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# **ANNUAL INFORMATION FORM**

**For the year ended December 31, 2022**

**Dated: May 1, 2023**

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## Glossary of Terms

**"2D"** means two dimensional.

**"3D"** means three dimensional.

**"2023 Bond Terms"** means the agreement between ShaMaran and Nordic Trustee AS entered into on July 3, 2018, and as amended February 25, 2019 and further amended July 5, 2020 and January 29, 2021, in its capacity as trustee for the bondholders, describing the rights and obligations associated with the senior bonds issued by ShaMaran on July 5, 2018 and which were originally scheduled to mature on July 5, 2023 (the **"2023 Bond"**) but have been merged into the 2025 Bond.

**"2025 Bond Terms"** means the agreement between ShaMaran and Nordic Trustee AS entered into on July 30, 2021 and describing the rights and obligations associated with the senior bonds issued by ShaMaran on July 30, 2021 and which mature on July 30, 2025 and the conversion of the 2023 Bond into such bond as certain conditions have been satisfied (the **"2025 Bond"**).

**"AIF"** or **"Annual Information Form"** means this Annual Information Form prepared for the year ended December 31, 2022 and dated May 1, 2023.

**"API"** means API gravity, a measure of the gravity of oil as defined by the American Petroleum Institute.

**"Atrush Block"** means the area covered by the Atrush Block PSC.

**"Atrush Block PSC"** means the Production Sharing Contract in respect of the Atrush Block, the KRG entered into with GEP dated November 10, 2007 and as further amended by the (i) first amendment dated August 1, 2010, (ii) second amendment dated October 20, 2010, (iii) third amendment dated December 31, 2012, (iv) fourth amendment dated November 7, 2016, and (v) fifth amendment dated May 31, 2019.

**"Atrush Commercial Discovery"** has the meaning assigned to it in the Atrush Block PSC, generally a discovery that is potentially commercial when considering all technical, operational, commercial and financial factors, all in accordance with prudent international petroleum industry practices.

**"Atrush Contractor Group"** means the parties from time to time that hold a participating interest in the Atrush Block PSC.

**"Atrush Lifting Agreement"** means the Lifting Agreement dated September 18, 2017 between the KRG and TAQA on behalf of itself and GEP for the sale of Atrush oil production to the KRG as such agreement has been amended and extended and expired at August 31, 2022 but at the date of this AIF negotiations on an amendment are continuing with the KRG.

**"Bond Trustee"** means Nordic Trust AS as bond trustee for the ShaMaran Bonds.

**"Business Code"** means the Code of Business Conduct and Ethics adopted by the Company on August 24, 2007 as subsequently amended and is in effect as at the date of this AIF.

**"COGE Handbook"** means the Canadian Oil and Gas Evaluation Handbook prepared jointly by The Society of Petroleum Evaluation Engineers (Calgary Chapter) and the Canadian Institute of Mining, Metallurgy & Petroleum (Petroleum Society), as amended from time to time.

**"Common Shares"** means the common shares in the capital of ShaMaran.

**“Company”** or **“Shamaran”** means ShaMaran Petroleum Corp. and, as the context may indicate, its subsidiaries.

**“Constitution of Iraq”** means the permanent constitution of Iraq approved by the people of Iraq in the general referendum of October 15, 2005.

**“crude oil”** means a mixture that consists mainly of pentanes and heavier hydrocarbons, which may contain sulphur and other non-hydrocarbon compounds, that is recoverable at a well from an underground reservoir and that is liquid at the conditions under which its volume is measured or estimated. It does not include solution gas or natural gas liquids.

**“development well”** means a well drilled inside the established limits of an oil or gas reservoir, or near the edge of the reservoir, to the depth of a stratigraphic horizon known to be productive.

**“GEP”** means General Exploration Partners, Inc., a wholly-owned subsidiary of the Company, existing under the laws of the Cayman Islands.

**“HKN”** means HKN Energy Ltd., Operator of the Sarsang Block.

**“km”** means kilometers.

**“KRG”** means The Kurdistan Regional Government of Iraq.

**“Kurdistan”** or **“Kurdistan Region”** means the Federal Region of Kurdistan recognized by the Constitution of Iraq and having the same meaning as “Region” in the Oil and Gas Law of The Kurdistan Region - Iraq (Law No. 22 of 2007).

**“MOKDV”** means Marathon Oil KDV B.V.

**“MD&A”** means Management’s Discussion and Analysis of results of operations and financial condition of the Company for the year ended December 31, 2022.

