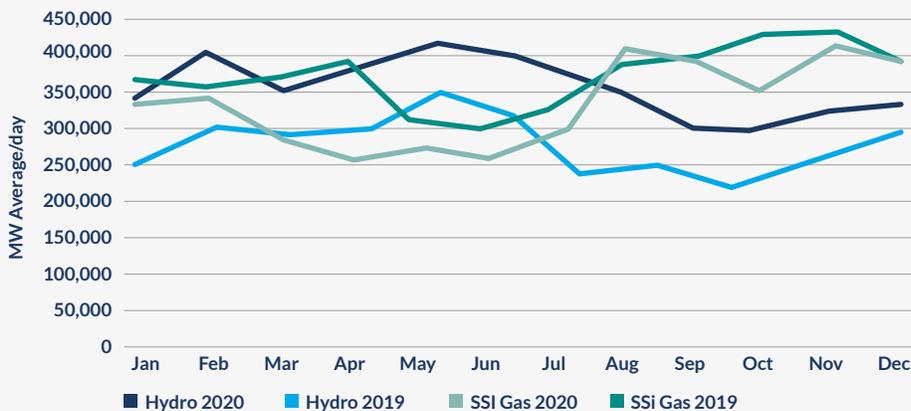
Graph 1: Relative hydropower production 2019/20



Graph 2: Relative gas fired power generation 2019/20



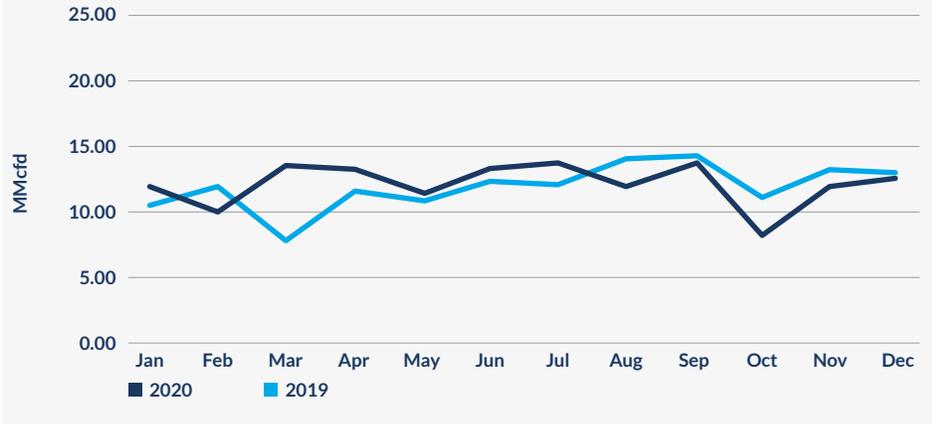
Graph 3: Relative hydro/SSI gas fired production 2019/20





Running HDPE through inspection chamber.

Industrial Sales 2019/20



Despite the lack of growth in sales in 2020, the Company continued to negotiate a range of new contracts with various potential customers while supporting our existing customers promptly and professionally whenever required.

In 2020, recognizing gas demand was unlikely to increase in the way the Company had anticipated, the Company proposed a temporary change in the terms of the Long-term Gas Sales Agreement ("LTGSA") signed with TPDC, allowing TPDC flexibility in the maximum daily quantities ("MDQ") they can consume under the agreement, whilst suspending penalties applied under the agreement's Take or Pay provisions should the demand decline. This arrangement, subject to review after 12-months, saw TPDC start to utilize gas from Songo Songo during periods of peak demand or shortfall from other suppliers. It allowed monthly average sales to increase and saw gas production through the NNGI temporarily peak at over 50 MMcf/d in November.

Summary

Overall, in the context of the global health pandemic and the unprecedented rainfalls in Tanzania in 2020, the Company considers the year to have been successful. The firm stance taken by the nation towards COVID-19 undoubtedly allowed businesses to continue operating when many other nations did not.

This, alongside an effective protective posture adopted by the Company to ensure operations could continue unaffected, resulted in only limited decline in overall gas sales, some of which was absorbed by the decline in PG production.

In delivering success in 2020, the Company continued to work closely with its partners and other government agencies, achieving unprecedented levels of cooperation to maximize infrastructure availability and build genuine redundancy into the nation's gas deliverability.

The Company was also been able to progress a number of strategically critical projects and plans and has used the year to conduct a thorough review of the Songo Songo gas reservoir to further inform future plans.

The dedication and professionalism shown by the Company's staff, particularly at its operational sites in Tanzania has been remarkable and demonstrated the importance of the value we continue to place in our team.

Gas Reserves

Reserves

Songo Songo Conventional Natural Gas Reserves (Bcf)	2020		2019	
	Gross ¹	Net ²	Gross	Net
Independent reserves evaluation				
Proved producing	202.6	124.7	234.4	144.5
Proved developed non-producing	-	-	-	-
Proved undeveloped	-	-	-	-
Total proved (1P)	202.6	124.7	234.4	144.5
Probable	26.9	16.8	30.9	17.3
Total proved and probable (2P)	229.5	141.5	265.3	161.8

¹ Gross equals the gross reserves that are available for the Company based on its effective ownership interest.

² Net equals the economic allocation of the gross reserves to the Company as determined in accordance with the PSA.

Company share of Net Present Value (\$'millions)	2020			2019		
	5%	10%	15%	5%	10%	15%
Proved producing	252.4	216.4	187.7	282.0	237.1	202.3
Proved developed non-producing	-	-	-	-	-	-
Proved undeveloped	-	-	-	-	-	-
Total proved (1P)	252.4	216.4	187.7	282.0	237.1	202.3
Probable	30.5	24.9	20.6	53.9	45.5	38.9
Total proved and probable (2P)	282.9	241.3	208.3	335.9	282.6	241.2

2020 Independent Evaluation

The Company's natural gas reserves as at December 31, 2020 for the period to the end of its license in October 2026 were evaluated by McDaniel & Associates Consultants Ltd. ("McDaniel") independent petroleum engineering consultants in accordance with the definitions, standards and procedures contained in the Canadian Oil and Gas Evaluation Handbook and National Instrument 51-101 – Standards of Disclosure for Oil and Gas Activities ("NI 51-101"). The independent reserves evaluation prepared by McDaniel (the "McDaniel Report") is dated February 23, 2021 with the effective date of December 31, 2020. A Reserves Committee of the Board of Directors reviews the qualifications and appointment of the independent reserves evaluator and reviews the procedures for providing information to the evaluators.

Reserves included herein are stated on a Company gross basis (92.07%) unless noted otherwise. All the Company's reserves are conventional natural gas reserves and are located in Tanzania. Additional reserves information required under NI 51-101 are included in Orca's reports relating to reserves data and other oil and gas information under NI 51-101, which have been filed on its profile on SEDAR at www.sedar.com.

On a gross Company basis there has been a 14% decrease in Songo Songo's 1P reserves, and a 13% decrease in the 2P reserves compared to 2019. Total Gas production in 2020 was 19.44 Bcf and taking this into account results in a 5% decrease in 1P reserves and a 6% decrease in 2P reserves.

There has been a 15% decrease in the 2P present value at a 10% discount basis from \$282.6 million to \$241.3 million. This represents an effective decrease of 6% after taking the 2020 results into consideration. The decrease is predominately a consequence of lower 2P reserves to the end of the license.

Background to the 2020 year end reserves evaluation

The Company initiated a comprehensive review of the Songo Songo subsurface field mapping, reservoir simulation modeling and well performance in 2020 to better understand the remaining potential of the Songo Songo (SS) field to the end of the license (October 2026) and assess the remaining resource potential beyond October 2026. The 2020 studies included a detailed review of the seismic database and a subsequent remapping of the SS field utilizing third party consultants to develop a new static subsurface model. The new (2020) static model was imported into the reservoir simulation (dynamic) environment, and parameterization investigated to obtain a model history match against observed well performance (production and pressure). The 2020 updated static and preliminary dynamic (simulation) modeling results were provided to McDaniel as part of the normal year end reserve process.

Key findings of the 2020 subsurface review:

- A reduction of mapped original gas initially in place (OGIP) in the greater Songo Songo field area, primarily in the northern area of the Songo Songo field. The mapped reduction in Songo Songo OGIP did not materially impact the core producing portion of the field or the remaining reserves to the end of the current license in October 2026.
- As the field matures, having produced ~ 450 Bcf to year end 2020, well performance and pressure analysis supports the emergence of compartments within the SS main field which will require additional study and increased future capital, prior to and beyond October 2026 to optimally develop the field. To date, three compartments (SS Core, SS South and SS East) in the main field have been identified from the current well set and the associated pressure data obtained in 2020. Currently, the three wells in the south and east compartments are all shut in pending well work over programs.

Forecast Gas Prices and Sales Volumes¹

	1P Gas Price \$/mcf	1P Gross Gas Volumes MMcfd	2P Gas Price \$/mcf	2P Gross Gas Volumes MMcfd
2021	4.10	70.9	4.09	75.3
2022	4.16	83.5	4.24	86.4
2023	4.25	86.9	4.25	101.4
2024	4.18	115.1	4.21	135.3
2025	4.20	138.5	4.26	159.9
2026	4.29	138.7	4.35	160.1

¹ McDaniel Report.

- The Company is currently planning a 2021 onshore multi-well workover program to replace a tubing string in SS-11 (SS Core) and, subject to certain approvals, will include the reactivation of the currently shut-in wells (SS-3 and SS-4) in the eastern compartment. The south compartment would require an offshore rig to remediate and restore production from the currently shut in SS-7 well. Reactivation of SS-7 will be evaluated for potential inclusion in any future offshore well activity to optimize mobilization and shared services costs.

Future Plans

With the results of subsurface work conducted during 2020, and subsequent reduction in mapped OGIP for the SS north area of the field, the Company has engaged McDaniel to update the 2019 Resource Assessment report for the Songo Songo PSA, to evaluate the future development potential of the Songo Songo license area prior to and beyond October 2026. Concurrently, the Company will progress dynamic modeling in concert with additional technical review and assessment of the emerging multi-tank (compartments) model for the Songo Songo field, to prepare and evaluate future development scenarios to support the optimum development of additional natural gas resources to meet Tanzania's anticipated future demand growth.



Our Workforce

Experienced, diverse and qualified to ensure the delivery of quality results



Jay Lyons

Executive Director
Interim Chief Executive Officer

Appointed 2019
Location Canada

Experience

Jay Lyons joined the Company in May 2019 as a Non-Executive Director and took on the role of Interim Chief Executive Officer in 2020. Jay Lyons is a private investor with considerable experience in the oil and gas industries in both Canada and the United States. He has worked in a range of roles for both private and public companies in the upstream and downstream sectors. Jay Lyons has a strong familiarity and understanding of the Songo Songo project and the Tanzanian operating environment.



Blaine E. Karst

Chief Financial Officer

Appointed 2015
Location Canada

Experience

Blaine Karst has over 30 years experience in senior financial management roles. He is a former Chief Financial Officer for Vostok Energy Plc, a private UK based group with oil and gas operations in Russia. Prior to that he was the in-country Finance Director in Vietnam and Russia for Soco International Plc, a London Stock Exchange listed international oil and gas exploration and production company. Blaine Karst has a B. Comm. from the University of Saskatchewan and is a Canadian Chartered Professional Accountant, Chartered Accountant.



Andrew Hanna MBE

Managing Director
PanAfrican Energy Tanzania Limited (PAET)

Appointed 2012
Location Tanzania

Experience

Andrew Hanna has worked with Orca and PAET in various management roles for the past nine years, being appointed Managing Director of PAET in 2019. He joined Orca following a career spanning four decades in the public sector where he led engineering, logistics and security projects around the world. Since joining Orca, he has played an integral role in the development and delivery of strategic and operational plans for PAET, while taking a lead role in the management of complex senior stakeholder issues in Tanzania. Andrew Hanna has a strong background in electronic and civil engineering and has a Master's Degree in Military Science from Cranfield University. He is a Fellow of the Chartered Management Institute and a Member of the Institute of Royal Engineers.

Andrew Hanna is pursuing a Masters in Business Administration, specializing in Oil and Gas Management, through Robert Gordon University, Aberdeen.



Lloyd Herrick

**Advisor to the Board
and Management**

Appointed 2020
Location Canada

Experience

Lloyd Herrick brings over 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. Prior to TransGlobe, he served as President, Chief Executive Officer and member of the board of Moibus Resource Corporation, which was acquired by TransGlobe. Earlier in his career, Lloyd Herrick 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 & Gas Ltd.

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.

Proud to have an in-country workforce made up of 99% local Tanzanian staff

We remain firmly focused that our workforce and leadership teams reflect the community and culture where we operate. We are proud of the recent progress that we have made to diversify our workforce, having successfully adapted the Company from a broad expatriate management organization to one that is, largely founded on Tanzanians. Our operational workforce is currently made up of 99% local staff, this reflects a steady increase year on year.

The Company's aim is to provide our employees with long term and rewarding careers. We invest heavily in the training and wellbeing of our employees, encouraging them in their personal career development which is reflected by our skilled and dedicated workforce.

Tanzanian Management Team



Bizimana Ntuyabaliwe
Deputy Managing Director



Mwinshehe Said
Finance Director



Onestus Mujemula
HSE Manager
Operations SH Engineer



Stella Ndossi
Logistics Manager



Rehema Shija
Local Content
Compliance Manager



Gasper Mkomba
HR/Office Manager



Peter Sololo
Operations Manager



Andrew Kashangaki
CSR/ESG Manager



Sabas Oisso
Downstream Operations
Engineer



Ritha Mohele
Legal and Document
Control Manager



John Samwel
Downstream Stakeholder
Relations Manager

Board of Directors

An international team leading through diligent management



David W. Ross

Chairman
Non-Executive Director

Appointed 2004
Location Canada

Experience
David Ross has extensive experience in international tax law and is a partner in the Calgary-based law firm of Burnet Duckworth & Palmer LLP. He has served as Secretary to the Board since the Company was formed in 2004.

Committee Membership

A RC R



Jay Lyons

Executive Director
Interim Chief Executive Officer

Appointed 2019
Location Canada

Experience
Jay Lyons is a private investor with considerable experience in the oil and gas industries of Canada and the United States. He has worked in a range of roles for both private and public companies in the upstream and downstream sectors.

Committee Membership

R E



Dr Frannie Léautier

Non-Executive Director
Chair of ESG Committee

Appointed 2019
Location United States

Experience
Dr Léautier is a globally respected development expert and has extensive African and global experience in the public and private sectors. Dr Léautier is a Senior Partner at SouthBridge Group, she is also the Founder and Managing Partner of the Fezembat Group and was previously Senior Vice President of the African Development Bank, where she led efforts to improve the bank's overall operational effectiveness. Other roles include: Chief Operating Officer for the Trade and Development Bank based in Nairobi, Infrastructure Director, World Bank, Vice President and Head of the World Bank Institute.

Dr Léautier holds a PhD in Infrastructure Systems and a Masters in Transportation from the Massachusetts Institute of Technology.

Committee Membership

A E



Linda Beal

Non-Executive Director
Chair of Audit Committee

Appointed 2019
Location United Kingdom

Experience
Linda Beal was a tax partner with PricewaterhouseCoopers in the UK for 16 years and then with Grant Thornton UK LLP. Linda has significant experience of advising natural resources groups operating in Africa and internationally.

Committee Membership

A RC

Committee membership key

- A** Audit and Risk Committee
- E** ESG Committee
- RC** Remuneration/ Compensation Committee
- R** Reserves Committee

How we manage our Company



Board diversity



■ Male
■ Female

Experience

- Oil & Gas
- Finance
- Developing Economies
- Engineering
- Infrastructure
- Management
- Mergers & Acquisitions
- Project Finance

Locations



Forward Looking Information Statement

This annual report contains forward-looking statements or information (collectively, 'forward looking statements') within the meaning of applicable securities legislation.

More particularly, this annual report contains, without limitation forward looking statements pertaining to: the Company's beliefs regarding its position for growth; statements regarding the adoption of a dividend policy; statements regarding the Company's access to infrastructure and infrastructure constraints; the Company's expectations regarding timing for the completion of installation of compression on the Songas infrastructure; the expected expenditures required to complete the installation of the compression on the Songas infrastructure; increased production potential as a result of the installation of compression on the Songas infrastructure; the expected increase in demand for gas; the Company's belief that it is positioned to meet increases in demand; the role of natural gas in achieving Tanzania's goal of a low carbon economy; the impact of the COVID-19 pandemic on the demand for and price of natural gas, volatility in the financial markets, disruptions to global supply chains and the Company's business, operations, access to customers and suppliers, availability of employees to carry out day-to-day operations and other resources; the ongoing dialogue with the Government of Tanzania with respect to extending the Company's license; the Company's beliefs regarding its position to overcome current macro-economic challenges; the Company's plans to rehabilitate the SS-10, SS-6 and SS-4 wells; the Company's ability to enter into gas sales agreements with new industrial customers; Tanzania's growth plans; CNG's ability to displace the use of petrol and diesel and the success of the treatment centre of increasing the survival rate of children with cancer in Tanzania. In addition, statements relating to "reserves" are by their nature forward-looking statements, as they involve the implied assessment, based on certain estimates and assumptions that the reserves described can be profitably produced in the future. The recovery and reserve estimates of the Company's reserves provided therein 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, 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. Additionally, 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. Please see the disclosure under the headings "Business Risks" and "Forward Looking Statements" in the Company's Management's Discussion and Analysis ("MD&A") for the year ended December 31, 2020 filed on www.sedar.com and contained in the Company's annual report for a discussion of such risks, uncertainties, and assumptions. The forward-looking statements contained in this annual report are made as of the date hereof and the Company undertakes no obligation to update publicly or revise any forward-looking statements or information, whether as a result of new information, future events or otherwise, unless so required by applicable securities laws.

Oil and Gas Advisory

The Company's conventional natural gas reserves as at December 31, 2020 and December 31, 2019, disclosed herein were evaluated by McDaniel in accordance with the definitions, standards and procedures contained in the Canadian Oil and Gas Evaluation Handbook and NI 51-101 – Standards of Disclosure for Oil and Gas Activities. The independent reserves evaluations prepared by McDaniel had an effective date of December 31, 2020 and December 31, 2019 and preparation date of February 23, 2021 and February 20, 2020 respectively. The recovery and reserves 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. "BOEs" may be misleading, particularly if used in isolation. A BOE conversion ratio of six thousand cubic feet of natural gas to one barrel of oil equivalent (6Mcf: 1 Bbl) is based on an energy equivalency conversion method primarily applicable at the burner tip and does not represent a value equivalency at the wellhead. As the value ratio between natural gas and crude oil based on the current prices of natural gas and crude oil is significantly different from the energy equivalency of 6:1, utilizing a conversion on a 6:1 basis may be misleading as an indication of value. 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 represent the fair market value of those reserves. Such amounts do not represent the fair market value of the Company's reserves.

Non-GAAP Measures

Throughout this Annual Report we use the term "adjusted funds flow from operations", which represents net cash flows from operating activities less interest expense and before changes in non-cash working capital. This is a performance measure that management believes represents the company's ability to generate sufficient cash flow to fund capital expenditures and/or service debt. "Adjusted funds flow from operations" has been calculated by management and does not have a standardized prescribed meaning under generally accepted accounting principles in Canada and may not be comparable with the calculation of similar measurements by other entities. Please see the disclosure under the heading "Non-GAAP Measures" in the Company's MD&A for the year ended December 31, 2020 filed on www.sedar.com and contained in the Company's annual report for a discussion of such non-GAAP measures.



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Management's Discussion & Analysis

THIS MANAGEMENT'S DISCUSSION AND ANALYSIS ("MD&A") OF OUR FINANCIAL CONDITION AND RESULTS OF OPERATIONS SHOULD BE READ IN CONJUNCTION WITH THE AUDITED CONSOLIDATED FINANCIAL STATEMENTS AND NOTES FOR THE YEAR ENDED DECEMBER 31, 2020. THIS MD&A IS BASED ON THE INFORMATION AVAILABLE ON APRIL 21, 2021. ALL AMOUNTS ARE REPORTED IN US DOLLARS ("\$\$") UNLESS OTHERWISE NOTED.

THIS MD&A CONTAINS NON-GAAP MEASURES AND FORWARD-LOOKING INFORMATION. READERS ARE CAUTIONED THAT THIS MD&A SHOULD BE READ IN CONJUNCTION WITH THE DISCLOSURE BELOW UNDER THE HEADINGS "NON-GAAP MEASURES", "FORWARD-LOOKING STATEMENTS" AND "GLOSSARY" INCLUDED AT THE END OF THIS MD&A.

Nature of Operations

The principal asset of Orca Energy Group Inc. ("Orca" or the "Company") is its interest in the Production Sharing Agreement ("PSA") with the Tanzanian Production Development Corporation ("TPDC") and the Government of Tanzania ("GoT") in the United Republic of Tanzania. This PSA covers the production and marketing of natural gas from the Songo Songo license offshore Tanzania. The PSA defines the gas produced from the Songo Songo gas field as "Protected Gas" and "Additional Gas". The Protected Gas is owned by TPDC and is sold under a 20-year gas agreement (until July 31, 2024) to Songas Limited ("Songas"). Songas is the owner of the infrastructure that enables the gas to be treated and delivered to Dar es Salaam, which includes a gas processing plant on Songo Songo Island (collectively, the "Songas Infrastructure").

Songas utilizes the Protected Gas as fuel for its gas turbine electricity generators and for onward sale to customers. The Company receives no revenue for the Protected Gas delivered to Songas and operates the original wells and gas processing plant on a 'no gain no loss' basis. Under the PSA, the Company has the right to produce and market all gas in the Songo Songo gas field in excess of the Protected Gas requirements set forth in the PSA ("Additional Gas") until the PSA expires in October 2026.

The Tanzanian Electric Supply Company Limited ("TANESCO") is a parastatal organization wholly owned by the GoT with oversight by the Ministry for Energy ("MoE"). TANESCO is responsible for the majority of electricity generation, transmission and distribution throughout Tanzania. Natural gas has become an integral component of TANESCO's power generation fuel mix as a more reliable source of supply over seasonal hydropower and a more cost-effective alternative to liquid fuels. The Company currently supplies Additional Gas directly to TANESCO by way of the Portfolio Gas Supply Agreement ("PGSA") between the Company, TANESCO and TPDC and indirectly through the supply of Protected Gas and Additional Gas to Songas, which in turn generates and sells power to TANESCO. Subject to meteorological conditions and increased use of hydropower generation, the gas the Company currently supplies to Songas and TANESCO via the Songas Infrastructure and the National Natural Gas Infrastructure ("NNGI"), generates approximately 40% of the electrical power and approximately 66% of the gas utilized for power generation in Tanzania.

In 2019 the Company entered into a long-term gas sales agreement ("LTGSA") with TPDC to supply up to 30 million standard cubic feet per day ("MMcfd") of gas through the NNGI. Prior to signing the LTGSA the processing and distribution of natural gas volumes had been restricted by infrastructure limitations at the Songas Infrastructure.

In addition to supplying gas to TPDC, Songas and TANESCO, the Company has developed 49 contracts to supply gas to Dar es Salaam's industrial market.

Outlook - COVID-19

In the year ended December 31, 2020 global oil prices declined significantly as a result of reduced demand driven by the ongoing coronavirus pandemic ("COVID-19") and concerns of excess supply resulting from failed negotiations between OPEC and other countries. As of now, there remains a considerable uncertainty regarding the duration and extent of oil demand destruction as a result of COVID-19. Although the Company's production and reserves are entirely comprised of gas, the current challenging economic climate has the potential to have significant adverse impacts on the Company, including, but not limited to:

- potential material declines in revenue and cash flows due to reduced commodity prices,
- potential declines in future revenue, which could result in increased impairment charges on long-term assets,
- potential increased risk of non-performance by the Company's customers which could materially increase collection risk of accounts receivable and customer defaults on contracts,
- potential increased risk of non-performance by the Company's suppliers impacting timing for delivery of equipment and supplies delaying implementation of key projects,
- potential prolonged demand reduction which could negatively impact the Company's ability to maintain liquidity, and
- potential impact on overall operating results and financial position.

There has been a decrease in industrial sales but no significant impact on the Company's operations to date due to COVID-19 however the current situation is dynamic and the ultimate duration and magnitude of the impact on the economy and the financial effect on the Company are not known at this time. The Company has taken precautions including testing for COVID-19 before allowing workers on site and limiting the number of people in the office at any one time and allowing employees to work from home.

Estimates and judgments made by management in the preparation of these consolidated financial statements are subject to a higher degree of measurement uncertainty during this volatile period. The current volatility in commodity prices and uncertainty regarding the timing for recovery creates inherent challenges with the preparation of financial forecasts (see "Business Risks").

Financial and Operating Highlights for the Three Months and Year Ended December 31, 2020

(Expressed in \$'000 unless indicated otherwise)	Three Months ended December 31		% Change Q4/20 vs Q4/19	Year ended December 31		% Change Ytd/20 vs Ytd/19
	2020	2019		2020	2019	
OPERATING						
Daily average gas delivered and sold (MMcfd)	62.8	70.8	(11)%	57.7	63.1	(9)%
Industrial	12.4	13.1	(5)%	12.7	13.3	(5)%
Power	50.4	57.7	(13)%	45.0	49.8	(10)%
Average price (\$/mcf)						
Industrial	7.56	7.77	(3)%	7.44	7.97	(7)%
Power	3.52	3.44	2%	3.47	3.43	1%
Weighted average	4.32	4.24	2%	4.34	4.38	(1)%
Operating netback (\$/mcf)¹	3.22	2.73	18%	2.85	2.63	8%
FINANCIAL						
Revenue	21,980	23,212	(5)%	77,874	85,595	(9)%
Net income attributable to shareholders	7,375	12,642	(42)%	27,761	24,718	12%
per share – basic and diluted (\$)	0.28	0.37	(24)%	1.00	0.71	41%
Net cash flows from operating activities	19,369	5,051	283%	46,505	34,873	33%
per share – basic and diluted (\$)	0.74	0.15	393%	1.67	1.00	67%
Adjusted funds flow from operations¹	12,348	13,479	(8)%	39,144	43,213	(9)%
per share – basic and diluted (\$)	0.47	0.39	21%	1.41	1.24	14%
Capital expenditures	16,315	1,014	1,509%	27,141	4,171	551%
Weighted average Class A and Class B shares ('000)	26,138	34,324	(24)%	27,818	34,931	(20)%
				December 31, 2020	As at December 31, 2019	% Change
Working capital (including cash)				74,236	106,972	(31)%
Cash and cash equivalents				104,190	93,899	11%
Investments in short-term bonds				–	44,756	(100)%
Long-term loan				54,246	54,057	0%
Outstanding shares ('000)						
Class A				1,750	1,750	0%
Class B				24,388	32,557	(25)%
Total shares outstanding				26,138	34,307	(24)%
RESERVES²						
Gross Reserves (Bcf)						
Proved				203	234	(13)%
Probable				27	31	(13)%
Proved plus probable				230	265	(13)%
Net Present Value, discounted at 10% (\$ million)³						
Proved				216	237	(9)%
Proved plus probable				241	283	(15)%

¹ Please refer to Non-GAAP measures section of the MD&A for additional information.

² Please refer to Oil and Gas Advisory section of the MD&A for additional information.

³ In accordance with the PSA with the TPDC and the GoT in the United Republic of Tanzania, the Company is able to recover income tax and consequently there is no significant difference between the NPV of reserves on a before and after tax basis. Any capitalized terms otherwise not defined within the Financial and Operating Highlights are defined in the MD&A.

Management's Discussion & Analysis continued

Financial and Operating Highlights for 2020 and Q4 2020

- On August 3, 2020 the Company signed a \$38 million contract for installation of compression on the Songas gas processing facility which is part of the Songas Infrastructure ("Compression Contract"). To date \$24.7 million has been spent. Compression is currently planned for installation prior to the end of Q2 2022 and will allow maximum production volumes of approximately 102 MMcfd to be sustained through the Songas Infrastructure, with the possibility to expand well deliverability to 172 MMcfd by also increasing the amount of gas currently being delivered through the NNGI. The forecasted expenditures under this contract are \$9.5 million in 2021, upon delivery and inspection of the equipment, and a further \$3.8 million in 2022 following completion of installation and testing.
- During 2020 the Company announced its intention to focus on maximizing value and shareholder returns through the optimization and monetization of the Company's rights to develop the Songo Songo gas field in Tanzania and to suspend efforts to acquire and develop an integrated gas business in other African countries. In November 2020 the Board of Directors approved a Dividend and Distribution Policy targeting regular quarterly dividends to align with our core strategy of providing meaningful returns to our shareholders while focusing on expanding our gas business to participate in the growth of the Tanzanian domestic gas markets.
- Revenue decreased by 5% for Q4 2020 and by 9% for the year compared to the same prior year periods. The decreases are primarily a result of decreased sales to TANESCO under the PGSA and a smaller current income tax adjustment due to increased capital expenditure and lower gross field revenue. Gas deliveries decreased by 11% for Q4 2020 and by 9% for the year compared to the same prior year periods. The decrease in revenue and gas delivery volumes for the year were primarily due to the increase in hydropower generated during the first eight months of the year as a result of higher than normal rainfall in 2020 compared to the prior year. The decrease in gas volumes in Q4 2020 is primarily the result of lower nominations of gas volumes by TANESCO and TPDC through the NNGI compared to Q4 2019 as volumes delivered in Q4 2019 were the highest for any single quarter since production started in 2004. The decrease in volumes for Q4 2020 was partially offset by a 2% increase in the weighted average price of gas sold compared to Q4 2019.
- Net income attributable to shareholders decreased 42% for Q4 2020 and increased by 12% for the year compared to the same prior year periods. The decrease for Q4 2020 was primarily a consequence of the decrease in revenue and a decrease in the reversal of loss allowances related to the lower collection of arrears from TANESCO compared to Q4 2019. The increase in net income attributable to shareholders for the year was primarily the result of the increase in the reversal of loss allowances of \$8.2 million mainly due to increased collection of TANESCO arrears during the first nine months of 2020 and was also positively impacted by savings in general and administrative expenses and stock based compensation. The increase for the year was partially offset by the impairment of receivable as a result of the Tanzania Revenue Authority ("TRA") issuing an Agency Notice during the year obligating the Company's bank to release \$5.3 million in favor of the TRA.
- Net cash flows from operating activities increased 283% for Q4 2020 and by 33% for the year compared to the same prior year periods. The increases are primarily a result of the collection of TANESCO arrears and changes in non-cash operating working capital associated with decreases in prepayments and in trade and other receivables.
- Adjusted funds flow from operations decreased by 8% for Q4 2020 and by 9% for the year compared to the same prior year periods. The decreases are primarily a result of the decreases in revenue.
- Capital expenditures increased by 1,509% for Q4 2020 and by 551% for the year over the comparable prior year periods. The capital expenditures in 2020 primarily relate to the flowline decoupling construction and payments under the Compression Contract. The capital expenditures in 2019 primarily relate to the refrigeration project for the Songas Infrastructure.
- The Company exited the period in a strong financial position with \$74.2 million in working capital (December 31, 2019: \$107.0 million), cash and cash equivalents of \$104.2 million (December 31, 2019: \$93.9 million), short-term investments of \$ nil (December 31, 2019: \$44.8 million) and long-term debt of \$54.2 million (December 31, 2019: \$54.1 million). The decrease in working capital and short-term investments was primarily related to the substantial issuer bid ("2020 SIB") completed in March 2020.
- Total proved conventional natural gas reserves ("1P") and total proved plus probable conventional natural gas reserves ("2P") decreased 13% at December 31, 2020 compared to the prior year. The decrease is due to gross property Additional Gas production in 2020 of 21.1 Bcf (2019: 23.1 Bcf) and lower forecasted sales over the remaining life of the Songo Songo license. The net present value of estimated future cash flows from 2P reserves at a 10% discount rate decreased by 15% compared to the previous year. This is mainly the result of the decrease in the time remaining to the end of the Songo Songo license together with a moderate increase in forecasted capital costs. The reserves and estimated future cash flows are based on forecasted gross property 1P Additional Gas sales volumes of 70.9 MMcfd for 2021 compared to actual results of 62.8 MMcfd for Q4-2020. Under the terms of the PSA, the Company is required to pay Tanzanian income tax which is fully recovered through the profit sharing arrangements with TPDC. Income tax has no material impact on the cash flows emanating from the PSA and accordingly there is no significant difference between the net present value of reserves on a before and after tax basis.
- As at December 31, 2020 the current receivable from TANESCO was \$ nil (December 31, 2019: \$ nil). TANESCO's long-term trade receivable as at December 31, 2020 was \$27.6 million with a provision of \$27.6 million compared to \$47.5 million (provision of \$47.5 million) as at December 31, 2019. Subsequent to December 31, 2020 the Company has invoiced TANESCO \$6.5 million for 2021 gas deliveries and TANESCO has paid the Company \$7.9 million. TANESCO also paid the take or pay invoice of \$5.0 million for the 2015-2016 contract year for gas to be taken by June 30, 2021.
- On February 25, 2020 and June 22, 2020 the Company declared dividends of CDN\$0.06 per share on each of its Class A common voting shares ("Class A Shares") and Class B subordinate voting shares ("Class B Shares") for a total of \$2.5 million to the holders of record as of March 31, 2020 and June 30, 2020 (paid on April 30, 2020 and July 15, 2020 respectively). On September 17, 2020 and November 19, 2020 the Company declared a dividend of CDN\$0.08 per share on each of its Class A Shares and Class B Shares for a total of \$3.2 million to the holders of record as of September 30, 2020 and December 31, 2020 (paid on October 15, 2020 and January 15, 2021 respectively).

Financial and Operating Highlights for 2020 and Q4 2020 continued

- On March 12, 2020 the Company announced the final results of the 2020 SIB where the Company repurchased and canceled 7,692,297 Class B Shares at CDN\$6.50 per Class B Share. The aggregate purchase of Class B Shares totaled CDN\$50.0 million representing 23.6% of Orca's issued and outstanding Class B Shares and 22.4% of the total number of Orca's issued and outstanding shares.
- On April 6, 2020 Orca received approval from the TSX Venture Exchange ("TSXV") to amend its normal course issuer bid ("NCIB") commenced on June 14, 2019 to allow it to purchase additional Class B Shares through the facilities of the TSXV and alternative trading systems in Canada. On June 19, 2020 Orca announced the completion of the NCIB under which Orca repurchased 477,500 Class B Shares at a weighted average price of CDN\$5.32 per Class B Share for aggregate consideration of approximately CDN\$2.5 million.
- On December 14, 2020 the Company announced commencement of another substantial issuer bid ("2021 SIB") at a price of not less than CDN\$6.50 and not more than CDN\$7.50 per Class B Share. On January 22, 2021 the Company announced the final results of the substantial issuer bid whereby the Company repurchased and canceled 6,153,846 Class B Shares at a price of CDN\$6.50 per Class B Share representing an aggregate purchase price of CDN\$40.0 million and 25.2% of the total number of the Company's issued and outstanding Class B Shares and 23.5% of the total number of the Company's issued and outstanding shares.
- On February 23, 2021 the Company declared a dividend of CDN\$0.10 per share on each of its Class A Shares and Class B Shares for a total of \$1.6 million to the holders of record as of March 31, 2021 paid on April 15, 2021.

Oil and Gas Advisory

The Company's conventional natural gas reserves as at December 31, 2020 disclosed herein were evaluated by McDaniel & Associates Consultants Ltd. ("McDaniel"), independent petroleum engineering consultants, 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 independent reserves evaluations prepared by McDaniel had an effective date of December 31, 2020 and December 31, 2019 and preparation date of February 23, 2021 and February 20, 2020 respectively. All of the reserves presented herein are conventional natural gas 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 administrative costs, but after providing for estimated royalties, production costs, development costs, other income and future capital expenditures for only those wells assigned reserves by McDaniel. 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 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. All of the reserves referenced herein are based on McDaniel's forecast pricing as at December 31, 2020 and December 31, 2019, as applicable.

All the Company's reserves are located in Tanzania. Reserves included herein are stated on a Company gross reserves basis unless noted otherwise. Company gross reserves are the total of the Company's working interest share in reserves before deduction of royalties owned by others and without including any royalty interests of the Company, and are based on the Company's 92.07 percent ownership interest in the reserves following the transaction with Swala Oil & Gas (Tanzania) plc. Additional reserves information required under NI 51-101 is included in Orca's reports relating to reserves data and other oil and gas information under NI 51-101, which are filed on its profile on SEDAR at www.sedar.com.

"BOEs" may be misleading, particularly if used in isolation. A BOE conversion ratio of six thousand cubic feet of natural gas to one barrel of oil equivalent (6Mcf: 1 Bbl) is based on an energy equivalency conversion method primarily applicable at the burner tip and does not represent a value equivalency at the wellhead. As the value ratio between natural gas and crude oil based on the current prices of natural gas and crude oil is significantly different from the energy equivalency of 6:1, utilizing a conversion on a 6:1 basis may be misleading as an indication of value.

Management's Discussion & Analysis continued

Operating Volumes

The average gross daily sales volume decreased by 11% for Q4 2020 and by 9% for the year compared to the same prior year periods. The decrease in gross sales volume was primarily due to decreased sales of natural gas to TANESCO partially offset by increased sales to TPDC for the year through the NNGI.

The Company's gross sales volumes were split between the Industrial and Power sectors as detailed in the table below:

	Three Months ended December 31		Year ended December 31	
	2020	2019	2020	2019
Gross sales volume (MMcf)				
Industrial sector	1,137	1,206	4,633	4,836
Power sector	4,640	5,309	16,484	18,183
Total volumes	5,777	6,515	21,117	23,019
Gross daily sales volume average (MMcfd)				
Industrial sector	12.4	13.1	12.7	13.3
Power sector	50.4	57.7	45.0	49.8
Gross daily sales volume average total	62.8	70.8	57.7	63.1

Industrial Sector

There was a decrease of 5% in industrial sales volumes for Q4 2020 and for the year over the comparable prior year periods. The decrease was primarily due to the reduction in demand for services and products, including natural gas as a consequence of the COVID-19 pandemic. This was partially offset by an increase in the number of industrial customer contracts entered into during the year.

Power Sector

Power sector sales volumes decreased by 13% for Q4 2020 and 10% for the year over the comparable prior year period. The decrease was primarily due to decreased gas sales to TANESCO partially offset by increased sales to TPDC through the NNGI for the year.

Protected Gas Volumes

Protected Gas volumes decreased by 10% to 3,335 MMcf (36.3 MMcfd) for Q4 2020 compared to 3,693 MMcf (40.1 MMcfd) for Q4 2019 and decreased by 17% to 12,138 MMcf (33.2 MMcfd) for the year compared to 14,571 MMcf (39.9 MMcfd) for the year ended December 31, 2019. The Company receives no revenue for Protected Gas volumes however the volumes are required to calculate total gas produced from the reservoir and the allocation of certain production, distribution and transportation expenses between Protected Gas and Additional Gas.

Commodity Prices

The commodity prices achieved in the different sectors during the year are detailed in the table below:

	Three Months ended December 31		Year ended December 31	
	2020	2019	2020	2019
\$/mcf				
Average sales price				
Industrial sector	7.56	7.77	7.44	7.97
Power sector	3.52	3.44	3.47	3.43
Weighted average price	4.32	4.24	4.34	4.38

Industrial Sector

The average Industrial sector sales price decreased by 3% for Q4 2020 and by 7% for the year compared to the same prior year periods. The decrease in prices is primarily due to the underlying decrease in the price of heavy fuel oil against which most of the industrial customer contracts are priced. As well, a reset of the caps and floors in the majority of industrial contracts also reduced prices compared to the prior year periods. The caps and floors were reduced to ensure gas remained competitive against alternate fuel sources and other suppliers.

Power Sector

The average Power sector sales price increased by 2% for Q4 2020 and by 1% for the year over the comparable prior year periods. The increase is due to price indexing embedded into the sales contracts.

Revenue

Under the terms of the PSA the Company is responsible for invoicing, collecting and allocating the revenue from Additional Gas sales (See "Principal Terms of the PSA and Related Agreements").

The Company is entitled to recover all costs incurred on the exploration, development and operations of the project ("Cost Gas revenue") up to a maximum of 75% of the net field revenue (gross field revenue less the tariff for processing and pipeline infrastructure) prior to allocating the remaining net field revenue between TPDC and the Company ("Profit Gas revenue"). Any costs not recovered in a period are carried forward for recovery out of future revenues. Once the Cost Gas revenue has been recovered, TPDC is able to recover any pre-approved marketing costs. Currently there are no pre-approved marketing costs for TPDC.

The average Additional Gas sales volumes for the quarter and the year ended December 31, 2020 and for the comparable prior year periods were above 50 MMcfd entitling the Company to a 55% share of Profit Gas revenue. The Company was allocated a total of 88% of the net field revenue for the quarter ended December 31, 2020 (Q4 2019: 75%) and 77% for the year ended December 31, 2020 (year ended December 31, 2019: 69%). The increase in allocation reflects the increase in Cost Gas revenue primarily a result of the increase in capital expenditures during the year and the resulting recovery of a percentage of these expenditures.

The Company is liable for income tax in Tanzania, but under the terms of the PSA, TPDC's share of revenue is reduced by the current tax payable grossed up at 30% ("income tax adjustment"). Revenue as presented on the Consolidated Statements of Comprehensive Income is calculated by adjusting the Company's operating revenue by the income tax adjustment.

The reconciliation of gross field revenue to Company operating revenue and revenue is detailed below:

\$'000	Three Months ended December 31		Year ended December 31	
	2020	2019	2020	2019
Industrial sector	8,589	9,374	34,485	38,530
Power sector	16,347	18,245	57,267	62,329
Gross field revenue	24,936	27,619	91,752	100,859
TPDC share of revenue	(2,822)	(6,347)	(19,685)	(28,334)
Company operating revenue	22,114	21,272	72,067	72,525
Current income tax adjustment	(134)	1,940	5,807	13,070
	21,980	23,212	77,874	85,595

Revenue decreased by 5% for Q4 2020 and by 9% for the year compared to the same prior year periods. The decrease is largely a consequence of decreased sales to TANESCO under the PGSA and smaller current income tax adjustments.

Production, Distribution and Transportation Expenses

The production, distribution and transportation costs are detailed in the table below:

\$'000	Three Months ended December 31		Year ended December 31	
	2020	2019	2020	2019
Operating costs	844	361	2,539	1,310
Tariff for processing and pipeline infrastructure	2,056	2,576	7,009	8,404
Ring-main distribution costs	620	542	2,356	2,151
	3,520	3,479	11,904	11,865

Included in operating costs are well maintenance costs, PSA license costs, regulatory fees, insurance, certain costs associated with evaluation of the reserves and the costs of personnel not recoverable from Songas. Operating costs are allocated between Protected Gas (recoverable from Songas) and Additional Gas in proportion to their respective sales during the period. Operating costs increased by 134% for Q4 2020 and by 94% for the year compared to the same prior year periods. The increase is due to increased expenditure on reserve and resource evaluation and the introduction of a new tariff by the Tanzanian Petroleum Upstream Regulatory Authority ("PURA") in Q4 2019. Tariff for processing and pipeline infrastructure decreased by 20% for Q4 2020 and by 17% for the year compared to the same prior year periods primarily as result of reduced gas volumes processed and delivered during the periods. Ring-main distribution costs increased by 14% for Q4 2020 and by 10% for the year compared to the same prior year periods primarily a result of increased costs to maintain the ring-main.

Management's Discussion & Analysis continued

Operating Netbacks

The operating netback per mcf before general and administrative expenses, tax and APT is detailed in the table below (see "Non-GAAP measures"):

	Three Months ended December 31		Year ended December 31	
	2020	2019	2020	2019
\$/mcf				
Gas price – Industrial	7.56	7.77	7.44	7.97
Gas price – Power	3.52	3.44	3.47	3.43
Weighted average price for gas	4.32	4.24	4.34	4.38
TPDC Profit Gas entitlement	(0.49)	(0.97)	(0.93)	(1.23)
Production, distribution and transportation expenses	(0.61)	(0.54)	(0.56)	(0.52)
Operating netback	3.22	2.73	2.85	2.63

The operating netback increased by 18% for Q4 2020 and by 8% for the year over the comparable prior year periods. The increase is mainly due to a lower TPDC Profit Gas entitlement as a consequence of higher capital expenditures increasing Cost Gas revenue which reduced the available Profit Gas.

General and Administrative Expenses

General and administrative expenses are detailed in the tables below:

	Three Months ended December 31		Year ended December 31	
	2020	2019	2020	2019
\$'000				
Employee and related costs	1,600	1,409	7,499	6,188
Office costs	1,206	1,052	4,006	4,438
Marketing and business development costs	130	536	879	1,921
Reporting, regulatory and corporate	191	561	1,208	1,850
	3,127	3,558	13,592	14,397

General and administrative expenses are split between the Company's head office and Tanzania. A significant percentage of general and administration expenses relate to office and management costs that support our operations in Tanzania and are cost recoverable under the PSA.

	Three Months ended December 31		Year ended December 31	
	2020	2019	2020	2019
\$'000				
Tanzania	2,184	2,176	7,052	8,214
Corporate	943	1,382	6,540	6,183
	3,127	3,558	13,592	14,397

General and administrative expenses averaged \$1.0 million per month during Q4 2020 (Q4 2019: \$1.2 million) and \$1.1 million per month over the year (2019: \$1.2 million). The 21% increase in employee and related costs in 2020 was mainly due to termination settlements the Company agreed to with the former CEO, and with employees who had worked on business development, following the decision to focus on Tanzanian operations and to suspend plans for expansion to other countries in Africa. Correspondingly, there was a 10% decrease in office costs and a 54% decrease in marketing and business development costs during the year. The reporting, regulatory and corporate costs in 2020 were 35% lower than in 2019, primarily because of the higher level of costs incurred in the strategic review work that was undertaken in the latter part of 2019.

Stock Based Compensation

The breakdown of the costs incurred in relation to stock based compensation is detailed in the table below:

\$'000	Three Months ended December 31		Year ended December 31	
	2020	2019	2020	2019
Stock appreciation rights ("SARs")	681	559	671	2,015
Restricted stock units ("RSUs")	146	155	403	440
	827	714	1,074	2,455

As at December 31, 2020 a total of 1,242,166 SARs were outstanding compared to 2,321,833 SARs as at December 31, 2019. A total of 160,000 new SARs were issued during the year ended December 31, 2020 with an exercise price of CDN\$5.02. A total of 697,000 SARs with exercise prices ranging from CDN\$2.30 to CDN\$5.00 were exercised during the year ended December 31, 2020 resulting in a total cash payout of \$0.6 million. A total of 542,667 SARs with exercise prices ranging from CDN\$5.00 to CDN\$6.65 were forfeited during the year ended December 31, 2020.

As at December 31, 2020 a total of 133,200 RSUs were outstanding compared to 234,700 at December 31, 2019. A total of 20,500 new RSUs were issued during the year ended December 31, 2020 with an exercise price of CDN\$0.01. A total of 78,000 RSUs were exercised during the year ended December 31, 2020 resulting in a total cash payout of \$0.3 million. A total of 44,000 RSUs with an exercise price of CDN\$0.01 were forfeited during the year.

As SARs and RSUs are settled in cash, they are re-valued at each reporting date using the Black-Scholes option pricing model with the resulting liability being recognized in trade and other payables. In the valuation of SARs and RSUs at the reporting date, the following assumptions have been made: a risk free rate of interest of 1.0%, stock volatility of 31.0% to 41.0%, 5% forfeiture and a closing price of CDN\$6.33 per Class B Share. The valuation of the SARs and RSUs awards is increased to reflect the amount of dividends paid between the award date to the time of exercise.

As at December 31, 2020 a total accrued liability of \$2.2 million (December 31, 2019: \$2.5 million) has been recognized in relation to SARs and RSUs. The Company recognized an expense for the year of \$1.1 million (2019: \$2.5 million) as stock based compensation.

Depletion and Depreciation

Natural gas properties are depleted using the unit of production method based on the production for the period as a percentage of the total future production from the Songo Songo proved reserves. As at December 31, 2020 the estimated proved reserves remaining to be produced over the term of the PSA license were 203 Bcf (December 31, 2019: 234 Bcf). The average depletion rate was \$0.69/mcf for the year ended December 31, 2020 compared to \$0.63/mcf for the comparable prior year.

\$'000	Three Months ended December 31		Year ended December 31	
	2020	2019	2020	2019
Oil and natural gas interests	4,078	4,566	14,830	15,005
Office and other	11	30	94	135
Right-of-use assets	73	47	397	189
	4,162	4,643	15,321	15,329

The depletion for oil and natural gas interests decreased by 11% for Q4 2020 and by 1% for the year compared to the same prior year periods. The decrease is primarily a result of the decrease in volume of gas produced and sold partially offset by the increase in the average depletion rate between periods.

Management's Discussion & Analysis continued

Finance Income and Expense

Finance income is detailed in the table below:

\$'000	Three Months ended December 31		Year ended December 31	
	2020	2019	2020	2019
Interest income	124	237	844	666
Investment income	-	416	305	2,199
	124	653	1,149	2,865

At December 31, 2020 the Company did not have investments in short-term bonds (December 31, 2019: \$44.8 million invested with maturity dates from February 2020 to July 2020 at a range of interest rates from 1.375% to 2.75%). The \$0.3 million investment income for the year (2019: \$2.2 million) includes interest earned of \$0.3 million (2019: \$1.4 million) and amortization of the discount on the acquisition of the bonds of \$ nil (2019: \$0.8 million). The investment income for Q4 2019 included accrued interest of \$0.3 million and amortization of the discount on the acquisition of the bonds of \$0.1 million.

Finance expense is detailed in the table below:

\$'000	Three Months ended December 31		Year ended December 31	
	2020	2019	2020	2019
Base interest expense	1,467	1,481	5,830	6,164
Participation interest expense	889	120	1,971	2,071
Lease interest expense	14	20	86	44
Interest expense	2,370	1,621	7,887	8,279
Net foreign exchange loss (gain)	58	9	(438)	289
Indirect tax	203	303	1,873	1,298
	2,631	1,933	9,322	9,866

The base interest expense decrease for the year is a result of the long-term loan repayment of \$4.8 million made during Q4 2019. Base and participation interest expense relate to the \$60 million long-term loan ("Loan") from the International Finance Corporation ("IFC") to the Company's subsidiary operating in Tanzania, PanAfrican Energy Tanzania Limited ("PAET"). Base interest on the Loan is payable quarterly at 10% per annum on a 'pay-if-you-can-basis' using a formula to calculate the net cash available for such payments as at any given interest payment date. The interest expense is payable quarterly in arrears. The participation interest expense is paid annually in arrears. It equates to 6.4% of PAET's net cash flows from operating activities net of net cash flows used in investing activities for the year. Such participation interest will continue until October 15, 2026 regardless of whether the Loan is repaid prior to its contractual maturity date.

Net foreign exchange gains and losses are the result of transactions in foreign currencies recorded at the rate of exchange prevailing on the date of such transactions. Monetary assets and liabilities in foreign currencies are translated at period-end rates. Non-monetary items are translated at historic rates, unless such items are carried at market value, in which case they are translated using the exchange rates that existed when the values were determined. These foreign exchange gains and losses are recorded in finance expense.

The indirect tax is for value added tax ("VAT") associated with invoices to TANESCO under the take or pay provisions within the PGSA and for interest on late payments. The increase in indirect taxation is primarily the result of a 2020 take or pay invoice of \$6.5 million; in 2019 no take or pay invoice was issued as TANESCO took the required volumes during the contract year to June 20, 2019. These invoices are not recognized in the financial statements as they do not meet revenue recognition criteria with respect to assurance of collectability.

Loss Allowance for Receivables

\$'000	Three Months ended December 31		Year ended December 31	
	2020	2019	2020	2019
Reversal of loss allowance	(3,478)	(7,546)	(20,951)	(11,044)
Loss allowance	-	-	5,337	-
	(3,478)	(7,546)	(15,614)	(11,044)

The reversal of the loss allowance of \$21.0 million during the year (2019: \$11.0 million) includes collection of: (i) TANESCO arrears of \$19.9 million (2019: \$11.0 million) which had previously been allowed for and represents the excess of receipts over gas sales invoiced during the year; and (ii) Songas arrears of \$1.1 million (2019: \$ nil) which had previously been allowed for. The reversal of the loss allowance of \$3.5 million during the quarter (Q4 2019: \$7.5 million) relates to the collection of TANESCO arrears which had been previously allowed for and represents the excess of receipts over gas sales invoiced during the quarter.

The loss allowance is a result of the TRA issuing an Agency Notice during the year obligating the Company's bank to release \$5.3 million in favor of the TRA. The subject of the notice is an ongoing dispute which, based on the opinion of the Company's legal advisors, has a better than a 50% chance of being resolved in favor of the Company. The Company has therefore recorded the \$5.3 million in other receivables, but has fully provided for the amount due to the uncertainties around collection.

Tax**Income Tax**

\$'000	Three Months ended December 31		Year ended December 31	
	2020	2019	2020	2019
Current tax	816	1,747	7,384	10,657
Deferred tax	2,296	1,223	3,356	2,326

Under the terms of the PSA with TPDC and the GoT, the Company is liable for income tax in Tanzania at the corporate tax rate of 30%. However, the PSA provides a mechanism by which income tax payable is recovered from TPDC by reducing TPDC's share of Profit Gas revenue and increasing the allocation to the Company. This is reflected in the accounts by increasing the Company's share of revenue by an amount equivalent to current year income taxes payable grossed up by 30%.