**“MENA”** means Middle East and North Africa.

**“MNR”** means the Ministry of Natural Resources of the KRG.

**“natural gas”** means a mixture of lighter hydrocarbons that exist either in the gaseous phase or in solution in crude oil in reservoirs but are gaseous at atmospheric conditions. Natural gas may contain sulphur or other non-hydrocarbon compounds.

**“NI 51-101”** means National Instrument 51-101 — *Standards of Disclosure for Oil and Gas Activities* of the Canadian Securities Administrators.

**“Oil and Gas Law”** means the Oil and Gas Law of the Kurdistan Region - Iraq (Law No. 22 of 2007).

**“petroleum”** means (i) any naturally occurring hydrocarbons in gaseous or liquid state; (ii) any mixture of naturally occurring hydrocarbons in a gaseous or liquid state; or (iii) any petroleum (as defined in (i) or (ii) herein) that has been returned to a reservoir.

**“prospect”** means a geographic or stratigraphic area in which the Company owns or intends to own one or more oil and gas interests, which is geographically defined based on geological data and which is reasonably anticipated to contain at least one reservoir or part of a reservoir of oil and gas.

“PSC”, or “Production Sharing Contract” means contracts or agreements entered with a host government providing for petroleum operations in a defined area and the division of petroleum production from the petroleum operations.

“PVT” means pressure volume temperature.

“reservoir” means a subsurface rock formation containing an individual and separate natural accumulation of producible petroleum characterized by a single natural pressure system.

“Sarsang Block” means the area covered by the Sarsang Block PSC.

“Sarsang Block PSC” means the Production Sharing Contract in respect of the Sarsang Block, the KRG entered into between the KRG and HKN dated November 7, 2007 and as further amended by the (i) first amendment dated August 1, 2010, (ii) the second amendment dated October 20, 2010, (iii) the third amendment dated April 22, 2014, (iv) the fourth amendment dated April 24, 2014, and (v) the fifth amendment dated May 31, 2018.

“Sarsang Commercial Discovery” has the meaning assigned to it in the Sarsang Block PSC, generally a discovery that is potentially commercial when considering all technical, operational, commercial and financial factors, all in accordance with prudent international petroleum industry practices.

“Sarsang Contractor Group” means the parties from time to time that hold a participating interest in the Sarsang Block PSC.

“Sarsang Lifting Agreement” means the Lifting Agreement as amended effective as of September 1, 2022 between the KRG and HKN on behalf of itself and SNM Sarsang for the sale of Sarsang oil production to the and is currently in effect as at the date of this AIF.

“SEDAR” means the Canadian Securities Administrator’s System for Electronic Document Analysis and Retrieval.

“Shamaran Bond Guarantors” as at the date of this AIF are certain subsidiaries of the Company being Shamaran Services SA, GEP, SNM Sarsang and 0781756 B.C. Ltd.

“SNM Sarsang” means Shamaran Sarsang AS, a wholly-owned subsidiary of the Company and existing under the laws of Denmark.

“TAQA” mean TAQA Atrush B.V., Operator of the Atrush Block, and a wholly-owned subsidiary of the Abu Dhabi National Energy Company PJSC.

“TSX.V” means the TSX Venture Exchange.

“TVD” means true vertical depth.

## Currency

The Company reports its financial results and prepares its financial statements in United States dollars (“USD”). All currency amounts indicated as “\$” in this AIF are expressed in USD unless otherwise indicated. “CAD” means Canadian dollars.

	Year Ended December 31		
Bank of Canada Exchange Rate for CAD/USD	2020	2021	2022
	0.7854	0.7888	0.7383

## Accounting Policies and Financial Information

Financial information is presented in accordance with International Financial Reporting Standards (“IFRS”) and unless otherwise indicated, financial information contained in this AIF is presented in accordance with IFRS.

### Conversion Table

The following table sets forth certain conversions between Standard Imperial Units and the International System of Units (or metric units).