As at December 31, 2020 there were temporary differences between the carrying value of the assets and liabilities for financial reporting purposes and the amounts used for taxation purposes under the Income Tax Act 2004. Applying the 30% Tanzanian tax rate, the Company has recognized a deferred tax liability of \$18.5 million (December 31, 2019: \$15.2 million). The deferred tax has no impact on cash flow until it becomes a current income tax, at which point the tax is paid and recovered from TPDC's share of Profit Gas revenue.

Additional Profits Tax ("APT")

\$'000	Three Months ended December 31		Year ended December 31	
	2020	2019	2020	2019
APT	589	1,304	4,054	6,587

Under the terms of the PSA, APT is payable when the Company has recovered its costs plus a specified return out of Cost Gas revenues and Profit Gas revenues. As a result: (i) no APT is payable until the Company recovers its costs out of Additional Gas revenues plus an annual operating return under the PSA of 25% plus the percentage change in the United States Industrial Goods Producer Price Index ("PPI"); and (ii) the maximum APT rate is 55% of the Company's Profit Gas when costs have been recovered with an annual return of 35% plus the percentage change in PPI.

The timing and the effective rate of APT depends on the realized value of Profit Gas which in turn depends on the level of expenditure. The Company provides for APT by annually forecasting the total APT payable in the future as a proportion of the forecast Profit Gas over the term of the PSA. The forecast takes into account the timing of future development capital spending. As at December 31, 2020 the current portion of APT payable was \$11.5 million (December 31, 2019: \$11.9 million) with a long-term APT payable of \$24.8 million (December 31, 2019: \$32.3 million).

The effective APT rate for the quarter of 17.1% (Q4 2019: 16.8%) has been applied to Company Profit Gas of \$3.4 million (Q4 2019: \$7.8 million), and an average effective APT rate of 16.8% (2019: 19.0%) has been applied to Company Profit Gas of \$24.1 million (2019: \$34.6 million) for the year ended December 31, 2020. Accordingly, \$0.6 million (Q4 2019: \$1.3 million) and \$4.1 million (2019: \$6.6 million) have been recorded for the quarter and for the year ended December 31, 2020, respectively.

Management's Discussion & Analysis continued

Working Capital

Working capital as at December 31, 2020 was \$74.2 million (December 31, 2019: \$107.0 million) and is detailed in the table below:

\$'000	As at December 31		
		2020	2019
Cash and cash equivalents		104,190	93,899
Investment in short term bonds		-	44,756
Trade and other receivables			
Songas	6,624	8,763	
TPDC	7,417	7,284	
TRA	5,337	-	
Industrial customers and other receivables	10,960	10,287	
Loss allowance	(8,458)	(4,167)	22,167
Prepayments		898	6,752
		126,968	167,574
Trade and other payables			
TPDC share of Profit Gas revenue ¹	25,570	33,134	
Songas	2,062	2,354	
Other trade payables and accrued liabilities	11,655	12,673	
Current portion of Additional Profits Tax	11,489	50,776	60,101
Tax payable		1,956	501
		52,732	60,602
Working capital		74,236	106,972

¹ The balance of \$25.6 million payable to TPDC represents TPDC's share of Profit Gas revenue, primarily related to unpaid gas deliveries to TANESCO, net of \$4.8 million (2019: \$4.9 million) of tax recoverable by the Company. The majority of the settlement of this liability is dependent on receipt of payment from TANESCO for arrears. For their allocation of Profit Gas revenue, the Company paid TPDC \$14.9 million in 2020 and an additional \$6.4 million in January 2021.

Financial Instruments

Current financial instruments of the Company include cash and cash equivalents, investment in short term bonds, trade and other receivables, trade and other payables and tax payable. The carrying values of the financial instruments approximate fair values due to their relatively short periods to maturity. The risks associated with the Company's financial instruments are primarily attributed to the inherent riskiness of cash, and the risk that trade and other receivables may not be paid when due. The Company mitigates these risks by (i) holding the majority of its cash outside of Tanzania in reputable international financial institutions primarily in Jersey and Mauritius which reduces geo-political risk; and (ii) monitoring and reviewing the trade and other receivables on a regular basis to determine if allowances are required for overdue amounts or action is required to restrict deliveries on past due accounts to reduce exposure on outstanding receivables. There are no restrictions on the movement of cash from Jersey, Mauritius or Tanzania.

Financial assets and liabilities are recognized when the Company becomes a party to the contractual provisions of the instrument. Financial assets are derecognized when the rights to receive cash flows from the assets have expired or have been transferred and the Company has transferred substantially all risks and rewards of ownership.

Working Capital Requirements

The Company expects to have sufficient cash flow from operating activities to maintain adequate working capital to cover both short-term and long-term obligations, including forecasted debt and interest payments (\$7.7 million) and capital expenditure (\$9.5 million) for 2021. The Company hasn't incurred any losses from debtors in 2020 and does not expect to incur any losses from debtors in 2021. The Company maintains adequate cash and cash equivalents on hand to ensure it can meet all its capital expenditure obligations and deal with possible fluctuations in liquidity from operational problems including any potential impact from COVID-19. The Company does not anticipate any circumstances that are reasonably likely to occur that could significantly impact the Company's cash flows and liquidity.

TANESCO Receivable

As at December 31, 2020 the current receivable from TANESCO was \$ nil (December 31, 2019: \$ nil). During Q4 2020 and the year ended December 31, 2020 the amounts received from TANESCO were in excess of the revenue recognized for gas deliveries to TANESCO. The TANESCO long-term receivable as at December 31, 2020 was \$27.6 million with a provision of \$27.6 million compared to \$47.5 million (with a provision of \$47.5 million) as at December 31, 2019. In Q2 2020 the Company invoiced TANESCO \$6.5 million (Q2 2019: \$ nil) under the take or pay provision within the PGSA. The invoice has not been recognized in these financial statements as it does not meet revenue recognition criteria with respect to assurance of collectability. Subsequent to December 31, 2020 the Company invoiced TANESCO \$6.5 million for 2021 gas deliveries and TANESCO has paid the Company \$7.9 million.

Capital Expenditures

The capital expenditures in 2020 primarily related to the Compression Contract and the capital expenditures in 2019 primarily related to the refrigeration project for the Songas Infrastructure (does not include capitalized leases).

\$'000	Three Months ended December 31		Year ended December 31	
	2020	2019	2020	2019
Pipelines and infrastructure	16,310	1,007	27,117	4,153
Other capital expenditures	5	7	24	18
	16,315	1,014	27,141	4,171

Capital Requirements

Except as described below there are no new contractual commitments for exploration or development drilling or other field development, either under the PSA or otherwise agreed, which would give rise to significant capital expenditure at Songo Songo. Any additional significant capital expenditure in Tanzania is discretionary.

In order to sustain current levels of production beyond 2021, it is necessary to install compression facilities to maintain throughput of the Songas Infrastructure over the remaining term of the PSA. Failure to do so will gradually lead to a significant reduction in production as field pressure declines below the level required to deliver gas to the Dar es Salaam power sector and industrial customers. As at the date of this report, the Company's only significant contractual commitment is in relation to the \$38.0 million fixed price turn-key Compression Contract, \$24.7 million of which has been paid to date. The remaining expenditures forecasted under this contract are \$9.5 million in 2021 and \$3.8 million in 2022. The compression facilities are expected to be operational by the end of Q2 2022.

During the year the Company implemented a flowline decoupling project to install dedicated flowlines to onshore wells SS-10 and SS-11 at a cost of \$1.3 million. These two wells have hitherto been coupled to the 4" flowlines used by wells SS-3 and SS-4. The new decoupled flowlines have been constructed and were tied into the Songas Infrastructure plant during Q1 2021. The project is expected to increase production potential by approximately 10 MMcf.

The Company intends to remediate the onshore SS-10 well by replacing the production tubing in the well during Q3 2021. The Company is also in discussions with Songas to remediate two additional onshore wells (SS-3 and SS-4) owned by Songas as part of the same program. A contiguous remediation program will reduce the capital expenditure required per well as a result of shared costs, particularly concerning rig mobilization and demobilization. All three wells will require replacement of their original carbon steel tubing completions with corrosion resistant tubing completions. Wells SS-3 and SS-4 are currently suspended and shut-in respectively. SS-10 well is still producing but, due to progressive corrosion of its production tubing identified by the Company's corrosion monitoring program, the work needs to be carried out this year. The Company is currently determining the costs of the workover program and expects the tender results from service providers including the workover rig before the end of Q2 2021.

Long-term Receivables

\$'000	As at December 31	
	2020	2019
VAT – Songas workovers	2,205	2,205
Lease deposit	9	45
	2,214	2,250

In 2017, based on agreement with TPDC, \$12.3 million relating to the Songas share of workover costs of the wells SS-5 and SS-9 was transferred to the cost pool enabling the Company to recover the costs via the PSA cost recovery mechanism. This resulted in \$2.2 million relating to VAT on the workovers that had already been paid being reclassified as a long-term receivable. The Company continues to take action to collect the Songas share of workover costs from Songas.

The following table details the amounts receivable from TANESCO that do not meet revenue recognition criteria and therefore are not recorded in the consolidated financial statements:

\$'000	As at December 31	
	2020	2019
Total amounts invoiced to TANESCO	111,234	118,861
Unrecognized amounts not meeting revenue recognition criteria ¹	(83,685)	(71,407)
Loss allowance	(27,549)	(47,454)
	-	-

¹ The amount includes invoices for interest on late payments and invoices relating to differences between gas contracted for delivery versus gas taken by TANESCO. In April 2021 TANESCO paid the take or pay invoice of \$5.0 million for the 2015-2016 contract year for gas to be taken by June 30, 2021.

Management's Discussion & Analysis continued

Long-term Loan

In 2015 PAET obtained the Loan of \$60 million from the IFC. The Loan was fully drawn down in 2016.

The Loan is to be repaid through six semi-annual payments of \$5 million starting April 15, 2022 and one final payment of \$25.2 million due on April 15, 2025. The Company may voluntarily prepay all or part of the Loan but must simultaneously pay any accrued base interest costs related to the principal amount being prepaid. The Loan is an unsecured subordinated obligation of PAET and is guaranteed by the Company to a maximum of \$30 million. The guarantee may only be called upon by IFC at maturity in 2025 and, subject to IFC approval and receipt of all required regulatory approvals, the Company, at its discretion, may issue shares in fulfilment of all or part of the guarantee obligation in 2025. Pursuant to the sale of a non-controlling interest in PAE PanAfrican Energy Corporation ("PAEM") the parent company of PAET, the Company agreed with the IFC to reduce the outstanding amount of the Loan by the percentage interest sold of 7.9% (\$4.8 million) before the fourth anniversary of the first drawdown. PAET made this payment on October 16, 2019.

Dividends and distributions from PAET to PAEM are restricted at any time whenever amounts of interest, principal or participating interest are due and outstanding. All amounts under the Loan have been paid when due.

Outstanding Shares

The Class A Shares are convertible at any time at the option of the holder into Class B Shares on a one-for-one basis. Subject to the terms and conditions of conversion specified in the memorandum of association and articles of association of the Company, the Class B Shares are convertible into Class A Shares on a one for one basis if an offer is made to purchase Class A Shares that: (i) must, by reason of applicable securities legislation or the requirements of a stock exchange on which the Class A Shares are listed, be made to all or substantially all of the holders of Class A Shares; and (ii) is not made concurrently with an offer to purchase Class B Shares that is identical to the offer to purchase Class A Shares and that has no condition attached other than the right not to take up and pay for shares tendered if no shares are purchased pursuant to the offer for Class A Shares. The conversion right does not come into effect under certain events specified in the memorandum of association of the Company, including, without limitation, the prior delivery to the Company's transfer agent and to the Secretary of the Company of a certificate signed by one or more shareholders owning more than 50% of the then outstanding Class A Shares.

There were 1,750,495 Class A Shares and 24,387,460 Class B Shares outstanding as at December 31, 2020. As at the date of this report there were a total of 1,750,495 Class A Shares and 18,233,614 Class B Shares outstanding following the completion of the 2021 SIB of CDN\$40.0 million on January 22, 2021.

Cash Flow Summary

\$'000	Three Months ended December 31		Year ended December 31	
	2020	2019	2020	2019
Operating activities				
Net income	7,698	12,886	29,121	26,346
Non-cash adjustments	2,791	8,139	25,637	27,911
Interest expense	2,370	1,621	7,887	8,279
Changes in non-cash working capital ⁽¹⁾	6,510	(17,595)	(16,140)	(27,663)
Net cash flows from operating activities	19,369	5,051	46,505	34,873
Net cash from investing activities	28,633	21,024	17,720	17,796
Net cash (used in)/from financing activities	(42,386)	1,616	(54,408)	(23,420)
Increase in cash	5,616	27,691	9,817	29,249

¹ See Consolidated Statements of Cash Flows

The Company's net cash flows from operating activities increased by 283% for Q4 2020 and by 33% for the year over the comparable prior year periods. The increase for Q4 2020 was mainly a result of fluctuations in non-cash working capital and was respectively offset by changes in net income. Changes in non-cash working capital for the year were affected by the payment in March 2020 of the 2019 current APT of \$11.9 million (2019: \$ nil). Increases in net cash flows used in investing activities are mainly a result of the increased investment under the Compression Contract and the conversion of short-term bonds to cash in 2020. Changes in cash from and used in financing activities are primarily a result of the 2020 SIB and NCIB.

Related Party Transactions

The Chairman of the Company's Board of Directors is counsel to Burnett, Duckworth and Palmer LLP, a law firm that provides legal advice to the Company and its subsidiaries. Fees for services provided by this firm totaled \$0.3 million during Q4 2020 (Q4 2019: \$0.2 million) and \$1.0 million for the year (2019: \$0.4 million).

As at December 31, 2020 the Company had a total of \$0.1 million (December 31, 2019: \$0.2 million) recorded in trade and other payables in relation to the related party.

Substantial Issuer Bid, Normal Course Issuer Bid and Dividends

During Q1 2020 the Company repurchased and canceled 7,692,297 Class B Shares at a weighted average price of CDN\$6.50 per Class B Share under the 2020 SIB. This resulted in an aggregate purchase of CDN\$50.0 million of Class B Shares representing 23.6% of the Company's issued and outstanding Class B Shares and 22.4% of the total number of the Company's issued and outstanding shares. Total cash payments of \$38.2 million were applied to the capital stock, contributed surplus and accumulated income accounts.

During Q2 2020 the Company completed the NCIB for its Class B Shares. Under the NCIB, the Company repurchased 477,500 Class B Shares at a weighted average price of CDN\$5.32 per Class B Share for aggregate consideration of approximately CDN\$2.5 million.

On November 18, 2020 the Company announced the approval of the new Dividend and Distribution Policy confirming the Company will be paying quarterly dividends to holders of Class A and Class B Shares.

On December 14, 2020 the Company announced the commencement of the 2021 SIB at a price of not less than CDN\$6.50 and not more than CDN\$7.50 per Class B Share. On January 22, 2021 the Company announced the final results of the 2021 SIB, whereby it repurchased and canceled a further 6,153,846 Class B Shares at a price of CDN\$6.50 per share. This represented an aggregate purchase price of CDN\$40.0 million, 25.2% of the total number of outstanding Class B Shares and 23.5% of the total number of the Company's issued and outstanding shares.

All issued capital stock is fully paid.

Dividend Summary

Declaration date	Record date	Payment date	Amount per share (CDN\$)
February 23, 2021	March 31, 2021	April 15, 2021	0.10
November 19, 2020	December 31, 2020	January 15, 2021	0.08
September 17, 2020	September 30, 2020	October 15, 2020	0.08
June 22, 2020	June 30, 2020	July 15, 2020	0.06
February 25, 2020	March 31, 2020	April 30, 2020	0.06
November 28, 2019	December 31, 2019	January 31, 2020	0.06
September 17, 2019	September 30, 2019	October 31, 2019	0.06
May 29, 2019	June 30, 2019	July 31, 2019	0.06
January 22, 2019	March 31, 2019	April 30, 2019	0.05

Consolidation

The companies which are being consolidated for the purposes of this MD&A are:

Subsidiary	Incorporated	Holding
Orca Energy Group Inc.	British Virgin Islands	Parent Company
Orca Exploration UK Services Limited	United Kingdom	100%
PAE PanAfrican Energy Corporation ("PAEM")	Mauritius	92%
PanAfrican Energy Tanzania Limited	Jersey	92%
Orca Exploration Italy Inc. ¹	British Virgin Islands	100%
Orca Exploration Italy Onshore Inc. ¹	British Virgin Islands	100%

¹ The companies were wound up during 2020.

Management's Discussion & Analysis continued

Non-Controlling Interest

The Company sold 7.9% (7,933 Class A common shares) of PAEM to a wholly owned subsidiary of Swala Oil & Gas (Tanzania) plc. ("Swala") in 2018 for \$15.4 million cash and \$4.0 million of Swala convertible preference shares ("Preference Shares") pursuant to a share purchase agreement. The Preference Shares entitle the Company to a 10% per annum distribution payable 15 days after each quarter end, commencing from the closing date, January 16, 2018. Payment of the quarterly distributions is at the discretion of Swala based on funds available, however, the liability accrues if any amount is unpaid when due. If any distributable amount remains unpaid after December 31, 2021, the Company may demand settlement and Swala is obligated to comply by transferring and returning the Class A common shares of PAEM sold to Swala. The aggregate value of these shares will equal the amount of the outstanding distributions. As at December 31, 2020 the Company has not received any distributions or recorded any amount receivable related to the Preference Shares.

Swala is obligated to redeem 20% of the Preference Shares for cash annually starting from December 31, 2021 until all shares are redeemed. If at any time Swala does not redeem the required number of Preference Shares for cash, Swala is obligated to redeem the Preference Shares by transferring and returning the Class A common shares of PAEM sold to Swala. The aggregate value of these Class A common shares will equal the amount of any outstanding redemption.

There is no credit risk associated with the Preference Shares as a consequence of Swala having the obligation to redeem them by returning the equivalent value of Class A common shares for any overdue and outstanding amounts. A reconciliation of the non-controlling interest is detailed below:

\$'000	As at December 31	
	2020	2019
Balance, beginning of year	163	(513)
Share of post-disposition income	1,360	1,628
Dividends paid	-	(952)
Balance, end of year	1,523	163

Contingencies**Taxation**

Amounts in \$'millions					As at December 31	
					2020	2019
Area	Period	Reason for dispute	Principal	Interest	Total	Total
Pay-As-You-Earn ("PAYE") tax	2008-16	PAYE tax on grossed-up amounts in staff salaries which are contractually stated as net.	1.2	0.4	1.6 ⁽¹⁾	1.5
Withholding tax ("WHT")	2005-16	WHT on services performed outside of Tanzania by non-resident persons, on deemed dividends, loan interest and other services.	5.7	3.0	8.7 ⁽²⁾	8.3
Income tax	2008-16	Deductibility of capital expenditures and expenses (2009, 2012, 2015 and 2016), additional income tax (2008, 2010, 2011 and 2012), tax on repatriated income (2012), deemed branch dividends (2015 and 2016), foreign exchange rate application (2013 and 2015) and underestimation of tax due (2014).	35.1	17.0	52.1 ⁽³⁾	50.9
VAT	2008-18	Output VAT on imported services and SSI Operatorship services (2008-16); interest on VAT decreasing adjustments and input VAT on services (2017 and 2018).	2.9	3.9	6.8 ⁽⁴⁾	5.7
			44.9	24.3	69.2	66.4

During 2020 the TRA conducted audits of 2017 and 2018 and issued two assessments with regards to VAT (\$1.2 million) and WHT (\$0.01 million). The Company has conceded to the TRA with respect to the WHT assessment (\$0.01 million) and a portion of the VAT assessment (\$0.06 million). However, the Company has objected to incorrect imposition of interest on VAT decreasing adjustments on TANESCO payments (\$1.1 million) and disallowing input VAT claimed in certain services (\$0.1 million). No final assessments have been issued to date with respect to corporation tax, excise duty or payroll tax for 2017, and no preliminary assessment has yet been received for 2018.

Contingencies continued

Taxation continued

During 2019 following the completion of audits for the years 2015 and 2016, the TRA issued assessments for \$15.1 million relating to corporation tax, withholding tax, VAT, excise duty and payroll tax. With the exception of \$0.1 million of VAT and WHT on rent which the Company has conceded, the Company has objected to the other components of the assessment and requested a waiver of the deposit required to allow a dispute of the assessment and is awaiting a TRA response. The Company has also objected to several other assessments from the TRA demanding deposits to allow the dispute to be made and is awaiting Tax Revenue Appeal Board ("TRAB") hearing dates. Management, with advice from its legal counsels, has reviewed the Company's position on the objections and appeals related to the disputed amounts and has concluded that no provision is required with regard to these matters and that the maximum potential exposure is \$63.6 million (December 31, 2019: \$66.4 million).

During 2020, acting under instructions from the TRA, the PAET's commercial bank in Tanzania transferred to the TRA the full principal tax amount of \$2.6 million together with interest of \$2.7 million relating to the disputed 2008-10 output VAT. Subsequently, the Company filed an appeal for review with the Tanzanian Court of Appeal ("CAT"). These amounts have been recorded in trade and other receivables and are fully provided for pending the resolution of the dispute.

During 2020 the Company filed an application for judicial review at the CAT with regards to the 2008-10 PAYE case (\$0.3 million). During the year, again acting under instructions from the TRA, PAET's commercial bank in Tanzania transferred the full principal tax amount in dispute (\$0.3 million) to the TRA. The Company has filed an appeal for review with the CAT.

The process of appealing assessments issued by TRA start by initially filing an appeal with the TRA. If this is not successful, claims can be taken to higher authorities starting with the TRAB, followed by an appeal to the Tax Revenue Appeals Tribunal ("TRAT") and finally to the CAT. Below is a summary of the status of the various assessments:

- (1) (a) 2008-10 (\$0.3 million): In 2020, the Company lost an appeal with CAT on the principal amount and filed an application for judicial review at CAT. TRA instructed PAET's commercial bank to transfer the full principal amount in dispute to TRA;
 - (b) 2015-16 (\$1.3 million): The Company has objected to an assessment and is awaiting a TRA response;
- (2) (a) 2005-2009 (\$1.6 million): In 2018 the CAT ruled in favor of the Company that no WHT was required on services performed outside Tanzania by non-resident persons. Waiting to see whether TRA will file an application to object to the CAT ruling;
 - (b) 2010 (\$0.1 million): TRAT ruled in favor of TRA. The Company has filed a notice of intention to appeal with CAT and is awaiting a TRAT written judgment to finalize the appeal;
 - (c) 2015-16 (\$7.0 million): The Company objected to several assessments in 2019 issued by TRA with regards to withholding tax and is awaiting a TRA response. The Company appealed to TRAB against the one-third deposit required to admit the objection and is awaiting a TRAB judgment;
- (3) (a) 2008 (\$0.6 million): The Company has objected to a TRA assessment that did not recognize a tax loss carried forward and is awaiting a response;
 - (b) 2009 (\$2.8 million): The Company has filed an application for review of a CAT judgment and is awaiting a hearing date (\$2.0 million). The Company objected to an amended assessment from TRA (\$0.8 million) for being time-barred and arbitrary and is awaiting a TRA response;
 - (c) 2010 (\$2.4 million): The Company is awaiting a judgment from a TRAB hearing held in 2019;
 - (d) 2011 (\$1.9 million): The Company is awaiting a judgment from TRAB (\$1.7 million). The Company is also awaiting a TRA response on an objection of an assessment (\$0.2 million);
 - (e) 2012 (\$15.4 million): The Company has objected to TRA assessments with respect to understated revenue, timing of deductibility of capital expenditures, expenses and tax on repatriated income. The Company is awaiting a CAT hearing date for waiver of a deposit payment required to file its objection;
 - (f) 2013 (\$9.1 million): The Company filed an objection to TRA assessment (\$0.1 million) and is awaiting a response. The Company has objected to two assessments as being time-barred without merit and tax on repatriated income (\$9.0 million) and is in the process of appealing to CAT that a deposit is required to file the objection;
 - (g) 2014 (\$11.6 million): The Company filed an objection to a TRA assessment (\$3.3 million) and is in the process of appealing to CAT that a deposit is required to file the objection. TRA issued two additional assessments for the year for corporation tax of \$5.3 million and tax on repatriated income of \$3.1 million. The Company has objected to the assessments and is awaiting a TRA response;
 - (h) 2015-16 (\$8.3 million): The Company filed objections to TRA assessments and is awaiting a response;
- (4) (a) 2008-2010 (\$5.3 million): Acting under instructions from TRA, PAET's commercial bank in Tanzania transferred the full disputed amount of \$5.3 million to TRA. The Company has filed an appeal at CAT and is awaiting a decision;
 - (b) 2015-16 (\$0.3 million): The Company has filed an objection to a TRA assessment and is awaiting a response;
 - (c) 2017-18 (\$1.2 million) The Company has filed an objection to a TRA assessment and is awaiting a response. The Company has objected incorrect imposition of interest on VAT decreasing adjustments in respect of delayed TANESCO payment (\$1.1 million) and disallowing input VAT claimed in certain services (\$0.1 million).

In 2016 the TRA introduced significant changes in relation to the income tax treatment of the extractive sector with separate new chapters in Part V of the Income Tax Act 2004 ("ITA, 2004") for mining and for petroleum to be effective commencing in 2018. Further changes were subsequently made by the Written Laws (Miscellaneous Amendments) Act, 2017 ("WLMAA, 2017") and in particular section 36(a)(ii) of the WLMAA, 2017. The WLMAA, 2017 amended section 65M and 65N of the ITA 2004 to exclude cost oil/cost gas from inclusion in both income and expenditure. The Company is still evaluating the tax effects of the changes as there are a number of uncertainties and ambiguities as to the interpretation and application of certain provisions of the WLMAA, 2017. In the absence of guidance on these matters, the Company has used what it believes are reasonable interpretations and assumptions in applying the WLMAA, 2017 for purposes of determining its tax liabilities and the results of operations, which may change as it receives additional clarification and implementation guidance. The Company does not expect a significant impact from the changes as it is able to recover taxes payable from the TPDC Profit Gas entitlement under the terms of the PSA.

Management's Discussion & Analysis continued

Recent Accounting Changes

The following recent accounting changes that became effective on January 1, 2020 have been adopted by the Company and have had no material effect on the Company:

- On October 22, 2018, the International Accounting Standards Board (the "IASB") issued "Definition of a Business (Amendments to IFRS 3)" aimed at resolving the difficulties that arise when an entity determines whether it has acquired a business or a group of assets. The amendments are effective for business combinations for which the acquisition date is on or after the beginning of the first annual reporting period beginning on or after January 1, 2020.
- On October 31, 2018, the IASB issued "Definition of Material (Amendments to IAS 1 and IAS 8)" to clarify the definition of 'material' and to align the definition used in the Conceptual Framework and the standards themselves. The amendments are effective for annual reporting periods beginning on or after January 1, 2020.

Disclosure Controls and Procedures and Internal Controls over Financial Reporting

The Company's Interim Chief Executive Officer ("CEO") and Chief Financial Officer ("CFO") have designed, or caused to be designed under their supervision, disclosure controls and procedures ("DC&P") for Orca. DC&P, as defined in National Instrument 52-109, Certification of Disclosure in Issuers' Annual and Interim Filings, are designed to provide reasonable assurance that information required to be disclosed in reports filed with, or submitted to, securities regulatory authorities is recorded, processed, summarized and reported within the time periods specified under Canadian securities law and include controls and procedures designed to ensure that information required to be so disclosed is accumulated and communicated to management, including the CEO and CFO, as appropriate, to allow timely decisions regarding required disclosure. The CEO and CFO of Orca evaluated the effectiveness of the design and operation of the Company's DC&P. Based on the evaluation, the officers concluded that Orca's DC&P were effective as at December 31, 2020.

Quarterly Results Summary

The following is a summary of key results for the Company for the last eight quarters:

Figures in \$'000 except where otherwise stated	2020				2019			
	Q4	Q3	Q2	Q1	Q4	Q3	Q2	Q1
Revenue	21,980	20,859	17,320	17,715	23,212	21,453	20,994	19,936
Net income attributable to shareholders	7,375	1,487	6,254	12,645	12,642	2,583	6,718	2,775
Earnings per share								
– basic and diluted (\$)	0.28	0.06	0.27	0.39	0.36	0.07	0.20	0.08
Net cash flows from operating activities	19,369	12,793	13,516	827	5,051	7,603	8,978	13,241
Adjusted funds flow from operations ⁽¹⁾	12,348	11,847	7,380	7,569	13,479	10,180	10,490	9,064
Capital expenditures	16,315	9,412	1,005	489	1,014	652	1,413	1,092

¹ See non-GAAP measures.

Revenue increased steadily throughout 2019, as a result of increased deliveries to TANESCO and TPDC. The decrease in the first half of 2020 was mainly due to increased use of hydropower during an extended rainy season which led to a fall in sales to the Power sector. Revenue rose during Q3 2020 and Q4 2020 as the Power sector demand for gas increased to compensate for a reduction in the available hydropower.

Net income attributable to shareholders was affected by several factors, other than changes in revenue, including:

- The collection of long-term TANESCO arrears, and the corresponding release of bad debt provisions, led to an increase in the reversal to loss allowances in Q2 2019, Q4 2019, Q1 2020, and Q4 2020. The Company collected \$3.5 million, \$7.5 million, \$10.1 million, and \$3.5 million of TANESCO long-term arrears, respectively. The decrease in Q3 2019, notwithstanding the increase in revenue, was a result of lower collections of TANESCO long-term arrears compared to other periods;
- Decrease in Q2 2020 was a result of lower revenue and a lower collection of TANESCO arrears as compared to Q1 2020;
- Decrease in Q3 2020 was primarily a result of a loss allowance of \$5.3 million in respect of the disputed 2008-10 output VAT case with the TRA.

Quarterly Results Summary continued

In addition to the factors impacting net income attributable to shareholders, net cash flows from operating activities were primarily affected by the timing and amount of payments received from TANESCO. This is the primary reason for the large cash flows in Q1 2019. The fluctuations throughout 2019 were primarily a result of the increase in revenue from quarter to quarter, payments to TPDC for profit share and changes in non-cash working capital. The decrease in Q1 2020 and the consequent increase in Q2 2020 is primarily a result of the annual payment of the 2019 current liability associated with APT in Q1 2020. The decrease in Q3 2020 is mainly a result of decreased collections from TANESCO compared to prior periods; correspondingly, the increase in Q4 2020 is mainly a result of the TRA provision of \$5.3 million and increased collections from TANESCO compared to the previous quarter.

Adjusted funds flow from operations from Q1 2019 to Q4 2019 showed consistent growth coinciding primarily with the increase in revenue. The increase in Q4 2019 was primarily related to the increased deliveries through the NNGI following the signing of the new LTGSA which resulted in TPDC taking gas deliveries as high as 40 MMcfd during the quarter. The decline from Q4 2019 to Q2 2020 is reflective of the decrease in revenue due to the availability of hydropower with revenue again increasing in Q3 2020 and Q4 2020.

Capital expenditures in 2019 and Q1 and Q2 2020 primarily relate to the refrigeration project and flowline decoupling and construction work. Capital expenditures in Q3 2020 and Q4 2020 mainly relate to the Compression Contract.

Selected Annual Financial Information

Selected annual financial information derived from the audited consolidated financial statements for the years ended December 31, 2020, 2019 and 2018 is set out below:

Figures in \$'000 except per share amount	2020	2019	2018
Revenue	77,874	85,595	57,766
Net income attributable to shareholders	27,761	24,718	13,270
Earnings – basic and diluted (\$ per share)	1.00	0.71	0.38
Cash dividends declared (CDN\$ per Class A and B Shares)	0.28	0.23	0.60
Net cash flows from operating activities	46,505	34,873	28,752
Adjusted funds flow from operations ¹	39,144	43,213	19,255
Total non-current liabilities	98,008	102,603	104,345
Total assets	242,612	271,772	262,441

¹ See Non-GAAP measures.

Revenue increased by 48% in 2019 compared to 2018. This was a result of increased sales to TANESCO and TPDC through NNGI as well as a higher current income tax adjustment. The 9% decrease of revenue in 2020 compared to 2019 was primarily due to lower power sales volumes and a lower current income tax adjustment.

The increases in net income attributable to shareholders in 2019 and in 2020 were primarily due to the changes in revenue and increased reversal of loss allowances related to the collection of TANESCO arrears.

The dividend in 2018 of CDN\$0.60 per share was approved following the sale of a 7.9% interest in PAEM. In 2019 the Company approved quarterly dividends, CDN\$0.05 per share for Q1 2019 and CDN\$0.06 per share for Q2, Q3 and Q4 2019. In 2020 the Company approved quarterly dividends, CDN\$0.06 per share for Q1 and Q2 2020 and CDN\$0.08 per share for Q3 and Q4 2020. Please refer to the table in the Substantial Issuer Bid, Normal Course Issuer Bid and Dividends section of this MD&A.

The increases in net cash flows from operating activities compared to net income are primarily related to the changes in non-cash working capital associated with decreases in prepayments and in trade and other receivables.

The changes in adjusted funds flow from operations primarily relate to increases and decreases in deliveries and revenue between periods.

Total non-current liabilities did not change significantly between the years. The decrease of \$1.7 million in 2019 compared to 2018 was primarily due to the repayment of a portion of the Loan. The \$4.6 million decrease in 2020 compared to 2019 was a result of the repayment of a portion of the APT.

Total assets increased in 2019 compared to 2018, primarily because of increased collections from TANESCO increasing cash and investment balances. The 11% decrease in 2020 compared to 2019 is mainly a result of the 2020 SIB. Please refer to the Substantial Issuer Bid, Normal Course Issuer Bid and Dividends section of this MD&A.

Non-GAAP Measures

The Company evaluates its performance using a number of non-GAAP (generally accepted accounting principles) measures. These non-GAAP measures are not standardized and therefore may not be comparable to similar measurements of other entities.

- Adjusted funds flow from operations represents net cash flows from operating activities less interest expense and reversal of loss allowances related to the collection of the TANESCO arrears and a previously disputed Songas operatorship receivable before changes in non-cash working capital. This is a performance measure that management believes represents the Company's ability to generate sufficient cash flow to fund capital expenditures and/or service debt.

Management's Discussion & Analysis continued

Non-GAAP Measures continued

\$'000	Three Months ended		Year ended	
	December 31		December 31	
	2020	2019	2020	2019
Net cash flows from operating activities	19,369	5,051	46,505	34,873
Interest expense	(2,370)	(1,621)	(7,887)	(8,279)
Reversal of loss allowance – TANESCO arrears	(3,478)	(7,546)	(19,905)	(11,044)
Reversal of loss allowance – collection of disputed Songas receivables	-	-	(1,046)	-
Loss allowance – TRA	5,337	-	5,337	-
Changes in non-cash working capital	(6,510)	17,595	16,140	27,663
Adjusted funds flow from operations	12,348	13,479	39,144	43,213

- Operating netbacks represent the profit margin associated with the production and sale of Additional Gas and is calculated as revenues less processing and transportation tariffs, TPDC's revenue share, operating and distribution costs per one thousand standard cubic feet of Additional Gas. This is a key measure as it demonstrates the profit generated from each unit of production.
- Adjusted funds flow from operations per share is calculated on the basis of the adjusted funds flow from operations divided by the weighted average number of shares, similar to the calculation of earnings per share.
- Net cash flows from operating activities per share is calculated as net cash flows from operating activities divided by the weighted average number of shares, similar to the calculation of earnings per share.

Use of Estimates and Judgments

The preparation of consolidated financial statements in conformity with IFRS requires management to make judgments, estimates and assumptions that affect the application of accounting policies and the reported amounts of assets, liabilities, income and expenses. The reader is referred to Orca's December 31, 2020 audited consolidated financial statements for a description of estimates and judgments.

Business Risks

Industry and Business Conditions

Competition and operational risk

The oil and gas industry is intensely competitive and the Company competes with other companies which possess greater technical and financial resources. Oil and gas drilling and production operations are subject to all the risks typically associated with such operations, including but not limited to risks of fires, blowouts, spills, cratering and explosions, mechanical and equipment problems, uncontrolled flows or leaks of oil, well fluids, natural gas, brine, toxic gas or other pollutants or hazardous materials, marine hazards with respect to offshore operations, formations with abnormal pressures, adverse weather conditions, natural or man-made disasters, premature decline of reservoirs and invasion of water into producing formations.

Drilling wells is speculative and involves significant costs that may be more than estimated and may not result in any discoveries or additions to our future production or reserves. Operational activities have numerous inherent risks and our license area is located on an island, 25 km offshore mainland Tanzania, and partially in shallow water. This generally increases the operating costs, chances of delay, planning time, technical challenges and risks associated with production activities. Our inability to access appropriate equipment and infrastructure in a timely manner may hinder our access to oil and natural gas markets or delay our oil and natural gas production.

The development of oil and natural gas projects, including the availability and cost of drilling rigs, equipment, supplies, personnel and oilfield services, is subject to delays and cost overruns. The Company may be affected by the inability to respond to changing technological developments and remain competitive. Slower economic growth rates may materially adversely impact our operating results and financial position. Any material inaccuracies in drilling costs, estimates or underlying assumptions will materially affect our business.

Business Risks continued

Industry and Business Conditions continued

COVID-19

The emergence of COVID-19 has resulted in travel bans, mandatory and self-imposed quarantines and isolations, social distancing and the closing of non-essential business which has had a negative impact on economies world-wide. The Company has taken appropriate action to protect employees such as social distancing, working from home where possible and ensuring staff who work on rotation at the Songas Infrastructure are placed into quarantine prior to assuming regular duties. The Company's business, operations and financial condition have not been significantly adversely affected by COVID-19 however there has been a decline in revenue from gas deliveries as a result of temporary business slowdowns and closures and expansion delays. Although the Company has lived with the impact of COVID-19 for over a year, the full extent of the risks surrounding the long-term impact and severity of the COVID-19 pandemic remains unclear at this time. The further spread of COVID-19 could result in volatility and disruptions in regular business operations including disruption of supply chains that could impact operations and performance of counter-parties, volatility in foreign exchange rates, payment delays from customers, additional cyber-security and internal control risk as a result of more employees working remotely as well as declining trade and market sentiment. COVID-19 poses a risk on the financial capacity of the Company's contract counter-parties and potentially their ability to perform contractual obligations and the Company's ability to implement planned capital projects. Although the Company's production and reserves are entirely comprised of gas, a prolonged decline in world oil prices could impact the competitiveness and demand for gas in Tanzania and negatively impact Company revenues, collectability of receivables and cash flow.

Key staff

Our performance and success are largely dependent on the ability, expertise, judgment and discretion of our management and the ability of our technical team to identify, discover, evaluate and develop reserves. We are dependent on members of our management and technical team that may not be easily replaced. The Company does not maintain any key life insurance on any of its employees or officers.

Environmental regulation

The oil and natural gas industry is subject to varying environmental regulations in each of the jurisdictions in which the Company may operate. Environmental regulations place restrictions and prohibitions on emissions of various substances produced concurrently and oil and natural gas and can impact on the selection of drilling sites and facility locations, potentially resulting in increased capital expenditures.

Contractual

We operate in a litigious environment which could result in title or contractual disputes during the ordinary course of business. The inability of one or more third parties who contract with us to meet their obligations to us may adversely affect our financial results.

Marketability and pricing

The marketability and price of natural gas which may be acquired, discovered or marketed by the Company will be affected by numerous factors beyond its control. The natural gas market in Tanzania is developing and there is currently limited access to infrastructure with which to serve potential new markets beyond that being constructed by the Company, Songas and TPDC, which now includes the NNGI. The ability of the Company to market any natural gas from current or future reserves in Tanzania may depend upon its ability to develop natural gas markets in Tanzania and the surrounding region, obtain access to the necessary infrastructure to process gas and to deliver sales gas volumes, including acquiring capacity on pipelines which deliver natural gas to commercial markets. The Company is also subject to market fluctuations in the prices of natural gas, uncertainties related to the delivery and proximity of its reserves to pipelines and processing facilities and extensive government regulation relating to prices, taxes, royalties, land tenure, allowable production, the export of oil and gas and many other aspects of the oil and gas business.

The prices that the Company receives for its natural gas affect the Company's revenue, profitability, access to capital and future growth rate. Historically, the oil and natural gas markets have been volatile and will likely continue to be volatile in the future. Oil prices have experienced significant and sustained declines in the past few years and may continue to be volatile in the future; though gas prices are less volatile, they may also be significantly affected in the longer run.

The natural gas prices the Company receives from its industrial customers fluctuate with the price of heavy fuel oil against which most of the Company's industrial customer contracts are priced. Prices can also be affected by gas on gas competition from other producers in Tanzania. There have been significant onshore and offshore discoveries of gas in the last ten years and it is expected that the development of these discoveries will increase competition in the future. There is also scope for greater government intervention on gas prices as TPDC owns and operates the majority of the gas processing and pipeline infrastructure.

A substantial or extended decline in both global and local oil and natural gas prices may adversely affect our business, financial condition and results of operations. Localized competition with other gas producers and alternative power sources such as hydropower could adversely impact our financial results.

Cyber attack

The oil and gas industry has become increasingly dependent on digital technologies to conduct day-to-day operations including certain exploration, development and production activities. For example, software programs are used to interpret seismic data, manage drilling rigs, conduct reservoir modeling and reserves estimation, and to process and record financial and operating data. A cyber incident could result in information theft, data corruption, operational disruption, and/or financial loss. There can be no assurance that we will not be the target of cyber-attacks in the future or suffer such losses related to any cyber-incident.

Management's Discussion & Analysis continued

Business Risks continued

Financial

Cost of capital

Our business plan requires substantial additional capital that we may be unable to fund out of working capital and cash flow generated from operations or raise on acceptable terms or at all in the future and which may in turn limit our ability to develop our appraisal, development and production activities. The Company's ability to meet its financing obligations or to arrange financing in the future will depend in part upon the prevailing capital market conditions as well as the Company's business performance. There can be no assurance that the Company would be successful in its efforts to meet its current commitments or arrange additional financing on terms satisfactory to the Company.

Collectability of receivables

The Company evaluates the collectability of its receivables on the basis of payment history, frequency and predictability, as well as Management's assessment of the customer's willingness and ability to pay. In the past, the Company has recorded loss allowances for receivables that did not meet the criteria for revenue recognition however no allowances have been recorded for the past two years.

Foreign exchange

The Company operates internationally and is exposed to foreign exchange risk arising from currency fluctuations against the US dollar when transactions and recognized assets and liabilities of the Company are denominated in a currency that is not the US dollar functional currency. The main currencies to which the Company has an exposure are Tanzanian shillings, British pounds sterling, Euros and Canadian dollars.

The majority of the expenditure associated with the operation of the gas distribution system is denominated in Tanzanian shillings. Whilst conversion of Tanzanian shillings into US dollars is unrestricted, the foreign exchange market for Tanzanian shillings is limited and not highly liquid, reducing the Company's ability to convert large amounts of Tanzanian shillings into US dollars at any given time. To mitigate the risk of Tanzanian shilling devaluation, the Company regularly converts Tanzanian shilling receipts into US dollars to the extent practicable. Capital stock, equity financing and any associated stock based compensation are denominated in Canadian dollars. The operational revenue and the majority of capital expenditures are denominated in US dollars.

Fluctuations in currency exchange rates could adversely impact the Company's financial results.

Debt financing

From time to time the Company may enter into transactions to acquire assets or the shares of other companies. These transactions may be financed partially or wholly with debt, which may temporarily increase the Company's debt levels above industry standards. The Company currently has a long-term loan that includes covenants that, among other things, restrict the incurrence of additional indebtedness, payment of dividends under certain conditions, granting of liens, mergers and sale of all or a substantial part of our business or license.

Foreign operations and concentration risk

Asset concentration

The Company's natural gas reserves are currently limited to one producing property, the Songo Songo field, and the productive potential from this field is limited. There is no assurance that the Company will have sufficient deliverability through the existing wells to provide Protected and Additional Gas volumes, and there may be significant capital expenditures associated with any remedial work, workovers, or new drilling required to achieve deliverability. In addition, any difficulties relating to the operation or performance of the field would have a material adverse effect on the Company. A loss or material reduction in production capabilities will have a material adverse effect on the total production and funds flow from operating activities of the Company.

Access to infrastructure

The Company is dependent upon access to the Songas Infrastructure and the Government owned NNGI to deliver gas to customers. The Company operates the Songas Infrastructure however Songas is the owner of the facilities including the 12-inch subsea and the 16-inch surface pipeline systems which transport natural gas from Songo Songo to Dar es Salaam. There are agreements in place to allow the Company to process and transport gas, but there is no assurance that these rights could not be challenged or access curtailed. The inability to access infrastructure would materially impair the Company's ability to realize revenue from natural gas sales.

Reputational

Our Tanzanian operations are anticipated to be our sole source of our near-term revenue earnings. Due to our asset concentration, the success of our operations is dependent on positive commercial relationships with a small number of organizations (including states and parastatal organizations) and certainty with respect to our rights and obligations arising from those relationships. Any damage to our reputation due to the actual or perceived occurrence of any number of events, such as environmental incidents, could negatively impact us. Reputation loss may result in negative publicity and diminished or adversarial stakeholder relationships, which could lead to increased challenges in developing and maintaining community relations, decreased investor confidence, and would likely impede our overall ability to advance our projects, thereby having a material adverse impact on financial performance, cash flows and growth prospects.

Financial continued

Foreign operations and concentration risk continued

Country risk

The geographic location of the license exposes us to an increased risk of loss of revenue or curtailment of production as a result of factors generally associated with foreign operations or arising from factors specifically affecting the area in which we operate or may operate. Tanzania may be considered to be politically and/or economically unstable. Development and operational activities in Tanzania may require protracted negotiations with host governments, national oil companies and third parties and are frequently subject to economic and political considerations, such as, the risks of war, actions by terrorist or insurgent groups, expropriation, nationalization, creeping nationalization, renegotiation or nullification of existing contracts and production sharing agreements, taxation policies, foreign exchange restrictions, changing political conditions, international monetary fluctuations, currency controls and foreign governmental regulations that favor or require the awarding of drilling and construction contracts to local contractors or require foreign contractors to employ citizens of, or purchase supplies from, a particular jurisdiction. In addition, if a dispute arises with foreign operations, the Company may be subject to the exclusive jurisdiction of foreign courts.

In Tanzania the state retains ownership of its minerals and consequently retains control of the exploration and production of hydrocarbon reserves. The GoT has historically been supportive of foreign investment in resource development projects in Tanzania however it has recently adopted a more conservative approach toward foreign involvement in the extractive sector, including the production, transmission, processing and marketing of natural gas. Factors such as changes in government, an increased nationalist sentiment and pressure to preserve development opportunities for local enterprises can result in legal and regulatory changes that can impact our ability to maintain our business operations.

Countries in Africa are susceptible to outbreaks of disease and may lack the resources to effectively contain such an outbreak quickly. Such outbreaks may impact our ability to explore for oil and gas, develop or produce our license areas by limiting access to qualified personnel, increasing costs associated with ensuring the safety and health of our personnel, restricting transportation of personnel, equipment, supplies and oil and gas production to and from our areas of operation and diverting the time, attention and resources of government agencies which are necessary to conduct our operations. In addition, any losses we experience as a result of such outbreaks of disease which impact sales or delay production may not be covered by our insurance policies. If travel bans are implemented or extended to the countries in which we operate, or contractors or personnel refuse to travel there, we could be adversely affected. If services are obtained, costs associated with those services could be significantly higher than planned which could have a material adverse effect on our business, results of operations, and future cash flow.

The recent disputed actions taken by the TRA to seize funds from PAET's bank account using Agency Notices further highlight the country risks of operating in Tanzania. There is no assurance that such disputes will be resolved in favor of the Company and that further such actions may have a material adverse effect on our activities and ability to operate and monetize our interests in Tanzania.

Corruption

Tanzania ranks 94 out of 180 on the 2020 Transparency International Corruption Index (2019: 96 out of 180). Having assessed the Company's exposure to corruption in Tanzania, it has been concluded that the risk of the Company and/or its subsidiaries violating applicable laws prohibiting corrupt activities are mitigated or unlikely given the Company's controls relating to such risks and their effective operation. There is exposure to liabilities under anti-money laundering and/or anti-corruption laws, and any determination that we violated such laws could have a material adverse effect on our business. There can be no assurance that corruption may not indirectly affect or otherwise impair the Company's ability to operate in Tanzania and effectively pursue its business plan in that country.

Contractual, regulatory and legislation risk

Contracts and regulations

The Company's operations are subject to regulation and control by the GoT (see "Principal Terms of the PSA and Related Agreements"). The Company has operated in Tanzania for a number of years and believes that it has had reasonably good relations with the current GoT. Under the principal agreements the Company has the right to market and sell Additional Gas provided that such sales do not jeopardize the priority right of Songas to sell or otherwise dispose of Protected Gas. There is a risk that Songas could exercise its contractual rights, which may curtail our ability to sell Additional Gas if there is insufficient natural gas available for the required volumes of Protected Gas. There can be no assurance that present or future administrations in Tanzania will honor all principal agreements which could materially adversely affect the operations or future cash flows of the Company.

PSA operations are regulated by national and parastatal organizations including the energy regulators (PURA and EWURA), and TPDC. Under our Gas Agreement ("GA") with the GoT, TPDC and Songas, the Company has the right to market and sell Additional Gas. The Amended and Restated Gas Agreement ("ARGA") provided clarification of the Protected Gas volumes and removes all terms dealing with the security of the Protected Gas. The ARGA was initialed by all parties but remains unsigned as at the date of this report. In certain respects, the parties thereto are conducting themselves as though the ARGA is in effect. In 2017 the Additional Gas Plan 2 ("AGP2") was signed further delineating the rights of the Company to market and sell Additional Gas. If our relationships with these counterparties were to deteriorate, then they might choose to exercise their contractual rights under our agreements differently and in a manner that is adverse to our interests. Management does not foresee a material risk with the conduct of the Company's business with an unsigned ARGA at this time.

We have had, and continue to have, disagreements with TPDC regarding certain of our rights and responsibilities under the PSA. Pursuant to the PSA, the Company plans for development and annual work programs must be submitted to TPDC for comment and subsequently to PURA who, under Petroleum Act 2015, insist on the right to approve the budget. We have previously had, and continue to have, disagreements with TPDC and the GoT regarding certain of our rights and responsibilities under the PSA. TPDC has challenged our rights to cost recover a number of items under the PSA including the costs of our downstream operations; however, there are currently no disagreements that have risen to the level of a formal dispute.

There can be no assurance that all of these disagreements will be resolved in our favor or that future disagreements will not arise in Tanzania or with any host government and/or national oil companies in future projects elsewhere that may have a material adverse effect on our exploration or development activities, our ability to operate, our rights under our licenses and local laws or our rights to monetize our interests.

Management's Discussion & Analysis continued

Financial continued

Contractual, regulatory and legislation risk continued

Legislation

The GoT has passed several new laws in the past five years impacting the Company's operation in Tanzania.

The National Energy Policy (2015) and the Petroleum Act, passed in 2015 provided regulatory framework over upstream, mid-stream and downstream gas activity. The Petroleum Act created a new regulator to oversee the upstream sectors, PURA and conferred upon TPDC the status of National Oil Company as the sole aggregator of natural gas in the country. Under the Petroleum Act Article 260 (3) preserves the Company's pre-existing right with TPDC to market and sell Additional Gas together or independently on terms and conditions (including prices) negotiated with third party natural gas customers. There remain differences of opinion between the Company and TPDC on the effect of certain provisions within the Petroleum Act and their application to the Company.

On October 7, 2016, the GoT issued the Petroleum (Natural Gas Pricing) Regulation made under Sections 165 and 258(I) of the Petroleum Act which may give rise to additional uncertainty. These changes could impact our ability to set gas pricing and the introduction of regulated gas pricing could result in operations becoming uneconomical and anticipated revenues could be materially affected. While the PSA has been grandfathered under the Petroleum Act, we can provide no assurances that this situation will remain unchanged in the future.

On July 15, 2017 the GoT passed into law the Natural Wealth and Resources (Permanent Sovereignty) Act, 2017, the Written Laws (Miscellaneous Amendments) Act, 2017, and the Natural Wealth and Resources Contracts (Review and Re-Negotiation of Unconscionable Terms) Act, 2017. The first and second of these acts are forward looking and only apply to agreements entered into on or after July 15, 2017. The GoT may argue that the third of these Acts has retrospective effect in terms of its ability to renegotiate pre-existing contracts. On January 31, 2020 the Government released the Natural Wealth and Resources Contracts (Review and Renegotiation of Unconscionable Terms) Regulations, 2020 which set out further guidance as to how contracts may be renegotiated. These acts contain new regulations including but not limited to regulations that all arbitration processes must be heard within Tanzania and potentially restrict the ability to move funds out of Tanzania.

In 2016, the TRA introduced significant changes to the income tax treatment of the extractive sector with separate new chapters in Part V of the Income Tax Act 2004 ("ITA, 2004") for mining and for petroleum to be effective commencing in 2018. Subsequent to this, further changes were made by the Written Laws (Miscellaneous Amendments) Act, 2017 ("WLMAA, 2017") to exclude cost oil/cost gas from inclusion in both income and expenditure. We are still evaluating the tax effects of the changes as there are a number of uncertainties and ambiguities as to the interpretation and application of certain provisions of the WLMAA, 2017 as there is an absence of regulations and guidance from TRA on the implementation of the changes. In the absence of guidance on these matters, we will continue to use what we believe are reasonable interpretations and assumptions in applying the WLMAA, 2017 for purposes of determining our tax liabilities and filing our tax returns, which interpretations and assumptions may change as we receive additional clarification and implementation guidance. As necessary, we will seek adjustments to the PSA to preserve our economic benefits. In addition, the Natural Wealth and Resources (Permanent Sovereignty) Act, 2017 (the "Permanent Sovereignty Act 2017") and the WLMAA 2017 restrict the ability of companies to repatriate funds out of Tanzania and it is possible that the GoT will seek to argue at some stage that these provisions apply to the Company even though our contracts with the GoT permit this.