To Convert From	To	Multiply By
Mcf	Cubic meters	0.028174
Cubic meters	Cubic feet	35.315
Bbls	Cubic meters	0.159
Cubic meters	Bbls	6.289
Feet	Meters	0.305
Meters	Feet	3.281
Miles	Kilometers	1.609
Kilometers	Miles	0.621
Acres	Hectares	0.405
Hectares	Acres	2.471

### Abbreviations

Oil and Natural Gas Liquids	
bbls	Barrels of crude oil
bopd	Barrels of crude oil per day
boe	Barrels of oil equivalent
boe/d	Barrels of oil equivalent per day
Mboe	Thousands of barrels of oil equivalent
MMboe	Millions of barrels of oil equivalent
Mblpd	Thousand barrels of liquid per day
Mbopd	Thousand barrels of crude oil per day
Mbbl	Thousands of barrels of crude oil
MMbbl	Millions of barrels of crude oil

The calculations of barrels of oil equivalent (boes) and thousand cubic feet of gas equivalent (McfGe) are based on the standard of 6 Mcf: 1 bbl when converting natural gas to oil and 1 bbl: 6 Mcf when converting oil to natural gas. Boes and McfGe may be misleading, particularly if used in isolation. A boe conversion ratio of 6 Mcf: 1 bbl or a McfGe conversion ratio of 1 bbl: 6 Mcf is based on an energy equivalent conversion method primarily applicable at the burner tip and does not represent a value equivalency at the wellhead.

### Cautionary Statement Regarding Forward-Looking Information

Certain statements in this document and the documents incorporated by reference are “forward-looking information” and “forward-looking statements” (within the meaning of applicable securities legislation). Forward-looking information is information concerning possible events, conditions or financial performance that is based on management’s assumptions relating to future economic conditions and courses of actions. Forward-looking information can include future oriented financial information and disclosure relating to the Company’s financial outlook. Forward-looking statements are statements that are not historical and are generally identified by words such as “seek”, “continue”, “may”, “will”, “projects”, “believes”, “anticipates”, “expects”, “estimates”, “pending”,

“intends”, “plans” or similar words suggesting future outcomes that are based on management’s best judgment and assumptions concerning how future trends will impact the Company’s business.

By their nature, forward-looking statements and forward-looking information is likely to be less reliable than historical information because it is based on these judgements and assumptions, accounting for inherent risks and uncertainties, many of which are difficult to predict, and which are usually beyond the control of management, but which could cause actual results to be materially different from those expressed by these forward-looking statements and information.

### **Assumptions**

Management is regularly considering and evaluating assumptions that will impact on future performance. Examples of such assumptions include, but are not limited to: (i) assumptions concerning competitive factors such as those relating to the distribution and marketing of oil and natural gas, pricing, and methods of improving reliability of delivery, and (ii) assumptions relating to future changes in environmental or health and safety laws, regulations or community expectations governing the Company’s operations, including, but not limited to, increased monitoring, compliance and remediation costs and or costs associated with penalties or other sanctions imposed on the Company for non-compliance or breach of environmental regulation.

### **Risks**

Examples of risks and uncertainties associated with the assumptions made by management include, but are not limited to: (i) risks associated with international operations in Kurdistan, in northern Iraq, which is a politically less stable jurisdiction; (ii) risks associated with the regulation of oil and gas production and export; (iii) risks that are inherent in oil and gas development and production, including availability of a functioning infrastructure, complying with environmental regulation and the availability of staff and equipment. The Company is also exposed to more generic risks such as the risk with respect to general economic conditions, regulations and taxes, civil unrest, corporate restructuring and related costs, capital and operating expenses, petroleum pricing and availability of financing and currency exchange rate fluctuations. Management used its best efforts to ensure that the assumptions used in the preparation of such information were reasonable. However, they may ultimately prove to be imprecise and, as such, undue reliance should not be placed on forward-looking statements.

The Company does not undertake to update or re-issue the forward-looking statements and information that may be contained herein, whether due to new information, future events or otherwise. Where such forward-looking statements or forward-looking information is updated or withdrawn, notification will be given by way of a news release and or MD&A disclosure. Material differences between actual results and previously disclosed future oriented financial information or financial outlook will be disclosed in the Company’s MD&A.

### **Forward-looking Statements**

Any statements regarding the following are forward-looking statements:

- planned development or appraisal activity including both expected drilling and geological and geophysical related activities
- future crude oil, natural gas or chemical prices
- future sources of funding for our capital program
- government or other regulatory consent for appraisal, development or acquisition activities
- future production levels
- future capital expenditures and their allocation to appraisal and development activities
- future earnings
- future asset acquisitions or dispositions
- future debt levels
- availability of committed credit facilities
- possible commerciality
- future development plan amendments or capacity expansions
- future ability to execute dispositions of assets or businesses
- future sources of liquidity, cash flows and their uses

- future drilling of new wells
- ultimate recoverability of current and long-term assets
- ultimate recoverability of reserves or resources
- expected finding and development costs
- expected operating costs
- estimates on a per share basis
- future foreign currency exchange rates
- future market interest rates
- future expenditures and future allowances relating to environmental matters
- dates by which certain areas will be developed or will come on stream or reach expected operating capacity
- changes in any of the foregoing

Statements relating to reserves or resources are forward-looking statements, as they involve the implied assessment, based on estimates and assumptions that the reserves and resources described exist in the quantities predicted or estimated and can be profitably produced in the future.