Intervening policy and legislative changes such as those described above may conflict with our pre-existing rights under the PSA and other agreements, though it remains unclear how such legislative actions will be implemented and whether and to what extent they will impact us. We are unable to predict what legislation may be proposed that might affect our business or when any such proposals, if enacted, might become effective. Such changes could require increased capital and operating expenditure and could prevent or delay certain of our operations. If, for reasons beyond our control, we are unable to maintain compliance with any legislative changes, whether in the future or past, we may have to cease operations in certain locations.

Principal Terms of the PSA and Related Agreements

The principal terms of the PSA and related agreements are as follows:

Obligations and Restrictions

- (a) The PSA covers two blocks within the Songo Songo gas field where there are gas reserves ("Discovery Blocks"). The Company has the right to conduct petroleum operations on the Discovery Blocks, market and sell all Additional Gas produced and share the net revenue with TPDC for a term of 25 years, expiring in October 2026.
- (b) No sale of Additional Gas may be made from the Discovery Blocks if in the Company's reasonable judgment such sales would jeopardize the supply of Protected Gas. Any Additional Gas contracts entered into are subject to interruption. Songas has the right to request that the Company and TPDC obtain security reasonably acceptable to Songas prior to making any sales of Additional Gas from the Discovery Blocks to secure the Company's and TPDC's obligations in respect of Insufficiency (see (c) below).
- (c) "Insufficiency" occurs if there is insufficient gas from the Discovery Blocks to supply the Protected Gas requirements or if the gas is so expensive to develop that its cost exceeds the market price of alternative fuels at Ubungo.

Where there have been third party sales of Additional Gas by the Company and TPDC from the Discovery Blocks prior to the occurrence of the Insufficiency, the Company and TPDC shall be jointly liable for the Insufficiency and shall satisfy their related liability by either replacing the Indemnified Volume (as defined in (d) below) at the Protected Gas price with natural gas from other sources; or by paying monetary damages equal to the difference between: (a) the market price for a quantity of alternative fuel that is appropriate for the five gas turbine electricity generators at Ubungo without significant modification together with the costs of any modification; and (b) the sum of the price for such volume of Protected Gas (at \$0.55/MMbtu escalated) and the amount of transportation revenues previously credited by Songas to the state electricity utility, TANESCO, for the gas volumes.

- (d) The "Indemnified Volume" means the lesser of the total volume of Additional Gas sales supplied from the Discovery Blocks prior to an Insufficiency and the Insufficiency Volume. "Insufficiency Volume" means the volume of natural gas determined by multiplying the average of the annual Protected Gas volumes for the three years prior to the Insufficiency by 110% and multiplied by the number of remaining years (initial term of 20 years) of the power purchase agreement entered into between Songas and TANESCO in relation to the five gas turbine electricity generators at Ubungo from the date of the Insufficiency.

Access and Development of Infrastructure

- (e) The Company is able to utilize the Songas Infrastructure including the gas processing plant and main pipeline to Dar es Salaam. Access to the Songas Infrastructure is open and can be utilized by any third party that wishes to process or transport gas.

Revenue Sharing Terms and Taxation

- (f) 75% of the gross field revenues derived from the Discovery Blocks, less processing and pipeline tariffs and direct sales taxes in any year ("field net revenue"), can be used to recover past costs incurred. Costs recovered out of field net revenue are termed "Cost Gas".

The Company pays and recovers costs of exploring, developing and operating the Additional Gas with two exceptions: (i) TPDC may recover reasonable market and market research costs as defined under the PSA; and (ii) TPDC has the right to elect to participate in the drilling of at least one well for Additional Gas in the Discovery Blocks for which there is a development program as detailed in an Additional Gas plan ("Additional Gas Plan") as submitted to the MoE, subject to TPDC being able to elect to participate in a development program only once and TPDC having to pay a proportion of the costs of such development program by committing to pay between 5% and 20% of the total costs ("Specified Proportion"). If TPDC does not notify the Company within 90 days of notice from the Company that the MoE has approved the Additional Gas Plan, then TPDC is deemed not to have elected to participate. If TPDC elects to participate, then it will be entitled to a ratable proportion of the Cost Gas and their profit share percentage increases by the Specified Proportion for that development program.

To date, TPDC has neither elected to back in within the prescribed notice period nor contributed any costs associated with backing in. The Company has therefore determined that to date there has been no working interest earned by TPDC. For the purpose of the reserves certification as at December 31, 2020, there are no planned drilling activities to the end of the license.

Management's Discussion & Analysis continued

Principal Terms of the PSA and Related Agreements continued

Revenue Sharing Terms and Taxation continued

(g) The Company's long-term gas price to the Power sector as set out in the ARGA between the GoT, TPDC and Songas and the PGSA is based on the price of gas at the wellhead. As at the date of this report, the ARGA remains an initialed agreement only and the parties are not in agreement with all the terms in the ARGA, however the parties are conducting themselves in terms of pricing as though the ARGA is in force.

In 2011 the Company signed a re-rating agreement with TANESCO, TPDC and Songas (the "Re-Rating Agreement") which evidenced an increase to the gas processing capacity of the Songas Infrastructure to a maximum of 110 MMcfd (the pipeline and pressure requirements at the Ubungo power plant restrict the infrastructure capacity to a maximum of 102 MMcfd). Under the terms of the Re-Rating Agreement, the Company paid additional compensation of \$0.30/mcf for sales between 70 MMcfd and 90 MMcfd and \$0.40/mcf for volumes above 90 MMcfd by issuing credit notes to TANESCO. This was in addition to the tariff of \$0.59/mcf payable to Songas as set by the energy regulator, Energy and Water Regulatory Authority ("EWURA"). Songas terminated the Re-Rating Agreement in 2014 although there remains a disagreement as to its current status.

In May 2016 the Company notified TANESCO and Songas that the additional compensation for sales over 70 MMcfd would no longer be paid effective June 2016. The additional compensation was always intended to be temporary in nature until the expansion of the Songas Infrastructure, at which time Songas would apply to EWURA to obtain approval of a new tariff for the processing of volumes over 70 MMcfd. The processing capacity at the Songas Infrastructure remains unaltered and is fully available for the Company's utilization along with the additional capacity within the NNGI which includes two gas processing facilities and pipelines supplying gas from the Mtwara Region of Tanzania and Songo Songo Island to Dar es Salaam. The PGSA provides for passing on to TANESCO any tariff to be charged to the Company in the event that a new tariff is approved.

In Q3 2017 the Company received approval of the Additional Gas Plan 2 ("AGP2") from the MoE to produce and sell increased volumes of Additional Gas. Currently wells SS-10, SS-11 and SS-12 are connected to the NNGI and the SS-12 well started flowing gas through the NNGI in December 2018.

In May 2019 the Company and TPDC signed the LTGSA, initially for volumes up to 20 MMcfd which was increased subsequently to 30 MMcfd on a best endeavours basis. In 2020 the parties established a 12-month renewable agreement for the supply of volumes above 30 MMcfd on an ad-hoc basis, allowing TPDC to meet fluctuating demand and compensate for shortfalls in production from their Madimba plant without being penalized due to a higher, fixed contractual limit and the subsequent take-or-pay penalties should the demand reduce again. The agreement has allowed the Company to supply volumes in excess of 50 MMcfd on occasion, increasing average sales volumes and revenues.

(h) Profits on sales from the Proven Section ("Profit Gas") are shared between TPDC and the Company, the proportion of which is dependent on the average daily volumes of Additional Gas sold or cumulative production.

The Company receives a higher share of the field net revenue after cost recovery, based on the higher of the cumulative production or the average daily sales. The Profit Gas share available to the Company is a minimum of 25% and a maximum of 55%.

Average daily sales of Additional Gas MMcfd	Cumulative sales of Additional Gas Bcf	TPDC's share of Profit Gas %	Company's share of Profit Gas %
0 – 20	0 – 125	75	25
> 20 <= 30	> 125 <= 250	70	30
> 30 <= 40	> 250 <= 375	65	35
> 40 <= 50	> 375 <= 500	60	40
> 50	> 500	45	55

For Additional Gas produced outside of the Proven Section, the Company's Profit Gas share is 55%.

Where TPDC elects to participate in a development program, its profit share percentage increases by the Specified Proportion (for that development program) with a corresponding decrease in the Company's percentage share of Profit Gas.

The Company is liable for income tax in Tanzania. Where income tax is payable, the Company pays the tax and there is a corresponding deduction in the amount of the Profit Gas payable to TPDC.

(i) "Additional Profits Tax" (or "APT") is payable when the Company recovers its costs out of Additional Gas revenues plus an annual operating return under the PSA of 25%, plus the percentage change in the United States Industrial Goods Producer Price Index ("PPI"). The maximum APT rate is 55% of the Company's Profit Gas when costs have been recovered with an annual return of 35% plus PPI return. The PSA is, therefore, structured to encourage the Company to develop the market and the gas fields in the knowledge that the Profit Gas share can increase with larger daily gas sales and that the costs will be recovered with a 25% plus PPI annual return before APT becomes payable. APT can have a significant negative impact on project economics if only limited capital expenditure is incurred.

Principal Terms of the PSA and Related Agreements continued

Revenue Sharing Terms and Taxation continued

- (j) The Company is appointed to develop, produce and process Protected Gas and operate and maintain the Songas Infrastructure, including the staffing, procurement, capital improvements, contract maintenance, maintenance of books and records, preparation of reports, maintenance of permits, waste handling, liaison with the GoT and taking all necessary safety, health and environmental precautions, all in accordance with good oilfield practices. In return, the Company is paid or reimbursed by Songas so that it neither benefits nor suffers a loss as a result of its performance.
- (k) In the event of loss arising from Songas' failure to perform, and the loss is not fully compensated by Songas or through insurance coverage, then the Company is liable to a performance and operational guarantee of \$2.5 million when (i) the loss is caused by the gross negligence or willful misconduct of the Company, its subsidiaries or employees, and (ii) Songas has insufficient funds to cure the loss and operate the project.

Protected Gas

Under the terms of the Gas Agreement for the Songo Songo project ("Gas Agreement"), in the event that there is a shortfall/insufficiency in Protected Gas as a consequence of the sale of Additional Gas, the Company is liable to pay the difference between the price of Protected Gas (\$0.55/MMBtu escalated) and the price of an alternative feedstock multiplied by the volumes of Protected Gas up to a maximum of the volume of Additional Gas sold (235 Bcf as at December 31, 2020). The Company did not have a shortfall during the reporting period and does not anticipate a shortfall arising during the term of the Protected Gas delivery obligation to July 2024.

Re-Rating Agreement

In 2011 the Company, TPDC and Songas signed the Re-Rating Agreement which evidenced an increase to the gas processing capacity of the Songas Infrastructure to a maximum of 110 MMcf (the pipeline and delivery pressure requirements at the Ubungo power plant restrict the infrastructure capacity to a maximum of 102 MMcf). Under the terms of the Re-Rating Agreement, the Company paid additional compensation of \$0.30/mcf for sales between 70 MMcf and 90 MMcf and \$0.40/mcf for volumes above 90 MMcf by issuing credit notes to TANESCO. This was in addition to the tariff of \$0.59/mcf payable to Songas as set by the energy regulator, EWURA.

Although Songas notified the Company in 2014 that the Re-Rating Agreement was terminated, the parties have continued to produce, transport and sell gas volumes in line with the re-rated plant capacity. In May 2016 the Company notified TANESCO and Songas that the additional compensation for sales over 70 MMcf would no longer be paid effective June 2016. The additional compensation was always intended to be temporary in nature until the expansion of the Songas Infrastructure, at which time Songas would apply to EWURA to obtain approval of a new tariff for the processing of volumes over 70 MMcf. The PGSA provides for passing on to TANESCO any tariff charged to the Company should a new tariff be approved.

The parties to the Re-Rating Agreement are in the process of negotiating a replacement agreement which may address the additional compensation paid. In the interim, the processing capacity at the Songas Infrastructure remains unaltered and is fully available for utilization by the Company. This capacity is in addition to the capacity available within the NNGI.

Portfolio Gas Supply Agreement

In June 2011 the PGSA was signed (term to June 30, 2023) between TANESCO (as the buyer) and the Company and TPDC (collectively as the seller). TANESCO requested a change to the PGSA maximum daily quantity which PAET and TPDC approved effective January 29, 2018. The seller is now obligated, subject to infrastructure capacity, to sell a maximum of approximately 26 MMcf (previously 36 MMcf) for use in any of TANESCO's current power plants, except those operated by Songas at Ubungo. Under the agreement, the basic wellhead price of approximately \$2.98/mcf increased to \$3.04/mcf on July 1, 2018, to \$3.10/mcf on July 1, 2019 and \$3.14/mcf on July 1, 2020.

Long-term Gas Sales Agreement

On May 14, 2019 the Company and TPDC signed the LTGSA for an initial delivery of 20 MMcf through the NNGI, at a price of \$3.10/MMBtu as at January 1, 2019, (escalating 2% per annum) exclusive of any processing and transportation tariff associated with the NNGI. The LTGSA was amended on September 24, 2019 to increase the volumes supplied through the NNGI up to a maximum daily quantity of 30 MMcf. In 2020 the parties established a 12-month renewable agreement for the supply of volumes above 30 MMcf on an ad-hoc basis, allowing TPDC to meet fluctuating demand and compensate for shortfalls in production from their Madimba plant without being penalized due to a higher, fixed contractual limit and the subsequent take-or-pay penalties should the demand reduce again. The agreement has allowed the Company to supply volumes in excess of 50 MMcf on occasion, increasing average sales volumes and revenues. All volumes above 20 MMcf are supplied on a best endeavours basis until compression facilities are added to the Songas Infrastructure.

TPDC Back-in

TPDC has the rights under the PSA to 'back in' to the Songo Songo field development and to convert this into a carried working interest in the PSA. The current terms of the PSA require TPDC to provide formal notice in a defined period and contribute a proportion of the costs of any development, sharing in the risks in return for an additional share of the gas. To date, TPDC has not contributed any costs nor provided any formal notice of intent to do so.

Management's Discussion & Analysis continued

Forward-Looking Statements

This MD&A contains forward-looking statements or information (collectively, "forward-looking statements") within the meaning of applicable securities legislation. All statements, other than statements of historical fact included in this MD&A, which address activities, events or developments that Orca expects or anticipates to occur in the future, are forward-looking statements. Forward-looking statements often contain terms such as may, will, should, anticipate, expect, continue, estimate, believe, project, forecast, plan, intend, target, outlook, focus, could and similar words suggesting future outcomes or statements regarding an outlook. More particularly, this MD&A contains, without limitation, forward-looking statements pertaining to the following: the Company's expectations regarding supply and demand of natural gas; the Company's expectations regarding timing for the completion of installation of compression on the Songas Infrastructure; the expected expenditures required to complete the installation of the compression on the Songas Infrastructure; the growth of the Tanzanian domestic gas markets; anticipated production volumes and increased well deliverability as a result of the installation of compression on the Songas Infrastructure; current and potential production capacity of the Songo Songo gas field; the anticipated increase in production capabilities following the implementation of the flowline decoupling project; expected timing, cost and ability to remediate three onshore wells, SS-3, SS-4 and SS-10; timing for receiving tender results in respect of the workover program; the Company's expectation that it will not incur any losses from debtors; the Company's expectation that all planned capital expenditures be funded out of existing working capital and cash flow generated by current operations; the Company's expectations in respect of the resolution of the dispute with the TRA relating to the loss allowance; the timing and effective rate of the APT payable by the Company; the Company's expectations in respect of its appeals on the decisions of the TRAB and TRAT and other statements under "Contingencies – Taxation"; the Company's expectation that the Songas Infrastructure production volumes will not be restricted; the Company's ability to produce additional volumes; the availability of debt financing; the Company's expectation that it can expand and maintain the deliverability of gas volumes in excess of the existing Songas Infrastructure; and the expectation that the IASB pronouncements will not have any impact on the Company's consolidated financial statements. In addition, statements relating to "reserves" are by their nature forward-looking statements, as they involve the implied assessment, based on certain estimates and assumptions that the reserves described can be produced profitably 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: failure to receive payments from TANESCO; risk that the potential financing solutions to resolve the TANESCO arrears are not implemented by the Tanzanian government; potential negative effect of the Company's decision to suspend efforts to acquire and develop an integrated gas business in other African countries; risk that the well workovers are unsuccessful or determined to be unfeasible; risk of a lack of access to Songas processing and transportation facilities; risk that the Company may be unable to complete additional field development to support the Songo Songo production profile through the life of the licence; risk that the Company may be unable to develop additional supply or increase production values; risks associated with the Company's ability to complete sales of Additional Gas; potential negative effect on the Company's rights under the PSA and other agreements relating to its business in Tanzania as a result of the Petroleum Act, 2015 and other recently enacted 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; risk that the Company will not be successful in appealing claims made by the TRA and may be required to pay additional taxes and penalties; 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; changes in laws and regulations including the adoption of new environmental laws and regulations, impact of new local content regulations and variances in how they are interpreted and enforced; increased competition; the lack of availability of qualified personnel or management; fluctuations in commodity prices, foreign exchange or interest rates; stock market volatility; competition for, among other things, capital, oil and gas field services and skilled personnel; failure to obtain required equipment for field development; delays in development plans; failure to obtain expected results from the drilling or workover of wells; effect of changes to the PSA on the Company as a result of the implementation of the new government policies for the oil and gas industry; changes in laws; imprecision in reserve estimates; the production and growth potential of the Company's assets; obtaining required approvals of regulatory authorities; failure to install compression on the Songas Infrastructure on the timeline anticipated; failure to obtain tender results from service providers in respect of the workover program on the timeline anticipated; risks associated with negotiating with foreign governments; inability to satisfy debt conditions of financing; failure to successfully negotiate agreements; risk that the Company will not be able to fulfil its contractual obligations; 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; and 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. In addition, there are risks and uncertainties associated with oil and gas operations, therefore the Company's actual results, performance or achievement could differ materially from those expressed in, or implied by, these forward-looking statements and, accordingly, no assurances can be given that any of the events anticipated by these forward-looking statements will transpire or occur, or if any of them do so, what benefits the Company will derive therefrom. Readers are cautioned that the foregoing list of factors is not exhaustive.

Forward-Looking Statements continued

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 be able to negotiate Additional Gas sales contracts; the ability of the Company to complete additional developments and increase its production capacity; the actual costs to complete the Company's development program are in line with estimates; that there will continue to be no restrictions on the movement of cash from Mauritius or Tanzania; the impact of the COVID-19 pandemic on the demand for and price of natural gas, volatility in financial markets, disruptions to global supply chains and the Company's business, operations, access to customers and suppliers, availability of employees to carry out day-to-day operations, and other resources; 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 successfully negotiate agreements; receipt of required regulatory approvals; the ability of the Company to increase production as required to meet demand; 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 Petroleum Act, 2015 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.

The forward-looking statements contained in this MD&A are made as of the date hereof and the Company undertakes no obligation to update publicly or revise any forward-looking statements or information, whether as a result of new information, future events or otherwise, unless so required by applicable securities laws.

Additional Information

Additional information relating to the Company is available on SEDAR at www.sedar.com.

Glossary

mcf	Thousand standard cubic feet	1P	Proven reserves
MMcf	Million standard cubic feet	2P	Proven and probable reserves
Bcf	Billion standard cubic feet	kWh	Kilowatt hour
Tcf	Trillion standard cubic feet	MW	Megawatt
MMcfd	Million standard cubic feet per day	\$	US dollars
MMbtu	Million British thermal units	CDN\$	Canadian dollars

Management's Report to Shareholders

The accompanying consolidated financial statements of Orca Energy Group Inc. are the responsibility of Management. The financial and operating information presented in this annual report is consistent with that shown in the consolidated financial statements.

The consolidated financial statements have been prepared by Management, on behalf of the Board, in accordance with the accounting policies disclosed in the notes to the consolidated financial statements. Where necessary, management has made informed judgments and estimates in accounting for transactions which were not complete at the balance sheet date. In the opinion of management, the consolidated financial statements have been prepared within acceptable limits of materiality and are in accordance with International Financial Reporting Standards (IFRS) as issued by the International Accounting Standards Board (IASB) appropriate in the circumstances.

Management maintains appropriate systems of internal controls. Policies and procedures are designed to give reasonable assurance that transactions are properly authorized, assets are safeguarded and financial records are properly maintained to provide reliable information for the preparation of financial statements. An independent firm of Chartered Professional Accountants, as appointed by the Shareholders, audited the consolidated financial statements in accordance with the Canadian Generally Accepted Auditing Standards to enable them to express an opinion on the fairness of the consolidated financial statements in accordance with International Financial Reporting Standards (IFRS) as issued by the International Accounting Standards Board (IASB).

The Board of Directors carries out its responsibility for the financial reporting and internal controls of the Company principally through an Audit Committee. The committee has met with the independent auditors and Management in order to determine if Management has fulfilled its responsibilities in the preparation of the consolidated financial statements. The consolidated financial statements have been approved by the Board of Directors on the recommendation of the Audit Committee.



Jay Lyons
Interim Chief Executive Officer
April 21, 2021



Blaine E. Karst
Chief Financial Officer
April 21, 2021

Independent Auditors' Report

To the Shareholders of Orca Energy Group Inc.

Opinion

We have audited the consolidated financial statements of Orca Energy Group Inc. (the Entity), which comprise:

- the consolidated statements of financial position as at December 31, 2020 and December 31, 2019
- the consolidated statements of comprehensive income for the years then ended
- the consolidated statements of changes in shareholders' equity for the years then ended
- the consolidated statements of cash flows for the years then ended
- and notes to the consolidated financial statements, including a summary of significant accounting policies

(Hereinafter referred to as the "financial statements").

In our opinion, the accompanying financial statements present fairly, in all material respects, the consolidated financial position of the Entity as at December 31, 2020 and December 31, 2019, and its consolidated financial performance and its consolidated cash flows for the years then ended in accordance with International Financial Reporting Standards (IFRS) as issued by the International Accounting Standards Board (IASB).

Basis for Opinion

We conducted our audit in accordance with Canadian generally accepted auditing standards. Our responsibilities under those standards are further described in the "Auditors' Responsibilities for the Audit of the Financial Statements" section of our auditors' report.

We are independent of the Entity in accordance with the ethical requirements that are relevant to our audit of the financial statements in Canada and we have fulfilled our other ethical responsibilities in accordance with these requirements.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

Other Information

Management is responsible for the other information. Other information comprises:

- the information included in Management's Discussion & Analysis filed with the relevant Canadian Securities Commissions.
- the information, other than the financial statements and the auditors' report thereon, included in a document likely to be entitled "Annual Report".

Our opinion on the financial statements does not cover the other information and we do not and will not express any form of assurance conclusion thereon.

In connection with our audit of the financial statements, our responsibility is to read the other information identified above and, in doing so, consider whether the other information is materially inconsistent with the financial statements or our knowledge obtained in the audit and remain alert for indications that the other information appears to be materially misstated.

We obtained the information included in Management's Discussion & Analysis filed with the relevant Canadian Securities Commissions as at the date of this auditors' report. If, based on the work we have performed on this other information, we conclude that there is a material misstatement of this other information, we are required to report that fact in the auditors' report.

We have nothing to report in this regard.

The information, other than the financial statements and the auditors' report thereon, included in a document likely to be entitled "Annual Report" is expected to be made available to us after the date of this auditors' report. If, based on the work we will perform on this other information, we conclude that there is a material misstatement of this other information, we are required to report that fact to those charged with governance.

Responsibilities of Management and Those Charged with Governance for the Financial Statements

Management is responsible for the preparation and fair presentation of the financial statements in accordance with International Financial Reporting Standards (IFRS) as issued by the International Accounting Standards Board (IASB), and for such internal control as management determines is necessary to enable the preparation of financial statements that are free from material misstatement, whether due to fraud or error. In preparing the financial statements, management is responsible for assessing the Entity's ability to continue as a going concern disclosing as applicable, matters related to going concern and using the going concern basis of accounting unless management either intends to liquidate the Entity or to cease operations, or has no realistic alternative but to do so.

Those charged with governance are responsible for overseeing the Entity's financial reporting process.

Independent Auditors' Report continued

Auditors' Responsibilities for the Audit of the Financial Statements

Our objectives are to obtain reasonable assurance about whether the financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditors' report that includes our opinion.

Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with Canadian generally accepted auditing standards will always detect a material misstatement when it exists.

Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of the financial statements.

As part of an audit in accordance with Canadian generally accepted auditing standards, we exercise professional judgment and maintain professional skepticism throughout the audit.

We also:

- Identify and assess the risks of material misstatement of the financial statements, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for our opinion.
The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control.
- Obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Entity's internal control.
- Evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by management.
- Conclude on the appropriateness of management's use of the going concern basis of accounting and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the Entity's ability to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw attention in our auditors' report to the related disclosures in the financial statements or, if such disclosures are inadequate, to modify our opinion. Our conclusions are based on the audit evidence obtained up to the date of our auditors' report. However, future events or conditions may cause the Entity to cease to continue as a going concern.
- Evaluate the overall presentation, structure and content of the financial statements, including the disclosures, and whether the financial statements represent the underlying transactions and events in a manner that achieves fair presentation.
- Communicate with those charged with governance regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that we identify during our audit.
- Provide those charged with governance with a statement that we have complied with relevant ethical requirements regarding independence, and communicate with them all relationships and other matters that may reasonably be thought to bear on our independence, and where applicable, related safeguards.
- Obtain sufficient appropriate audit evidence regarding the financial information of the entities or business activities within the group Entity to express an opinion on the financial statements. We are responsible for the direction, supervision and performance of the group audit. We remain solely responsible for our audit opinion.

The engagement partner on the audit resulting in this auditors' report is Petre Gueorguiev Kotev.



Chartered Professional Accountants
Calgary, Canada
April 21, 2021

Consolidated Statements of Comprehensive Income

\$'000	Note	Years ended December 31	
		2020	2019
Revenue	7	77,874	85,595
Production, distribution and transportation		11,904	11,865
Net production revenue		65,970	73,730
Operating expenses			
General and administrative	8	13,592	14,397
Stock based compensation	17	1,074	2,455
Depletion	13	14,830	15,005
Reversal of loss allowance for receivables	12	(15,614)	(11,044)
Finance income	9	(1,149)	(2,865)
Finance expense	9	9,322	9,866
Income before tax		43,915	45,916
Income tax expense – current	10	7,384	10,657
Income tax expense – deferred	10	3,356	2,326
Additional Profits Tax	11	4,054	6,587
Net income		29,121	26,346
Net income attributable to non-controlling interest	24	1,360	1,628
Net income attributable to shareholders		27,761	24,718
Foreign currency translation gain from foreign operations		(39)	(38)
Comprehensive income		27,800	24,756
Net income attributable to shareholders per share (\$)			
Basic and diluted	18	1.00	0.71

See accompanying notes to the consolidated financial statements.

Consolidated Statements of Financial Position

\$'000	Note	As at December 31	
		2020	2019
ASSETS			
Current assets			
Cash and cash equivalents		104,190	93,899
Investment in short-term bonds	9	-	44,756
Trade and other receivables	12	21,880	22,167
Prepayments		898	6,752
		126,968	167,574
Non-current assets			
Long-term receivables	15	2,214	2,250
Investments	24	3,967	3,967
Capital assets	13	109,463	97,981
		115,644	104,198
Total assets		242,612	271,772
EQUITY AND LIABILITIES			
Current liabilities			
Trade and other payables	14	39,287	48,161
Tax payable		1,956	501
Current portion of Additional Profits Tax	11	11,489	11,940
		52,732	60,602
Non-current liabilities			
Deferred income taxes	10	18,509	15,153
Lease liabilities	13	423	1,129
Long-term loan	16	54,246	54,057
Additional Profits Tax	11	24,830	32,264
		98,008	102,603
Total liabilities		150,740	163,205
SHAREHOLDERS' EQUITY			
Capital stock	17	63,243	84,099
Contributed surplus		-	4,181
Accumulated other comprehensive loss		(171)	(210)
Accumulated income		27,277	20,334
Non-controlling interest	24	1,523	163
		91,872	108,567
Total equity and liabilities		242,612	271,772

See accompanying notes to the consolidated financial statements.

Nature of operations (Note 1); Contractual obligations and committed capital investment (Note 20); Contingencies (Note 21); Subsequent events (Note 25).
The consolidated financial statements were approved by the Board on April 21, 2021.



Director



Director

Consolidated Statements of Cash Flows

\$'000	Note	Years ended December 31	
		2020	2019
OPERATING ACTIVITIES			
Net Income		29,121	26,346
Adjustment for:			
Depletion and depreciation	13	15,321	15,329
Loss on disposal of lease		293	-
Indirect tax	9	1,873	1,298
Stock based compensation	17	1,074	2,455
Deferred income taxes	10	3,356	2,326
Additional Profits Tax	11	4,054	6,587
Unrealized loss on foreign exchange		(334)	(84)
Interest expense	9	7,887	8,279
Change in non-cash operating working capital	23	(16,140)	(27,663)
Net cash flows from operating activities		46,505	34,873
INVESTING ACTIVITIES			
Capital expenditures	13	(27,036)	(4,285)
Proceeds from sale of investments in bonds, net	9	44,756	22,081
Net cash from investing activities		17,720	17,796
FINANCING ACTIVITIES			
Long-term loan repayment	16	-	(4,760)
Lease payments	13	(759)	(254)
Substantial issuer bid	17	(38,170)	-
Normal course issuer bid	17	(2,149)	(4,547)
Interest paid	9	(7,887)	(8,431)
Dividends paid to shareholders	17	(5,443)	(4,476)
Dividends paid to non-controlling interest	24	-	(952)
Net cash used in financing activities		(54,408)	(23,420)
Increase in cash		9,817	29,249
Cash and cash equivalents at the beginning of the year		93,899	64,660
Effect of change in foreign exchange on cash for the year		474	(10)
Cash and cash equivalents at the end of the year		104,190	93,899

See accompanying notes to the consolidated financial statements.

Consolidated Statements of Changes in Shareholders' Equity

\$'000	Capital stock	Contributed surplus	Accumulated other comprehensive loss	Accumulated income	Non- controlling Interest	Total
Note	17			17	24	
Balance as at December 31, 2019	84,099	4,181	(210)	20,334	163	108,567
Share repurchase	(20,856)	(4,181)	-	(14,460)	-	(39,497)
Share repurchase costs	-	-	-	(822)	-	(822)
Dividends declared	-	-	-	(5,536)	-	(5,536)
Foreign currency translation adjustment on foreign operations	-	-	39	-	-	39
Net income	-	-	-	27,761	1,360	29,121
Balance as at December 31, 2020	63,243	-	(171)	27,277	1,523	91,872

\$'000	Capital stock	Contributed surplus	Accumulated other comprehensive loss	Accumulated income	Non- controlling Interest	Total
Note	17			17	24	
Balance as at December 31, 2018	86,508	6,319	(248)	1,636	(513)	93,702
Share repurchase	(2,409)	(2,138)	-	-	-	(4,547)
Dividend declared	-	-	-	(6,020)	-	(6,020)
Foreign currency translation adjustment on foreign operations	-	-	38	-	-	38
Net income	-	-	-	24,718	1,628	26,346
Non-controlling interest dividend declared and paid	-	-	-	-	(952)	(952)
Balance as at December 31, 2019	84,099	4,181	(210)	20,334	163	108,567

See accompanying notes to the consolidated financial statements.

Notes to the Consolidated Financial Statements

General Information

Orca Energy Group Inc. (formerly Orca Exploration Group Inc.) was incorporated on April 28, 2004 under the laws of the British Virgin Islands with registered offices located at PO Box 146, Road Town, Tortola, British Virgin Islands, VG110. The Company produces and sells natural gas to the power and industrial sectors in Tanzania and the name change reflects the Company's focus on developing and producing proven gas resources.

The consolidated financial statements of the Company as at and for the year ended December 31, 2020 comprise accounts of the Company and its subsidiaries (collectively, the "Company" or "Orca Energy") and were authorized for issue in accordance with a resolution of the directors on April 21, 2021. The Company is controlled by Shaymar Limited who is the registered holder of 24.6% of the equity and controls 71.4% of the total votes of the Company. The shares are held in a trust that is independently managed for the beneficiaries.

1. Nature of Operations

The Company's principal operating asset is an interest held by a subsidiary, PanAfrican Energy Tanzania Limited ("PAET") in a Production Sharing Agreement ("PSA") with the Tanzania Petroleum Development Corporation ("TPDC") and the Government of Tanzania ("GoT") in the United Republic of Tanzania. This PSA covers the production and marketing of certain gas from the Songo Songo Block offshore Tanzania.

The PSA defines gas in the Songo Songo field as "Protected Gas" and "Additional Gas". The "Protected Gas" is owned by TPDC and is sold under a 20-year gas agreement until July 2024 ("Gas Agreement") to Songas Limited ("Songas"). Songas is the owner of the infrastructure that enables the gas to be delivered to Dar es Salaam, which includes a gas processing plant on Songo Songo Island ("Songas Infrastructure"). The Company operates the gas processing plant and field on a 'no gain no loss' basis and receives no revenue for the Protected Gas delivered to Songas.

Under the PSA, the Company has the right to produce and market all gas in the Songo Songo Block in excess of the Protected Gas requirements ("Additional Gas").

The Tanzania Electricity Supply Company Limited ("TANESCO") is a parastatal organization wholly-owned by the Government of Tanzania, with oversight by the Ministry for Energy ("MoE"). TANESCO is responsible for the majority of electricity generation, transmission and distribution throughout Tanzania. The Company currently supplies Additional Gas directly to TANESCO by way of a Portfolio Gas Supply Agreement ("PGSA") and indirectly through the supply of Protected Gas and Additional Gas to Songas and Additional Gas to TPDC who in turn generate and sell power to TANESCO.

The Company delivers gas to TPDC through a long-term gas sales agreement ("LTGSA") to the TPDC operated National Natural Gas Infrastructure ("NNGI") on Songo Songo Island where the natural gas is processed before being transported to Dar es Salaam for power and industrial use.

In addition to gas supplied to TPDC, Songas and TANESCO for the generation of power, the Company has developed and supplies an industrial gas market in the Dar es Salaam area.

2. Basis of Preparation

Statement of Compliance

The consolidated financial statements have been prepared in accordance with International Financial Reporting Standards ("IFRS") as issued by the International Accounting Standards Board ("IASB"). The comparative consolidated statement of cash flows for the year ended December 31, 2019 was adjusted for presentation correction. The "Proceeds from sale of investment in bonds, net" of \$22.1 million was reclassified from financing activities to investing activities.

Basis of Measurement

These consolidated financial statements have been prepared on a historical cost basis and have been prepared using the accrual basis of accounting. The consolidated financial statements are presented in US dollars ("\$") unless otherwise stated.

Basis of Consolidation

Subsidiaries

Subsidiaries are those enterprises controlled by the Company. The following companies have been consolidated within the Orca Energy financial statements:

Subsidiary	Registered	Holding	Functional currency
Orca Energy Group Inc.	British Virgin Islands	Parent Company	US dollar
Orca Exploration UK Services Limited	United Kingdom	100%	British pound
PAE PanAfrican Energy Corporation ("PAEM")	Mauritius	92%	US dollar
PanAfrican Energy Tanzania Limited	Jersey	92%	US dollar
Orca Exploration Italy Inc. ¹	British Virgin Islands	100%	Euro
Orca Exploration Italy Onshore Inc. ¹	British Virgin Islands	100%	Euro

¹ The companies were wound up during 2020.

Transactions Eliminated Upon Consolidation

Inter-company balances and transactions and any unrealized gains or losses arising from inter-company transactions are eliminated in preparing the consolidated financial statements.

Notes to the Consolidated Financial Statements continued

2. Basis of Preparation continued

Foreign Currency

i) Foreign Currency Transactions

Transactions in foreign currencies are recorded at the rate of exchange prevailing at the date of the transaction. Monetary assets and liabilities in foreign currencies are translated at period-end rates. Non-monetary items are translated at historic rates, unless such items are carried at market value, in which case they are translated using the exchange rates that existed when the values were determined. Any resulting exchange rate differences are recognized in earnings.

ii) Foreign Currency Translation

Foreign currency differences are recognized in comprehensive income and accumulated in the translation reserve. The assets and liabilities of these companies are translated into the functional currency at the period-end exchange rate. The income and expenses of the companies are translated into the functional currency at the average exchange rate for the period. Translation gains and losses are included in other comprehensive income.

COVID-19

In the year ended December 31, 2020 global oil prices declined significantly as a result of reduced demand driven by the recent coronavirus pandemic ("COVID-19") and concerns of excess supply resulting from failed negotiations between OPEC and other countries. As of now, there remains a considerable uncertainty regarding the duration and extent of oil demand destruction from the COVID-19 pandemic. Although the Company's production and reserves are entirely comprised of gas, the current challenging economic climate has the potential to have significant adverse impacts on the Company, including, but not limited to:

- potential material declines in revenue and cash flows due to reduced commodity prices,
- potential declines in future revenue, which could result in increased impairment charges on long-term assets,
- potential increased risk of non-performance by the Company's customers which could materially increase collection risk of accounts receivable and customer defaults on contracts,
- potential increased risk of non-performance by the Company's suppliers impacting timing for delivery of equipment and supplies delaying implementation of key projects,
- potential prolonged demand reduction which could negatively impact the Company's ability to maintain liquidity, and
- potential impact on overall operating results and financial position.

There has been a decrease in industrial sales but no significant impact on Company operations to date due to COVID-19 however the current situation is dynamic and the ultimate duration and magnitude of the impact on the economy and the financial effect on the Company are not known at this time. Estimates and judgments made by management in the preparation of these consolidated financial statements are subject to a higher degree of measurement uncertainty during this volatile period. The current volatility in commodity prices and uncertainty regarding the timing for recovery creates inherent challenges with the preparation of financial forecasts.

3. Summary of Significant Accounting Policies

The accounting policies set out below have been applied consistently to all periods presented in these consolidated financial statements.

Capital Assets

i) Capital Assets

Capital assets comprises the Company's tangible natural gas assets, development wells, leasehold improvements, computer equipment, motor vehicles and fixtures and fittings carried at cost, right-of-use assets less any accumulated depletion, depreciation and accumulated impairment losses. Cost includes purchase price and construction costs for qualifying assets. Depletion of these assets commences when the assets are ready for their intended use. Only costs that are directly related to the discovery and development of specific oil and gas reserves are capitalized. The cost associated with tangible natural gas assets are amortized on a unit of production method based on commercial proven reserves. The calculation of the unit of production amortization takes into account the estimated future development cost associated with proven reserves.

ii) Impairment of Property, Plant and Equipment

At each balance sheet date, the Company reviews the carrying amounts of its property, plant and equipment to determine if indicators of impairment exist. Individual assets are grouped together as a cash generating unit ("CGU") for impairment assessment purposes at the lowest level at which there are identifiable cash flows that are independent from other group assets. If any such indication of impairment exists, the Company makes an estimate of its recoverable amount. The recoverable amount is the higher of fair value less costs to sell and value in use. Where the carrying amount of a CGU exceeds its recoverable amount, the CGU is considered impaired and is written down to its recoverable amount. In assessing the value in use, the estimated future cash flows are adjusted for the risks specific to the CGU and are discounted to their present value with a pretax discount rate that reflects the current market indicators. The fair value less costs to sell is the amount that would be obtained from the sale of a CGU in an arm's length transaction between knowledgeable and willing parties. Where an impairment loss subsequently reverses, the carrying amount of the asset CGU is increased to the revised estimate of its recoverable amount, but so that the increased carrying amount does not exceed the carrying amount that would have been determined had no impairment loss been recognized for the CGU in prior years. A reversal of an impairment loss is recognized in earnings.

Operatorship

The Company operates the Songo Songo Gas Field, flowlines and gas processing plant. The Songas wells, flowlines and gas plant are operated by the Company on behalf of Songas on a 'no gain no loss' basis. The cost of operating and maintaining the wells and flowlines is paid for by the Company and Songas in proportion to the respective volumes of Protected Gas and Additional Gas sales. The costs of operating and maintaining the wells and flowlines are reflected in the accounts to the extent that the costs were incurred to accomplish Additional Gas sales. The cost of operating the gas processing plant and pipeline to Dar es Salaam is paid by Songas. Costs incurred by the Company in connection with the operatorship of the Songas plant are recorded as receivables which are re-charged to Songas. Subsequent payments received from Songas are credited to receivables. When there are Additional Gas sales, a tariff is paid to Songas as compensation for using the gas processing plant and pipeline.

Employment Benefits

i) Pension

The Company does not operate a pension plan, but it does make defined contributions to the statutory pension fund for employees in the United Kingdom and Tanzania. Obligations for contributions to the statutory pension fund are recognized as an expense as incurred.

ii) Stock Appreciation Rights and Restricted Stock Units

Stock appreciation rights ("SARs") and restricted stock units ("RSUs") are issued to certain key managers, officers, directors and employees. The fair value of SARs and RSUs are recorded in earnings in accordance with the service period. The fair value of the SARs and RSUs is revalued every reporting date with the change in the value recognized in earnings.

Asset Retirement Obligations

No provision has been made for future site restoration costs in Tanzania because the Company currently has no legal or contractual or constructive obligation under the PSA to restore the fields at the end of their commercial lives, should such occur within the term of the PSA. If an amendment to the PSA is agreed requiring the Company to restore the fields at the end of the commercial lives, a provision will be made for future site restoration costs.

Notes to the Consolidated Financial Statements continued

3. Summary of Significant Accounting Policies continued

Revenue Recognition, Production Sharing Agreements and Royalties

Pursuant to the terms of the PSA, the Company has exclusive rights to (i) to carry on Exploration Operations in the Songo Songo Gas Field; (ii) to carry on Development Operations in the Songo Songo Gas Field and (iii) jointly with TPDC, to sell or otherwise dispose of Additional Gas.

The Company recognizes revenue related to Additional Gas sales to all customers at specified delivery points at benchmark and contractual prices. A good or service is transferred when the customer obtains control of that good or service. The transfer of control of natural gas occurs at the metering points at the inlet to the customer's facility (see Note 7). Under the terms of the PSA, the Company pays both its share and TPDC's share of operating, administrative and capital costs. The Company recovers all reasonably incurred operating, administrative and capital costs including TPDC's share of these costs from future revenues over several years ("Cost Gas"). TPDC's share of operating and administrative costs is recorded in operating and general and administrative costs when incurred and capital costs are recorded in capital assets. All recoveries are recorded as Cost Gas revenue in the year of recovery.

The Company has gas sales contracts under which the customers are required to take, or pay for, a minimum quantity of gas. In the event that a customer has paid for gas that was not delivered, the additional income received by the Company is carried on the balance sheet as deferred revenue. If the customer consumes volumes in excess of the minimum, it will be charged at the current rate, but may receive a credit for volumes paid but not delivered. At the end of each reporting period the Company reassesses the volumes for which the customer may receive credit, any remaining balance is credited to income. As at December 31, 2020, future revenues from take or pay provisions of the LTGSA extending through 2026 are approximately \$0.7 million, of which approximately \$0.4 million is expected to be recognized in 2021.

In any given year, the Company is entitled to recover as Cost Gas up to 75% of the net revenue (gross revenue less processing and pipeline tariffs). Any net revenue in excess of the Cost Gas ("Profit Gas") is shared between the Company and TPDC in accordance with the terms of the PSA. Under the PSA the Profit Gas payable to TPDC is adjusted by the amount necessary to fully pay and discharge the Company's liability for taxes on income. Revenue represents the Company's share of Profit Gas and Cost Gas during the period.

The Company records revenues for sales to TANESCO based on the expected amount to be collected, which represents a percentage of the amounts invoiced to TANESCO determined by comparison of TANESCO's payment history to the amounts invoiced by the Company. Management believes this approach provides the best estimate of TANESCO's ability to pay and remain reasonably current; it also reflects the economic reality of the situation (see Notes 4 and 7).

The estimated percentage used to recognize TANESCO revenue will be reviewed periodically as circumstances require. If there is a significant difference between the amount of revenue recorded and amounts received, the percentage used to record revenue as well as any existing receivable or deferred revenue balance will be revised accordingly. For 2019 and 2020 the Company recognized 100% of amounts invoiced for TANESCO gas deliveries in revenue as payments from TANESCO for the past four years have consistently been higher than amounts invoiced for gas deliveries.

The Company sells its natural gas to power customers (TANESCO, TPDC and Songas) and one industrial customer (a cement manufacturer) pursuant to fixed-price contracts. Sales to other industrial customers are at fixed-price discounts (subject to certain floors and ceilings) to the lowest alternative fuel source in Dar es Salaam, Heavy Fuel Oil ("HFO") and coal. Under all contracts, the Company is required to deliver volumes of natural gas to the contract counter party. Natural gas revenue is recognized when the Company gives up control of the natural gas which occurs at metering points located at the inlets of customers' facilities. The amount of production revenue recognized is based on the agreed transaction price and the volumes delivered.

The Company has entered into contracts with customers with terms ranging from four to six years.

3. Summary of Significant Accounting Policies continued

Additional Profits Tax

Under the terms of the PSA, in the event that all costs have been recovered with an annual return from the PSA of 25% plus the percentage change in the United States Industrial Goods Producer Price Index, an Additional Profits Tax ("APT") is payable to the Government of Tanzania. APT is provided for by forecasting the total APT payable in the future as a proportion of the forecast Profit Gas over the term of PSA license. The actual APT that will be paid is dependent on the achieved value of the Additional Gas sales and the quantum and timing of the operating costs and capital expenditure program.

The PSA states that APT shall be calculated for each year and shall vary with the real rate of return earned by the Company on the net cash flow from the Contract Area (as defined in the PSA). The calculation of APT includes a working capital adjustment reflecting the effect of the timing of actual receipt of amounts owing from TANESCO on net cash flow.

Income Taxes

The Company is liable for Tanzanian income tax on the income for the year; this comprises current and deferred tax. Where current income tax is payable, this is shown as a current tax liability. Deferred tax is provided using the balance sheet method, providing for temporary differences between the carrying amounts of assets and liabilities for financial reporting purposes and the amounts used for taxation purposes. The amount of deferred tax provided is based on the expected manner of realization or settlement of carrying amounts of assets and liabilities using tax rates substantively enacted at the balance sheet date. A deferred tax asset is recognized only to the extent that it is probable that future taxable profits will be available, against which the asset can be utilized. Deferred tax assets are reduced to the extent that it is no longer probable that the related tax benefits will be realized.

Depreciation

Depreciation for non-natural gas properties is charged to earnings on a straight-line basis over the estimated useful economic lives of each class of asset. The estimated useful lives are as follows:

Leasehold improvement	Over remaining life of the lease
Computer equipment	3 years
Vehicles	3 years
Fixtures and fittings	3 years
Leased assets and right-of-use assets	Over the remaining life of the lease

Financial Instruments

All financial instruments are initially recognized at fair value on the consolidated statement of financial position. The Company has classified each financial instrument into one of the following categories: (i) fair value through the statement of comprehensive income (loss), (ii) loans and receivables, and (iii) other financial liabilities. Measurement in subsequent periods depends on the classification of the financial instrument as described below:

- Fair value through profit or loss: financial instruments under this classification include cash and cash equivalents and derivative assets and liabilities.
- Amortized cost: financial instruments under this classification include accounts receivable, investments in bonds, investments, accounts payable and accrued liabilities, dividends payable, finance lease obligations, and long-term debt.

Financial assets and liabilities are recognized when the Company becomes a party to the contractual provisions of the instrument. Financial assets are derecognized when the rights to receive cash flows from the assets have expired or have been transferred and the Company has transferred substantially all risks and rewards of ownership. Financial assets and liabilities are offset and the net amount is reported on the statement of financial position when there is a legally enforceable right to offset the recognized amounts and there is an intention to settle on a net basis, or realize the asset and settle the liability simultaneously.

Cash and Cash Equivalents

Cash and cash equivalents include cash on hand, term deposits and short-term highly liquid investments with the original term to maturity of three months or less, which are convertible to known amounts of cash and which, in the opinion of management, are subject to an insignificant risk of changes in value. The fair value of cash and cash equivalents approximates their carrying amount. There are no restrictions on the movement of funds out of Tanzania.

Investments in Short-Term Bonds

Investments in short-term bonds includes highly liquid investments with the original term to maturity of 12-months or less which are convertible to known amounts of cash and which, in the opinion of management, are subject to an insignificant risk of changes in value. The fair value of the investments in short-term bonds approximates their carrying amount.

Notes to the Consolidated Financial Statements continued

3. Summary of Significant Accounting Policies continued

Impairment of Financial Assets

A financial asset is assessed at each reporting date to determine whether there is any objective evidence that it is impaired. A financial asset is considered to be impaired if objective evidence indicates that one or more events have had a negative effect on the estimated future cash flows of that asset.

An impairment loss in respect of a financial asset measured at amortized cost is calculated as the difference between its carrying amount and the present value of the estimated future cash flows discounted at the original effective interest rate. Individually significant financial assets are tested for impairment on an individual basis. The remaining financial assets are assessed collectively in groups that share similar credit risk characteristics.

All impairment losses are recognized in earnings. An impairment loss is reversed if the reversal can be related objectively to an event occurring after the impairment loss was recognized. For financial assets measured at amortized cost the reversal is recognized in earnings.

Leases

The Company recognizes a right-of-use asset and a lease liability at the lease commencement date. The right-of-use asset is initially measured at cost, which comprises the initial amount of the lease liability adjusted for any lease payments made at or before the commencement date, plus any initial direct costs incurred and an estimate of costs to dismantle and remove the underlying asset or to restore the underlying asset or the site on which it is located, less any lease incentives received.

The right-of-use asset is depreciated using the straight-line method from its commencement date to the earlier of the end of the useful life of the right-of-use asset or end of the lease term. The estimated useful lives of right-of-use assets are determined on the same basis as those of property, plant and equipment. In addition, the right-of-use asset is periodically reduced by impairment losses, if any, and adjusted for certain re-measurements of the lease liability.

The lease liability is initially measured at the present value of the minimum lease payments that are not yet paid at the commencement date, discounted using the interest rate implicit in the lease or, if that rate cannot be readily determined, the Company's incremental borrowing rate for that asset. Generally, the Company uses its incremental borrowing rate as the discount rate. The lease liability is subsequently increased by the interest cost on the lease liability and decreased by lease payments made. It is remeasured when there is a change in future lease payments arising from a change in an index or rate, a change in estimate of the amount expected to be payable under a residual value guarantee, changes in the assessment of whether a purchase or extension option is reasonably certain to be exercised or a termination option is reasonably certain not to be exercised.

Short-Term Leases and Leases of Low Value Assets

The Company has elected not to recognize right-of-use assets and lease liabilities for short term leases that have a term of 12-months or less and leases of low value assets defined as less than \$5,000 USD or less. The Company recognizes the lease payments associated with these leases as an expense when incurred, over the lease term.

Accounting Changes

The following pronouncements from the IASB will become effective or were amended for financial reporting periods beginning on or after January 1, 2020.

On October 22, 2018, the IASB issued "Definition of a Business (Amendments to IFRS 3)" aimed at resolving the difficulties that arise when an entity determines whether it has acquired a business or a group of assets.

On October 31, 2018, the IASB issued "Definition of Material (Amendments to IAS 1 and IAS 8)" to clarify the definition of 'material' and to align the definition used in the Conceptual Framework and the standards themselves.

The amendments to IFRS 3 amendments to IAS and IAS 8 are effective for annual reporting periods beginning on or after January 1, 2020 and apply prospectively and have had no impact on the Company.

4. Use of Estimates and Judgments

The following are the critical judgments, apart from those involving estimations (see below), that management has made in the process of applying the Company's accounting policies and that have the most significant effect on the accounts recognized in these consolidated financial statements.

Critical Judgments in Applying Accounting Policies:

A. Natural gas assets

The Company assesses its natural gas assets for impairment when events or circumstances indicate that the carrying amount of its assets may not be recoverable. If any indication of impairment exists, the Company performs an impairment test on the CGU, which is the lowest level at which there are identifiable cash flows. The carrying amount of the CGU is compared to its recoverable amount which is defined as the greater of its fair value less cost to sell and value in use and is subject to management estimates. These estimates include quantities of reserves and future production, future commodity pricing, development costs, operating costs, and discount rates. Any changes in these estimates may have an impact on the recoverable amount of the CGU.

B. Collectability of receivables

The Company evaluates the collectability of its receivables on the basis of payment history, frequency and predictability, as well as Management's assessment of the customer's willingness and ability to pay. Management performs impairment tests each period on the Company's current and long-term receivables.

C. Statutory taxes

The Company operates in a jurisdiction with complex tax laws and regulations, which are evolving over time. The Company has taken certain tax positions in its tax filings and these filings are subject to audit and potential reassessment after the lapse of considerable time. Accordingly, the actual income tax impact may differ significantly from that estimated and recorded by management.

The recognition or reversal of deferred tax assets requires judgment as to whether or not there will be sufficient taxable profits available to offset the tax assets when they do reverse. This requires assumptions regarding future profitability and is therefore inherently uncertain.

Key Sources of Estimation of Uncertainty

A. Reserves

There are numerous uncertainties inherent in estimating quantities of proved and probable reserves and cash flows to be derived therefrom, including many factors beyond the control of the Company. The reserves and estimated future net cash flow from the Company's properties have been evaluated by independent petroleum engineers. These evaluations include a number of assumptions relating to factors such as initial production rates, production decline rates, ultimate recovery of reserves, timing and amount of capital expenditures, marketability of production, crude oil price differentials to benchmarks, future prices of oil and natural gas, operating costs, transportation costs, cost recovery provisions and royalties, TPDC "back-in" methodology and other Government levies that may be imposed over the producing life of the reserves. These assumptions were based on price forecasts in use at the date the relevant evaluations were prepared and many of these assumptions are subject to change and are beyond the control of the Company. To date, TPDC has neither elected to back in within the prescribed notice period nor contributed any costs associated with backing in.

Reserves are integral to the amount of depletion and impairment test.

B. Fair Value of Stock Based Compensation

All SARs and RSUs granted by the Company are required to be measured at their fair value for each reporting period. In assessing the fair value of the equity based compensation, estimates have to be made as to (i) the volatility in share price, (ii) the risk free rate of interest, (iii) the level of forfeiture, and (iv) the dividend yield.

C. Cost Recovery

The Company is able to recover reasonable costs incurred on the development of the Songo Songo project out of 75% of the gross field revenue less processing and pipeline tariffs ("field net revenue"). There are inherent uncertainties in estimating when costs have been recovered as these costs are subject to Government audit and in exceptional circumstances a potential reassessment after the lapse of a considerable period of time.

D. Financial Instruments Classification and Measurement

The Company's financial instruments include trade and other receivables, long-term receivables, trade and other payables and long-term loan. The Company classifies the fair value of these financial instruments according to the following hierarchy based on the amount of observable inputs used to value the instrument.

- Level 1 – Quoted prices are available in active markets for identical assets or liabilities as of the reporting date. Active markets are those in which transactions occur in sufficient frequency and volume to provide pricing information on an ongoing basis.
- Level 2 – Pricing inputs are other than quoted prices in active markets included in Level 1. Prices in Level 2 are either directly or indirectly observable as of the reporting date. Level 2 valuations are based on inputs, including quoted forward prices for commodities, time value and volatility factors, which can be substantially observed or corroborated in the marketplace.
- Level 3 – Valuation in this level are those with inputs for the asset or liabilities that are not based on observable market data.

The fair value of trade and other receivables and trade and other payables approximate their carrying amount due to the short-term nature of those instruments. The fair value of long-term receivables also approximates their carrying amount.

The Company's long-term loan is classified as Level 2 measurements. The long-term loan bears interest at a fixed rate which is close to the current market rates and accordingly the fair market value of the long-term loan approximates the carrying value.

Notes to the Consolidated Financial Statements continued

5. Risk Management

The Company, by its activities in oil and gas exploration, development and production, is exposed to the risk associated with the unpredictable nature of the financial markets as well as political risk associated with conducting operations in an emerging market. The Company seeks to manage its exposure to these risks wherever possible.

A. Foreign Exchange Risk

Foreign exchange risk arises when transactions and recognized assets and liabilities of the Company are denominated in a currency that is not the US dollar functional currency.

The Company operates internationally and is exposed to foreign exchange risk arising from currency exposures to US dollars. The main currencies to which the Company has an exposure are: Tanzanian shillings, British pounds sterling, Euros and Canadian dollars.

The majority of contracts with customers are based on US dollar prices for gas delivered however the majority of invoices and receipts are in Tanzanian shillings. Invoices are priced and then converted to Tanzanian shillings at the time of invoicing however payments are based on the US dollar invoiced amount translated to shillings at the time of payment. While conversion of Tanzanian shillings into US dollars is unrestricted, the foreign exchange market for Tanzanian shillings is limited and not highly liquid, reducing the Company's ability to convert large amounts of Tanzanian shillings into US dollars at any given time. To mitigate the risk of Tanzanian shilling devaluation, the Company regularly converts Tanzanian shilling receipts into US dollars to the extent practicable taking into consideration that the majority of operating expenditures are denominated in Tanzanian shillings.

The majority of capital expenditures are denominated in US dollars. Capital stock, equity financing and any associated stock based compensation are denominated in Canadian dollars.

There are no forward exchange rate contracts in place.

A 10% increase in the US dollar against the relevant foreign currency would result in an overall increase in working capital (defined as current assets less current liabilities) of \$1.5 million from \$74.2 million to \$75.7 million and an increase in the income before tax from \$43.9 million to \$45.4 million. The sensitivity includes only outstanding foreign currency denominated monetary items and adjusts their translation at period end for a 10% change in the foreign currency rates. A 10% sensitivity rate is used when reporting foreign currency risk internally to key management personnel and represents management's assessment of the reasonable possible change in foreign exchange rates.

The following balances are denominated in foreign currency (stated in US dollars at period end exchange rates):

Balances as at December 31, 2020

\$'millions	Canadian dollars	Tanzanian shillings	Euros	Other currencies	Total
Cash	0.9	10.6	0.1	3.1	14.7
Trade and other receivables	-	3.1	-	-	3.1
Trade and other payables	(1.6)	(1.0)	-	(0.2)	(2.8)
Net	(0.7)	12.7	0.1	2.9	15.0

B. Commodity Price Risk

The Company negotiated industrial gas sales contracts with gas prices which, subject to certain floors and ceilings, are determined as a discount to the lowest cost alternative fuels in Dar es Salaam, namely Heavy Fuel Oil ("HFO") and coal. The price of HFO is exposed to the volatility in the market price of crude oil.

C. Interest Rate Risk

Interest rate risk is the risk that future cash flows will fluctuate as a result of changes in market interest rates. The Company has minimal exposure to interest rates as the long-term loan has a fixed interest rate, interest rates on short-term investments are fixed and interest received on cash balances is not significant.

D. Concentration Risk

All the Company's sales are currently made in Tanzania. The sales are made to the Power sector and the Industrial sector. In relation to sales to the Power sector, the Company has a contract with Songas for the supply of gas to the Ubungo power plant, a contract with TANESCO to supply gas to some of the TANESCO power plants, and a contract with TPDC to supply gas through NNGI. The contracts with Songas, TANESCO and TPDC accounted for 62% of the Company's gross field revenue operating revenue during 2020 and \$9.5 million of the short and long-term receivables at December 31, 2020.

5. Risk Management continued

E. Credit Risk

Credit risk is the risk of financial loss to the Company if a customer or counterparty to a financial instrument fails to meet its contractual obligations and arises principally from the Company's receivables from TANESCO, Songas and TPDC. The carrying amount of accounts receivable and the long-term receivable represents the maximum credit exposure. As at December 31, 2020 and 2019, loss allowance exists against all of the long-term TANESCO receivable, gas plant operations and capital expenditure receivables from Songas, and a receivable of \$0.5 million from one industrial customer. No write-off of any receivables occurred in 2020 or 2019 (see Note 12).

The Company manages the credit exposure related to cash and cash equivalents by selecting counterparties based on credit ratings and monitoring all investments to ensure a stable return, avoiding complex investment vehicles with higher risk such as asset backed commercial paper. The Company's cash resources are placed with reputable financial institutions with no history of default.

F. Liquidity Risk

Liquidity risk is the risk that the Company will not have sufficient funds to meet its liabilities. Cash forecasts identifying liquidity requirements of the Company are produced on a regular basis. These are reviewed to ensure sufficient funds exist to finance the Company's current operational and investment cash flow requirements. At December 31, 2020 the Company has working capital of \$74.2 million which is net of \$52.7 million of financial liabilities with regards to trade and other payables of which \$25.6 million is due within one to three months, \$ nil is due within three to six months, and \$27.1 million is due within six to twelve months (see Note 14).

At the end of the year approximately 48% of the current liabilities relate to TPDC (see Note 14). The amounts due to TPDC represent its share of Profit Gas and the current portion of Additional Profit Tax; in accordance with the terms of the PSA, TPDC is entitled to the payment of its share of Profit Gas on a quarterly basis proportional to the cash receipts during the quarter. A substantial proportion of the TPDC liability is associated with the long-term TANESCO arrears and payments to TPDC are made when cash is received for the arrears.

COVID-19 has reduced travel throughout the world in 2020. Tourism is a major source of revenue and foreign currency for Tanzania and the decrease in travel has resulted in a reduction of foreign currency flowing into the country. It has been more difficult for the Company in 2020 to convert Tanzanian shillings to United States dollars compared to prior years, however, as at the date of this report, this has not significantly impacted the PAET's ability to meet its United States dollar obligations. There is a risk that in the future the Company may not be able to convert Tanzanian shillings to United States dollars as and when required.

G. Capital Risk Management

The Company's objectives when managing capital are to safeguard the Company's ability to continue as a going concern in order to provide returns for shareholders and benefits for other stakeholders and to achieve an optimal capital structure to reduce the cost of capital.

H. Country Risk

The Company has unresolved disputes with TPDC related to Cost Gas revenue, TANESCO and Songas regarding unpaid invoices, and the Tanzanian Revenue Authority ("TRA") in relation to tax disputes (see Note 21). The Company continues to rely upon its rights under the existing PSA and has initiated notices of disputes as required under the PSA and by local tax regulations to resolve outstanding issues.

6. Segment Information

The Company has one reportable industry segment which is international exploration, development and production of petroleum and natural gas. During 2020 the Company's producing and exploration assets were entirely located in Tanzania. In 2019 the Company relinquished exploration and appraisal interests in Italy and the companies used for the Italian operations were wound up in Q2 2020.

Notes to the Consolidated Financial Statements continued

7. Revenue

\$'000	Years ended December 31	
	2020	2019
Industrial sector	34,485	38,530
Power sector	57,267	62,329
Gross field revenue	91,752	100,859
TPDC share of revenue	(19,685)	(28,334)
Company operating revenue	72,067	72,525
Current income tax adjustment	5,807	13,070
	77,874	85,595

The Company recognized 100% of amounts invoiced for deliveries to TANESCO as revenue during 2020 and 2019. During 2020 the Company invoiced TANESCO \$23.3 million (2019: \$50.6 million) for gas deliveries and received \$43.2 million (2020: \$61.6 million) in payments. Based on the consistent payments from TANESCO, the Company: (i) recognized all amounts invoiced for gas deliveries in 2020 as revenue; and (ii) recognized \$19.9 million during the year (2019: \$11.0 million) as a reversal of loss allowance relating to the amounts collected during the year that were applied towards the long-term TANESCO receivables previously allowed for (see Note 9). Subsequent to December 31, 2020 the Company has invoiced TANESCO \$6.5 million for 2021 gas deliveries and TANESCO has paid the Company \$7.9 million.

8. Personnel Expenses

\$'000	Years ended December 31	
	2020	2019
Employee and related costs included in:		
Production, distribution and transportation	3,176	3,036
General and administrative	6,163	6,188
	9,339	9,224
Stock based compensation (Note 17)	1,074	2,455
	10,413	11,679

Personnel expenses include Company employees who operate the Songas facilities on behalf of Songas; these expenses are recharged to Songas.

9. Finance Income and Expense**Finance Income**

\$'000	Years ended December 31	
	2020	2019
Interest income	844	666
Investment income	305	2,199
	1,149	2,865

At December 31, 2020 the Company did not have investments in short-term bonds (December 31, 2019: \$44.8 million invested with maturity dates from February 2020 to July 2020 and a range of interest rates from 1.375% to 2.75%). The \$0.3 million investment income for the year (2019: \$2.2 million) includes interest earned of \$0.3 million (2019: \$1.4 million) and amortization of the discount on the acquisition of the bonds of \$ nil (2019: \$0.8 million).

9. Finance Income and Expense continued**Finance Expense**

\$'000	Years ended December 31	
	2020	2019
Base interest expense	5,830	6,164
Participation interest expense	1,971	2,071
Lease interest expense	86	44
Interest expense	7,887	8,279
Net foreign exchange (gain) loss	(438)	289
Indirect tax	1,873	1,298
	9,322	9,866

Base interest expense and participation interest expense relate to the long-term loan ("Loan") with the International Finance Corporation ("IFC"). Base interest on the Loan is payable quarterly in arrears at 10% per annum on a 'pay-if-you-can-basis' using a formula to calculate the net cash available for such payments as at any given interest payment date. The participation interest expense is paid annually in arrears and equates to 6.4% of PAET's net cash flows from operating activities net of net cash flows used in investing activities for the year. The participation interest will continue until October 15, 2026 regardless of whether the Loan is repaid prior to its contractual maturity date.

The indirect tax is for value added tax ("VAT") associated with invoices to TANESCO under the take or pay provisions within the PGSA and for interest on late payments. In 2020 a take or pay invoice of \$6.5 million was raised but not recognized in the financial statements as it did not meet the revenue recognition criteria with respect to assurance of collectability. In 2019 no take or pay invoice was issued as TANESCO took the required volumes during the contract year to June 30, 2019.

10. Income Taxes

The tax charge is as follows:

\$'000	Years ended December 31	
	2020	2019
Current income tax expense	7,384	10,657
Deferred income tax expense	3,356	2,326
	10,740	12,983

Tax of \$0.6 million was paid during 2020 in relation to the settlement of the prior year's tax liability (2019: \$ nil). Installment tax payments totaling \$5.3 million were made in respect of 2020 (2019: \$10.0 million). These are presented as a reduction in tax payable on the consolidated statement of financial position.

Notes to the Consolidated Financial Statements continued

10. Income Taxes continued**Tax Rate Reconciliation**

\$'000	Years ended December 31	
	2020	2019
Income before tax per Consolidated Statements of Comprehensive Income	43,915	45,916
Less Additional Profits Tax	(4,054)	(6,587)
Income before statutory tax	39,861	39,329
Provision for income tax calculated at the statutory rate of 30%	11,958	11,799
Effect on income tax of:		
Administrative and operating expenses	1,959	1,827
Foreign exchange (gain) loss	(258)	61
Stock based compensation	186	532
TANESCO interest not recognized as interest income	1,468	2,164
Change in unrecognized tax asset	(4,796)	(2,924)
Other permanent differences	223	(476)
	10,740	12,983

As at December 31, 2020 the loss allowance for TANESCO had resulted in a \$18.6 million unrecognized deferred tax asset (December 31, 2019: \$22.2 million). If this debt is ultimately not recovered, the Company will also be entitled to a \$13.1 million (2019: \$15.3 million) refund of VAT.

In respect of each type of temporary difference the amounts of deferred tax assets/(liabilities) recognized in in the consolidated balance sheet were as follows:

\$'000	As at December 31	
	2020	2019
Differences between tax base and carrying value of property, plant and equipment	(30,417)	(27,153)
Tax recoverable from TPDC	(3,110)	(4,560)
Loss allowances	3,357	2,720
Additional Profits Tax	10,946	13,287
Unrealized exchange losses/other provisions	715	553
	(18,509)	(15,153)

11. Additional Profits Tax

Under the terms of the PSA, APT is payable when the Company has recovered its costs plus a specified return out of Cost Gas revenue and Profit Gas revenue. As a result: (i) no APT is payable until the Company recovers its costs out of Additional Gas revenues plus an annual operating return under the PSA of 25% plus the percentage change in the United States Industrial Goods Producer Price Index ("PPI"); and (ii) the maximum APT rate is 55% of the Company's Profit Gas when costs have been recovered with an annual return of 35% plus the percentage change in PPI.

The timing and the effective rate of APT depends on the realized value of Profit Gas which in turn depends on the level of expenditure. The Company provides for APT by annually forecasting the total APT payable in the future as a proportion of the forecast Profit Gas over the term of the PSA. The forecast takes into account the timing of future development capital spending. As at December 31, 2020 the current portion of APT payable was estimated at \$11.5 million (December 31, 2019: \$11.9 million) with a long-term APT payable of \$24.8 million (December 31, 2019: \$32.3 million).

The effective APT rate of 16.8% (2019: 19.0%) has been applied to the Company's Profit Gas of \$24.1 million (2019: \$34.6 million). Accordingly, \$4.1 million of APT has been recorded as APT in Consolidated Statement of Comprehensive Income for the year ended December 31, 2020 (2019: \$6.6 million).

12. Current Trade and Other Receivables

\$'000	As at December 31	
	2020	2019
Trade receivables		
Songas	2,053	2,332
TPDC	7,417	7,284
Industrial customers	9,362	9,121
Loss allowance	(452)	(452)
	18,380	18,285
Other receivables		
Songas gas plant operations	4,571	6,431
Other	6,935	1,166
Loss allowance	(8,006)	(3,715)
	3,500	3,882
	21,880	22,167

Trade Receivables Aged Analysis

\$'000	As at December 31, 2020				
	Current	>30 <60	>60 <90	>90	Total
	14,608	1,424	882	1,466	18,380
\$'000	As at December 31, 2019				
	Current	>30 <60	>60 <90	>90	Total
	7,631	8,228	640	1,786	18,285

Songas

As at December 31, 2020 Songas owed the Company \$6.6 million (December 31, 2019: \$8.8 million), while the Company owed Songas \$2.0 million (December 31, 2019: \$2.4 million). The amounts due to the Company are mainly for sales of gas of \$2.1 million (December 31, 2019: \$2.3 million) and for the operation of the gas plant of \$4.6 million (December 31, 2019: \$6.4 million) against which the Company has made a loss allowance of \$2.7 million (December 31, 2019: \$3.7 million). The Company is pursuing the collection of the arrears and as part of the contractual process, the Company has entered into arbitration to resolve the dispute for the amounts previously allowed for. The results of the arbitration are uncertain at this time. The amounts due to Songas primarily relate to pipeline tariff charges of \$1.7 million (December 31, 2019: \$1.8 million). The operation of the gas plant is conducted at cost and the charges are billed to Songas on a flow through basis.

TPDC

The current receivable from TPDC is for gas deliveries through the NNGI pursuant to the signing of the LTGSA. In accordance with the LTGSA, any unpaid, overdue amounts are offset against TPDC profit share.

Other

The increase in other receivables and the loss allowance relate to a payment of \$5.3 million to the TRA under an Agency Notice.

Notes to the Consolidated Financial Statements continued

12. Current Trade and Other Receivables continued

Reversal of loss allowance for receivables

\$'000	Years ended December 31	
	2020	2019
Reversal of loss allowance	(20,951)	(11,044)
Loss allowance	5,337	-
	(15,614)	(11,044)

The reversal of loss allowance of \$21.0 million (2019: \$11.0 million) follows collection of: (i) TANESCO arrears of \$19.9 million (2019: \$11.0 million) which had been previously allowed for and represents the excess of receipts over gas sales invoiced during the year; and (ii) Songas operatorship arrears of \$1.1 million (2019: \$ nil) which had been previously allowed for (see Note 7).

The loss allowance is for a receivable from the Tanzanian Revenue Authority ("TRA") who issued an Agency Notice for \$5.3 million obligating PAET's commercial bank in Tanzania to release funds in favor of the TRA. The tax dispute related to the Agency Notice is ongoing and based on the opinion of the Company's legal advisors there is better than a 50% chance of the dispute being resolved in favor of the Company (see Note 21). The Company recorded the \$5.3 million as other receivables and fully allowed for the amount in dispute as the timing and likelihood for collection is uncertain.

13. Capital Assets

\$'000	Natural gas interests	Office and other	Right-of-use	Total
Costs				
As at December 31, 2019	214,163	2,870	1,665	218,698
Additions	27,117	24	80	27,221
Disposals	-	-	(661)	(661)
As at December 31, 2020	241,280	2,894	1,084	245,258
Accumulated depletion and depreciation				
As at December 31, 2019	117,758	2,770	189	120,717
Additions	14,830	94	397	15,321
Disposals	-	-	(243)	(243)
As at December 31, 2020	132,588	2,864	343	135,795
Net book values				
As at December 31, 2020	108,692	30	741	109,463

13. Capital Assets continued

\$'000	Natural gas interests	Office and other	Right-of-use	Total
Costs				
As at December 31, 2018	210,010	3,860	-	213,870
Additions	4,153	18	1,665	5,836
Disposals	-	(1,008)	-	(1,008)
As at December 31, 2019	214,163	2,870	1,665	218,698
Accumulated depletion and depreciation				
As at December 31, 2018	102,753	3,643	-	106,396
Additions	15,005	135	189	15,329
Disposals	-	(1,008)	-	(1,008)
As at December 31, 2019	117,758	2,770	189	120,717
Net book values				
As at December 31, 2019	96,405	100	1,476	97,981

In determining the depletion charge, it is estimated that future development costs of \$34.2 million (December 31, 2019: \$67.9 million) will be required to bring the total proved reserves to production. The decrease in estimated future development costs is a result of expenditures during the year of \$27.1 million and a downward revision of the future cost estimates. The future development cost is an estimate of the capital expenditure required to ensure the Company can produce the required gas volumes to meet its contractual obligations for the remaining life of the license. During the year the Company recorded depreciation of \$0.1 million (2019: \$0.3 million) in general and administrative expenses.

Notes to the Consolidated Financial Statements continued

13. Capital Assets continued**Right-of-use assets**

\$'000	
As at December 31, 2019	1,476
Additions	80
Disposals	(418)
Depreciation	(397)
As at December 31, 2020	741
As at January 1, 2019 (effect from IFRS 16 adoption)	537
Additions	1,128
Depreciation	(189)
As at December 31, 2019	1,476

Lease liabilities

\$'000	
As at December 31, 2019	1,411
Additions	80
Disposals	(125)
Lease interest expense	86
Lease foreign currency translation difference	(9)
Lease payments	(759)
As at December 31, 2020	684
As at January 1, 2019 (effect from IFRS 16 adoption)	537
Additions	1,128
Lease interest expense	44
Lease payments	(298)
As at December 31, 2019	1,411

Right-of-use assets are presented as part of capital assets on the Company's balance sheet. Of the total lease liability of \$0.7 million (2019: \$1.4 million), \$0.3 million (2019: \$0.3 million) is current and is presented in trade and other payables.

Disposals relate to the surrender of the Winchester office lease and renegotiation of the Ubongo lease. Lease payments includes the final lease payment including costs for returning the Winchester office premises to their original condition along with regular lease payments on two lease agreements in Tanzania.

14. Trade and Other Payables

\$'000	As at December 31	
	2020	2019
Songas	2,062	2,354
Other trade payables	2,573	1,310
Trade payables	4,635	3,664
TPDC Profit Gas entitlement, net	25,570	33,134
Accrued liabilities	9,082	11,363
	39,287	48,161

TPDC share of Profit Gas

\$'000	As at December 31	
	2020	2019
TPDC share of Profit Gas	30,405	38,077
Less "Adjustment Factor"	(4,835)	(4,943)
TPDC share of Profit Gas entitlement	25,570	33,134

Under the PSA revenue sharing mechanism, the Company is to adjust TPDC's Profit Gas entitlement by the "Adjustment Factor". The Adjustment Factor is equal to the amount necessary to fully pay and discharge the PAET liability for taxes on income derived from petroleum operations. A significant percentage of the settlement of the \$26.0 million liability to TPDC is dependent on receipt of payment from TANESCO for long-term arrears that have been fully allowed for.

15. Long-term Receivables

\$'000	As at December 31	
	2020	2019
Amounts invoiced to TANESCO	111,234	118,861
Unrecognized amounts not meeting revenue recognition criteria ¹	(83,685)	(71,407)
Loss allowance	(27,549)	(47,454)
Net TANESCO receivable	-	-
VAT - Songas workovers	2,205	2,205
Lease deposit	9	45
	2,214	2,250

¹ The amount includes invoices for interest on late payments and invoices relating to differences between gas contracted for delivery versus gas taken by TANESCO. In April 2021, TANESCO paid the take or pay invoice of \$5.0 million for the 2015-2016 contract year for gas to be taken by June 30, 2021.

During the year the amounts received from TANESCO were in excess of the revenue recognized for gas sales to TANESCO and \$19.9 million of cumulative excess cash receipts over sales invoiced in 2020 were recorded, reducing the long-term arrears and allowing the reversal of the associated loss allowances (2019: \$11.0 million). In Q2 2020 the Company invoiced TANESCO \$6.5 million (Q2 2019: \$ nil) under the take or pay provision within the PGSA; this invoice has not been recognized as it does not meet revenue recognition criteria with respect to assurance of collectability.

In 2017, based on agreement with TPDC, \$12.3 million relating to the Songas share of workover costs of the wells SS-5 and SS-9 was transferred to the cost pool to recover the costs via the PSA cost recovery mechanism. This resulted in \$2.2 million relating to VAT on the workovers that had already been paid being reclassified as a long-term receivable. The Company continues to take action to collect the workover costs through the mechanisms provided in the agreements with Songas.

Notes to the Consolidated Financial Statements continued

16. Long-term Loan

In 2015 PAET took out the Loan with the IFC, a member of the World Bank Group, for \$60 million. The Loan was fully drawn down in 2016.

The Loan is to be paid out through six semi-annual payments of \$5 million starting April 15, 2022 and one final payment of \$25.2 million due on April 15, 2025. The Company may voluntarily prepay all or part of the Loan but must simultaneously pay any accrued base interest costs related to the principal amount being prepaid. The Loan is an unsecured subordinated obligation of PAET and was initially guaranteed by the Company to a maximum of \$30 million. The guarantee may only be called upon by IFC at maturity in 2025 and, subject to IFC approval and receipt of all required regulatory approvals, the Company, at its discretion, may issue shares in fulfillment of all or part of the guarantee obligation in 2025. Pursuant to the sale of the non-controlling interest in PAEM, the parent company of PAET, the Company agreed with the IFC to reduce the outstanding amount of the Loan by the percentage interest sold of 7.9% (\$4.8 million) before the fourth anniversary of the first drawdown. PAET made this payment on October 16, 2019.

Dividends and distributions from PAET to the Company are restricted, if at any time amounts of interest, principal or participating interest are due and outstanding. All amounts due under the Loan have been paid when due.

\$'000	As at December 31	
	2020	2019
Loan principal	55,240	55,240
Financing costs	(994)	(1,183)
	54,246	54,057

17. Capital Stock**Authorized**

50,000,000	Class A common shares ("Class A Shares")	No par value
100,000,000	Class B subordinate voting shares ("Class B Shares")	No par value
100,000,000	First preference shares	No par value

The Class A and Class B Shares rank pari passu in respect of dividends and repayment of capital in the event of winding-up. Class A Shares carry twenty (20) votes per share and Class B Shares carry one vote per share. The Class A Shares are convertible at the option of the holder at any time into Class B Shares on a one-for-one basis. The Class B Shares are convertible into Class A Shares on a one-for-one basis in the event that a take-over bid is made to purchase Class A Shares which must, by reason of a stock exchange or legal requirements, be made to all or substantially all of the holders of Class A Shares and which is not concurrently made to holders of Class B Shares.

Changes in the capital stock

Number of shares	As at December 31					
	2020			2019		
	Authorized (000)	Issued (000)	Amount (\$'000)	Authorized (000)	Issued (000)	Amount (\$'000)
Class A Shares	50,000	1,750	983	50,000	1,750	983
Class B Shares	100,000	24,388	62,260	100,000	32,557	83,116
First preference shares	100,000	-	-	100,000	-	-
Total	250,000	26,138	63,243	250,000	34,307	84,099

During the year the Company repurchased and canceled 7,692,297 Class B Shares at a weighted average price of CDN\$6.50 per Class B Share under a substantial issuer bid ("SIB"). This resulted in an aggregate purchase of CDN\$50.0 million of Class B Shares representing 23.6% of the Company's issued and outstanding Class B Shares and 22.4% of the total number of the Company's issued and outstanding shares. Total cash payments of \$38.2 million were applied to the capital stock, contributed surplus and accumulated income accounts.

In addition, during 2020 the Company repurchased and canceled 477,500 Class B Shares at a weighted average price of CDN\$5.32 per Class B Share under the normal course issuer bid ("NCIB"). This resulted in an aggregate purchase of CDN\$2.5 million of Class B Shares. Total cash payments of \$2.1 million were applied to the capital stock, contributed surplus and accumulated income accounts.

All issued capital stock is fully paid.

17. Capital Stock continued**Changes in Stock Appreciation Rights ("SARs")**

	2020		2019	
	SARs (000)	Exercise price (CDN\$)	SARs (000)	Exercise price (CDN\$)
Outstanding as at January 1	2,322	2.30 to 6.65	645	2.30 to 3.87
Issued	160	5.02	2,169	5.00 to 6.65
Exercised	(517)	5.00	-	-
Exercised	(120)	3.02	(405)	2.30 to 3.87
Exercised	(30)	3.87	-	-
Exercised	(30)	2.30	-	-
Forfeited	(317)	5.00	(87)	5.00
Forfeited	(118)	5.02	-	-
Forfeited	(108)	6.65	-	-
Outstanding as at December 31	1,242	3.02 to 6.65	2,322	2.30 to 6.65

The number outstanding, the weighted average remaining life and weighted average exercise prices of SARs at December 31, 2020 were as follows:

Exercise price (CDN\$)	Number outstanding (000)	Weighted average remaining contractual life (years)	Number exercisable (000)	Weighted average exercise price (CDN\$)
3.87	60	2.00	-	3.87
5.00 to 6.65	1,182	2.04	206	5.11
3.87 to 6.65	1,242	2.03	206	5.05

Change in Restrictive Stock Units ("RSUs")

	2020		2019	
	RSUs (000)	Exercise price (CDN\$)	RSUs (000)	Exercise price (CDN\$)
Outstanding as at January 1	235	0.01	88	0.01
Issued	20	0.01	218	0.01
Exercised	(78)	0.01	(63)	0.01
Forfeited	(44)	0.01	(8)	0.01
Outstanding as at December 31	133	0.01	235	0.01

The number outstanding, the weighted average remaining life and weighted average exercise prices of RSUs at December 31, 2020 were as follows:

Exercise price (CDN\$)	Number outstanding (000)	Number exercisable (000)	Weighted average remaining contractual life (years)
0.01	133	20	2.06

As SARs and RSUs are settled in cash, they are re-valued at each reporting date using the Black-Scholes option pricing model with the resulting liability being recognized in trade and other payables. In the valuation of stock appreciation rights and restricted stock units as at December 31, 2020, the following assumptions have been made: a risk free rate of interest of 1.0%, stock volatility of 31.0% to 41.0%, 5% forfeiture and a closing stock price of CDN\$6.33 per share. The valuation of the SARs and RSUs awards is increased to reflect the amount of dividends paid between the award date to the time of exercise.

Notes to the Consolidated Financial Statements continued

17. Capital Stock continued

Change in Restrictive Stock Units ("RSUs") continued

\$'000	As at December 31	
	2020	2019
SARs	1,683	1,996
RSUs	496	536
	2,179	2,532

As at December 31, 2020 a total accrued liability of \$2.2 million (December 31, 2019: \$2.5 million) has been recognized in relation to SARs and RSUs which is included in other payables. The Company recognized an expense for the year of \$1.1 million (2019: \$2.5 million) as stock based compensation.

Dividend Summary

Declaration date	Record date	Payment date	Amount per share (CDN\$)
February 23, 2021	March 31, 2021	April 15, 2021	0.10
November 19, 2020	December 31, 2020	January 15, 2021	0.08
September 17, 2020	September 30, 2020	October 15, 2020	0.08
June 22, 2020	June 30, 2020	July 15, 2020	0.06
February 25, 2020	March 31, 2020	April 30, 2020	0.06
November 28, 2019	December 31, 2019	January 31, 2020	0.06
September 17, 2019	September 30, 2019	October 31, 2019	0.06
May 29, 2019	June 30, 2019	July 31, 2019	0.06
January 22, 2019	March 31, 2019	April 30, 2019	0.05

18. Earnings Per Share

(000)	As at December 31	
	2020	2019
Outstanding shares		
Weighted average number of Class A and Class B Shares	27,818	34,931
Weighted average diluted number of Class A and Class B Shares	27,818	34,931

The calculation of basic earnings per share is based on a net income attributable to shareholders for the year of \$27.7 million (2019: \$24.7 million) and a weighted average number of Class A and Class B Shares outstanding during the period of 27,817,531 (2019: 34,931,144).

19. Related Party Transactions

The Chairman of the Company's Board of Directors is counsel to Burnett, Duckworth and Palmer LLP, a law firm that provides legal advice to the Company and its subsidiaries. During the year ended December 31, 2020 fees for services provided by this firm totaled \$1.0 million (2019: \$0.4 million).

As at December 31, 2020 the Company had a total of \$0.1 million (December 31, 2019: \$0.2 million) recorded in trade and other payables in relation to the related party.

20. Contractual Obligations and Committed Capital Investments

Protected Gas

Under the terms of the Gas Agreement for the Songo Songo project ("Gas Agreement"), in the event that there is a shortfall/insufficiency in Protected Gas as a consequence of the sale of Additional Gas, the Company is liable to pay the difference between the price of Protected Gas (\$0.55/MMBtu escalated) and the price of an alternative feedstock multiplied by the volumes of Protected Gas up to a maximum of the volume of Additional Gas sold which was 235 Bcf as at December 31, 2019 (December 31, 2019: 214 Bcf). The Company did not have a shortfall during the reporting period and does not anticipate a shortfall arising during the term of the Protected Gas delivery obligation to the end of July 2024.

Terms of the Gas Agreement were modified by the Amended and Restated Gas Agreement ("ARGA") which was initialed by all parties but remains unsigned. In certain respects, the parties thereto are conducting themselves as though the ARGA is in effect. Management does not foresee a material risk with the conduct of the Company's business with an unsigned ARGA at this time.

Re-Rating Agreement

In 2011 the Company, TPDC and Songas signed a Re-Rating Agreement which evidenced an increase to the gas processing capacity of the Songas Infrastructure to a maximum of 110 MMcf/d (the pipeline and delivery pressure requirements at the Ubungo power plant restrict the infrastructure capacity to a maximum of 102 MMcf/d). Under the terms of the Re-Rating Agreement, the Company paid additional compensation of \$0.30/mcf for sales between 70 MMcf/d and 90 MMcf/d and \$0.40/mcf for volumes above 90 MMcf/d by issuing credit notes to TANESCO. This was in addition to the tariff of \$0.59/mcf payable to Songas as set by the energy regulator, EWURA.

Although Songas notified the Company in 2014 that the Re-Rating Agreement was terminated, the parties have continued to produce, transport and sell gas volumes in line with the re-rated plant capacity. In May 2016 the Company notified TANESCO and Songas that the additional compensation for sales over 70 MMcf/d would no longer be paid effective June 2016. The additional compensation was always intended to be temporary in nature until the expansion of the Songas Infrastructure, at which time Songas would apply to EWURA to obtain approval of a new tariff for the processing of volumes over 70 MMcf/d. The PGSA provides for passing on to TANESCO any tariff charged to the Company in the event that a new tariff is approved.

The parties to the Re-Rating Agreement are in the process of negotiating a replacement agreement which may address the additional compensation paid. In the interim, the processing capacity at the Songas Infrastructure remains unaltered and is fully available for utilization by the Company. This capacity is in addition to the capacity available within the NNGI.

Portfolio Gas Supply Agreement ("PGSA")

On June 17, 2011, the PGSA was signed (term to June 2023) between TANESCO (as the buyer) and the Company and TPDC (collectively as the seller). TANESCO requested a change to the PGSA MDQ in accordance with clause 7.6(b) which PAET and TPDC approved effective January 29, 2018. The seller is obligated, subject to infrastructure capacity, to sell a maximum of approximately 26 MMcf/d (previously 36 MMcf/d) for use in any of TANESCO's current power plants, except those operated by Songas at Ubungo. Under the agreement, the basic wellhead price of approximately \$2.98/mcf increased to \$3.04/mcf on July 1, 2017, to \$3.10/mcf on July 1, 2019 and \$3.14/mcf on July 1, 2020. Previously under the PGSA any sales in excess of 36 MMcf/d were subject to a 150% increase in the basic wellhead gas price. On December 22, 2018 a side letter amendment to the PGSA was agreed with TPDC to allow PGSA volumes up to a maximum monthly average volume of 35 MMscf/d to temporarily flow through the NNGI. The temporary arrangement was terminated in September 2019 once the refrigeration unit became fully operational and all PGSA volumes were again processed through the Songas Infrastructure.

Long-term Gas Sales Agreement ("LTGSA")

On May 14, 2019 the Company and TPDC signed the LTGSA for an initial delivery of 20 MMcf/d through the NNGI, at a price of \$3.10/MMBtu as at January 1, 2019, (escalating 2% per annum) exclusive of any processing and transportation tariff associated with the NNGI. The LTGSA was amended on September 24, 2019 to increase the volumes supplied through the NNGI up to a maximum daily quantity of 30 MMcf/d. In 2020 parties established a 12-month renewable agreement for the supply of volumes above 30 MMcf/d on an ad-hoc basis, allowing TPDC to meet fluctuating demand and compensate for shortfalls in production from their Madimba plant without being penalized due to a higher, fixed contractual limit and the subsequent take-or-pay penalties should the demand reduce again. The agreement has allowed the Company to supply volumes in excess of 50 MMcf/d on occasion, increasing average sales volumes and revenues.

All volumes above 20 MMcf/d are supplied on a best endeavors basis until compression facilities are added to the Songas facilities.

Leases

The Company has three office rental agreements, two in Dar es Salaam, Tanzania, and one in London, England. An agreement for the office in Dar es Salaam was entered into on November 1, 2019 and expires on October 31, 2023 at an annual rent of \$0.4 million. Another agreement for the downstream office in Dar es Salaam was entered into on May 1, 2018 and extended on November 1, 2020 to June 30, 2022 at an annual rent of \$0.04 million. The lease of the London office was renewed in November, 2020 at \$0.1 million per annum for a further six months. The cost of the London office lease is recognized in the general and administrative expenses. Previously the Company had a rental agreement in Winchester, England; this lease was terminated in 2020.

Notes to the Consolidated Financial Statements continued

20. Contractual Obligations and Committed Capital Investments continued

Capital Commitments

Tanzania

At the date of this report, the Company's only significant outstanding contractual commitment is in relation to the \$38 million fixed price turn-key compression contract; \$24.7 million has been paid to date. The remaining forecasted capital expenditures under this contract are \$9.5 million in 2021 and \$3.8 million in 2022.

Italy

The Company relinquished its rights to farm-in on the Central Adriatic permit in 2019 and has no further capital obligations relating to Italian operations. The subsidiary companies previously used for the Company's Italian operations were wound up in Q2 2020.

21. Contingencies

Upstream and Downstream Activities

The Petroleum Act, 2015 (the "Petroleum Act") provides TPDC with exclusive rights over the distribution of gas in Tanzania. The Petroleum Act has grandfathering provisions upholding the rights of the Company to develop and market natural gas produced under the PSA as it was signed prior to the Petroleum Act coming into effect in 2015.

On October 7, 2016 the Government of Tanzania issued the Petroleum (Natural Gas Pricing) Regulation made under Sections 165 and 258 (I) of the Petroleum Act. Article 260 (3) of the Petroleum Act preserves the Company's pre-existing right with TPDC to market and sell Additional Gas together or independently on terms and conditions (including prices) negotiated with third party Natural Gas customers. To date there has been no impact on the Company as a result of the Natural Gas Pricing Regulation, however, any future impact cannot be determined at this time.

TPDC Back-in

TPDC has the right under the PSA to 'back in' to the Songo Songo field development and convert this into a carried working interest in the PSA. The current terms of the PSA require TPDC to provide formal notice in a defined period and contribute a proportion of the costs of any development, sharing in the risks in return for an additional share of the gas. To date, TPDC has not contributed any costs.

Cost Recovery

TPDC conducted an audit of historical costs (the "Cost Pool") and in 2011 disputed approximately \$34.0 million of costs that had been recovered from the Cost Pool from 2002 through to 2009. In 2014 a substantial portion of the disputed costs were agreed to be cost recoverable by TPDC. Under the dispute mechanism outlined in the PSA, parties are to agree the appointment of an independent specialist to assist the parties in reaching agreement on costs that are still subject to dispute. In 2014, prior to appointing an independent specialist, TPDC suspended the process. From 2010 to 2015 TPDC rejected a further \$18.0 million of costs. In 2016 the Tanzanian Petroleum Upstream Regulatory Authority ("PURA") assumed the role of auditing the PSA cost pool from TPDC and for 2016 to 2018 have rejected all costs pertaining to downstream development amounting to \$9.6 million and a further \$4.4 million of other costs. To date there remains a total of \$56.2 million of costs that have been queried or rejected by TPDC or PURA through the cost pool audit process.

During 2019 discussions on the disputed amounts briefly resumed with TPDC. At the time of writing this report no independent specialist has been appointed and neither TPDC nor PURA have issued a formal dispute regarding cost recovery. If the matter is not resolved to the Company's satisfaction, the Company intends to proceed to arbitration via the International Centre for Settlement of Investment Disputes pursuant to the terms of the PSA. The Company's view is that all costs have been correctly included in the Cost Pool however should any of the costs be rejected as not being cost recoverable, the Company would be required to retroactively adjust its share of revenue for the period under dispute.

21. Contingencies continued**Taxation**

Amounts in \$'millions					As at December 31	
					2020	2019
Area	Period	Reason for dispute	Principal	Interest	Total	Total
Pay-As-You-Earn ("PAYE") tax	2008-16	PAYE tax on grossed-up amounts in staff salaries which are contractually stated as net.	1.2	0.4	1.6 ⁽¹⁾	1.5
Withholding tax ("WHT")	2005-16	WHT on services performed outside of Tanzania by non-resident persons, on deemed dividends, loan interest and other services.	5.7	3.0	8.7 ⁽²⁾	8.3
Income tax	2008-16	Deductibility of capital expenditures and expenses (2009, 2012, 2015 and 2016), additional income tax (2008, 2010, 2011 and 2012), tax on repatriated income (2012), deemed branch dividends (2015 and 2016), foreign exchange rate application (2013 and 2015) and underestimation of tax due (2014).	35.1	17.0	52.1 ⁽³⁾	50.9
VAT	2008-18	Output VAT on imported services and SSI Operatorship services (2008-16), interest on VAT decreasing adjustments and input VAT on services (2017 and 2018).	2.9	3.9	6.8 ⁽⁴⁾	5.7
			44.9	24.3	69.2	66.4

During 2020 the TRA conducted audits of 2017 and 2018 and issued two assessments with regards to VAT (\$1.2 million) and WHT (\$0.01 million). The Company has conceded to the TRA with respect to the WHT assessment (\$0.01 million) and a portion of the VAT assessment (\$0.06 million). However, the Company has objected incorrect imposition of interest on VAT decreasing adjustments on TANESCO payments (\$1.1 million) and disallowing input VAT claimed in certain services (\$0.1 million). No final assessments have been issued to date with respect to corporation tax, excise duty or payroll tax for 2017 and no preliminary assessment has yet been received for 2018.

During 2019 following completion of audits for the years 2015 and 2016, TRA issued assessments for \$15.1 million with regards to corporation tax, withholding tax, VAT, excise duty and payroll tax. With the exception of \$0.1 million of VAT and WHT on rent which the Company has conceded, the Company has objected to the other components of the assessment and requested a waiver of the deposit required to allow a dispute of the assessment and is awaiting a TRA response. The Company has also objected to several other assessments from the TRA demanding deposits to allow the dispute to be made and is awaiting Tax Revenue Appeal Board ("TRAB") hearing dates. Management, with advice from its legal counsels, has reviewed the Company's position on the objections and appeals related to the disputed amounts and has concluded that no provision is required with regard to these matters and that the maximum potential exposure is \$63.6 million (December 31, 2019: \$66.4 million).

During 2020 acting under instructions from the TRA, PAET's commercial bank in Tanzania transferred to the TRA the full principal tax amount of \$2.6 million and the interest of \$2.7 million with regards to the 2008-10 output VAT. Subsequently, the Company filed an appeal for review with the Tanzanian Court of Appeal ("CAT"). These amounts have been recorded in trade and other receivables and fully provided for pending the resolution of the dispute.

During 2020 the Company filed an application for judicial review at the CAT with regards to the 2008-10 PAYE case (\$0.3 million). During the year, acting under instructions from the TRA, PAET's commercial bank transferred the full principal tax amount in dispute (\$0.3 million) to the TRA. The Company has filed an appeal for review with the CAT.

Notes to the Consolidated Financial Statements continued

21. Contingencies continued

The process of appealing assessments issued by TRA start by initially filing an appeal with the TRA. If this is not successful, claims can be taken to higher authorities starting with the TRAB, followed by an appeal to the Tax Revenue Appeals Tribunal ("TRAT") and finally to the CAT. Below is a summary of the status of the various assessments:

- (1) (a) 2008-10 (\$0.3 million): In 2020, the Company lost an appeal with CAT on the principal amount and filed an application for judicial review at CAT. TRA instructed PAET's commercial bank in Tanzania to transfer the full principal amount in dispute to TRA;
 (b) 2015-16 (\$1.3 million): The Company has objected to an assessment and is awaiting a TRA response;
- (2) (a) 2005-2009 (\$1.6 million): In 2018 the CAT ruled in favor of the Company that no WHT was required on services performed outside Tanzania by non-resident persons. Waiting to see whether TRA will file an application to object to the CAT ruling;
 (b) 2010 (\$0.1 million): TRAT ruled in favor of TRA. The Company has filed a notice of intention to appeal with CAT and is awaiting a TRAT written judgment to finalize the appeal;
 (c) 2015-16 (\$7.0 million): The Company objected to several assessments in 2019 issued by TRA with regards to withholding tax and is awaiting a TRA response. The Company appealed to TRAB against the one-third deposit required to admit the objection and is awaiting a TRAB judgment;
- (3) (a) 2008 (\$0.6 million): The Company has objected to a TRA assessment that did not recognize a tax loss carried forward and is awaiting a response;
 (b) 2009 (\$2.8 million): The Company has filed an application for review of a CAT judgment and is awaiting a hearing date (\$2.0 million). The Company objected to an amended assessment from TRA (\$0.8 million) for being time-barred and arbitrary and is awaiting a TRA response;
 (c) 2010 (\$2.4 million): The Company is awaiting a judgment from a TRAB hearing held in 2019;
 (d) 2011 (\$1.9 million): The Company is awaiting a judgment from TRAB (\$1.7 million). The Company is also awaiting a TRA response on an objection of an assessment (\$0.2 million);
 (e) 2012 (\$15.4 million): The Company has objected to TRA assessments with respect to understated revenue, timing of deductibility of capital expenditures, expenses and tax on repatriated income. The Company is awaiting a CAT hearing date for waiver of a deposit payment required to file its objection;
 (f) 2013 (\$9.1 million): The Company filed an objection to TRA assessment (\$0.1 million) and is awaiting a response. The Company has objected to two assessments as being time-barred without merit and tax on repatriated income (\$9.0 million) and is in the process of appealing to CAT that a deposit is required to file the objection;
 (g) 2014 (\$11.6 million): The Company filed an objection to a TRA assessment (\$3.3 million) and is in the process of appealing to CAT that a deposit is required to file the objection. TRA issued two additional assessments for the year for corporation tax of \$5.3 million and tax on repatriated income of \$3.1 million. The Company has objected to the assessments and is awaiting a TRA response;
 (h) 2015-16 (\$8.3 million): The Company filed objections to TRA assessments and is awaiting a response;
- (4) (a) 2008-2010 (\$5.3 million): Acting under instructions from TRA, PAET's commercial bank in Tanzania transferred the full disputed amount of \$5.3 million to TRA. The Company has filed an appeal at CAT and is awaiting a decision;
 (b) 2015-16 (\$0.3 million): The Company has filed an objection to a TRA assessment and is awaiting a response;
 (c) 2017-18 (\$1.2 million) The Company has filed an objection to a TRA assessment and is awaiting a response. The Company has objected incorrect imposition of interest on VAT decreasing adjustments in respect of delayed TANESCO payment (\$1.1 million) and disallowing input VAT claimed in certain services (\$0.1 million).

In 2016 the TRA introduced significant changes in relation to the income tax treatment of the extractive sector with separate new chapters in Part V of the Income Tax Act 2004 ("ITA, 2004") for mining and for petroleum to be effective commencing in 2018. Further changes were subsequently made by the Written Laws (Miscellaneous Amendments) Act, 2017 ("WLMAA, 2017") and in particular section 36(a)(ii) of the WLMAA, 2017. The WLMAA, 2017 amended section 65M and 65N of the ITA 2004 to exclude cost oil/cost gas from inclusion in both income and expenditure. The Company is still evaluating the tax effects of the changes as there are a number of uncertainties and ambiguities as to the interpretation and application of certain provisions of the WLMAA, 2017. In the absence of guidance on these matters, the Company has used what it believes are reasonable interpretations and assumptions in applying the WLMAA, 2017 for purposes of determining its tax liabilities and the results of operations, which may change as it receives additional clarification and implementation guidance. The Company does not expect a significant impact from the changes as it is able to recover taxes payable from the TPDC Profit Gas entitlement under the terms of the PSA.

22. Directors and Officers Emoluments

\$'000	Year	Base	Bonus	Stock based	Total
				compensation expense	
Directors	2020	514	-	157	671
Directors	2019	554	-	273	827
Officers	2020	1,465	472	285	2,222
Officers	2019	1,486	-	1,082	2,568

The table above provides information on compensation relating to the Company's officers and directors. Five officers (year ended December 31, 2019: four) and six non-executive directors (year ended December 31, 2019: six) comprised the key management personnel during the year ended December 31, 2020. As at December 31, 2020, there were three officers and three non-executive directors reflecting the Company's focus on Tanzanian operations and termination of plans to expand to other parts of Africa.

23. Change in Non-Cash Operating Working Capital

\$'000	As at December 31	
	2020	2019
Increase in trade and other receivables	(1,654)	(7,552)
Decrease in prepayments	5,854	(5,535)
Decrease in trade and other payables	(9,892)	(15,251)
Decrease in APT	(11,939)	-
Increase in tax payable	1,455	501
Decrease in long-term receivable	36	174
	(16,140)	(27,663)

24. Non-Controlling Interest

The Company sold 7.9% (7,933 Class A common shares) of PAEM to a wholly owned subsidiary of Swala Oil & Gas (Tanzania) plc. ("Swala") in 2018 for \$15.4 million cash and \$4.0 million of Swala convertible preference shares ("Preference Shares") pursuant to a share purchase agreement. The Preference Shares entitle the Company to a 10% per annum distribution payable 15 days after each quarter end commencing from the closing date, January 16, 2018. Payment of the quarterly distributions is at the discretion of Swala based on funds available, however, the liability accrues if any amount is unpaid when due. If any distributable amount remains unpaid at December 31, 2021, the Company may demand settlement and Swala is obligated to comply by transferring and returning the Class A common shares of PAEM sold to Swala. The aggregate value of these shares will equal the amount of the outstanding distributions. As at December 31, 2020 the Company has not received any distributions or recorded any amount receivable related to the Preference Shares.

Swala is obligated to redeem 20% of the Preference Shares for cash annually starting from December 31, 2021 until all shares are redeemed. If at any time Swala does not redeem in cash the required number of Preference Shares, Swala is obligated to redeem the Preference Shares by transferring and returning the Class A common shares of PAEM sold to Swala. The aggregate value of these Class A common shares will equal the amount of any outstanding redemption.

A reconciliation of the non-controlling interest is detailed below:

\$'000	As at December 31	
	2020	2019
Balance, beginning of year	163	(513)
Net income attributable to non-controlling interest	1,360	1,628
Dividends paid	-	(952)
Balance, end of year	1,523	163

25. Subsequent Events

On January 22, 2021 the Company announced the final results of the substantial issuer bid whereby the Company took up and paid for 6,153,846 Class B Shares at a price of CDN\$6.50 per Class B Share representing an aggregate purchase price of approximately CDN\$40.0 million and 25.2% of the total number of the Company's issued and outstanding Class B Shares and 23.5% of the total number of the Company's issued and outstanding shares.

On February 23, 2021 the Company declared a dividend of CDN\$0.10 per share on each of its Class A Shares and Class B Shares for a total of \$1.6 million to holders of record as of March 31, 2021 paid on April 15, 2021.

Corporate Information

Board of Directors

Jay Lyons

Executive Director and
Interim Chief Executive Officer
Vancouver, Canada

David W. Ross

Chairman and Non-Executive Director
Calgary, Canada

Dr Frannie Léautier

Non-Executive Director
Washington DC, United States

Linda Beal

Non-Executive Director
London, UK

Advisor to the Board

Lloyd Herrick

Director, PAET
Calgary, Canada

Officers

Jay Lyons

Interim Chief Executive Officer
Vancouver, Canada

Blaine Karst

Chief Financial Officer
Calgary, Canada

Andrew Hanna

Managing Director, PAET
Surrey, UK

Operating Office

PanAfrican Energy Tanzania Limited
Oyster Plaza Building, 5th Floor,
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Tel: + 255 22 2138737
Fax: + 255 22 2138938

Registered Office

Orca Energy Group Inc.
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Road Town Tortola
British Virgin Islands, VG110

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Jay Lyons

Interim Chief Executive Officer
jlyons@orcaenergygroup.com

Blaine Karst

Chief Financial Officer
bkarst@orcaenergygroup.com

International Subsidiaries

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Port Louis,
Mauritius
Tel: + 230 207 8888
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Engineering Consultants

McDaniel & Associates Consultants Ltd.

Calgary, Canada

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KPMG LLP

Calgary, Canada

Website

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Lawyers

Burnet, Duckworth & Palmer LLP

Calgary, Canada

Transfer Agent

AST Trust Company

Calgary, Canada



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