The forward-looking statements are subject to known and unknown risks and uncertainties and other factors which may cause actual results, levels of activity and achievements to differ materially from those expressed or implied by such statements. Such factors include, among others:

- market prices for oil and gas and chemical products
- the Company's ability to develop, produce and transport crude oil to markets
- ultimate effectiveness of design or design modification to facilities
- the results of appraisal and development drilling and related activities
- volatility in energy trading markets
- foreign-currency exchange rates
- economic conditions in the country and region in which the Company carries on business
- governmental actions including changes to taxes or royalties, changes in environmental and other laws and regulations
- renegotiations of contracts
- results of litigation, arbitration or regulatory proceedings
- political uncertainty, including actions by terrorists, insurgent or other groups, or other armed conflict
- conflict between states
- internal conflict within states or regions

The impact of any one risk, uncertainty or factor on a particular forward-looking statement is not determinable with certainty as these factors are interdependent, and management's future course of action would depend on our assessment of all information at that time. Although the Company believes that the expectations conveyed by the forward-looking statements are reasonable based on information available to us on the date such forward-looking statements were made, no assurances can be given as to future results, levels of activity and achievements.

Undue reliance should not be placed on the statements contained herein, which are made as at the date hereof and, except as required by law, we undertake no obligation to update publicly or revise any forward-looking statements, whether because of new information, future events or otherwise. The forward-looking statements contained herein are expressly qualified by this cautionary statement.

### **Presentation of Oil and Gas Information**

All oil and gas information contained in this AIF has been prepared and presented in accordance with NI 51-101. Certain terms used herein are defined in the "*Glossary of Terms*". Certain other terms used herein but not defined herein are defined in the COGE Handbook, NI 51-101 and Canadian Securities Administrators Staff Notice 51-324 ("**CSA 51-324**") and, unless the context otherwise requires, shall have the same meanings herein as in NI 51-101 and CSA 51-324. This AIF also contains certain supplemental operational, and property information with respect to the Company, not required to be disclosed under NI 51-101.



The actual oil and gas resources or reserves and future production may be greater or less than any estimates provided herein.

## ITEM 1 - INTRODUCTION

### Incorporation by Reference and Date of Information

Specifically incorporated by reference and forming a part of this AIF is the Company's material change report from May 27, 2022 and September 23, 2022 to the date of this AIF. A copy of such material change reports have been filed with the Canadian Securities Administrators in each of the Provinces of British Columbia, Alberta, Ontario, Saskatchewan, Manitoba and Nova Scotia and can be found under the Company's profile on SEDAR at [www.sedar.com](http://www.sedar.com).

All information in this AIF is at December 31, 2022 unless otherwise indicated.

## ITEM 2 - CORPORATE STRUCTURE

### Name, Address and Incorporation

The full corporate name of the Company is ShaMaran Petroleum Corp. The address of the Company's head office is 2000, 885 West Georgia Street, Vancouver, British Columbia, V6C 3E8 and the registered address and records office is 25th Floor, 666 Burrard Street, Vancouver, BC, V6C 2X8, Canada.

The Company was incorporated under the laws of the Province of British Columbia on October 3, 1991, under the name "Arauco Resources Corporation" ("**Arauco**").

On August 13, 1997, Arauco was continued as a federal company under the *Canada Business Corporations Act* ("**CBCA**") and on August 29, 1997 the name of the Company was changed from Arauco to Kit Resources Ltd. ("**Kit**").

Pursuant to the terms of a statutory plan of arrangement approved by the Ontario Superior Court of Justice on March 3, 2000, Kit and 1395896 Ontario Inc., a wholly-owned subsidiary of Wheaton River Minerals Ltd. ("**Wheaton River**"), were amalgamated under the name Kit (the "**Arrangement**"). After the Arrangement, Kit became a wholly-owned subsidiary of Wheaton River.

Effective March 6, 2000, to facilitate the business combination of Kit and Wheaton River, Kit was continued from the federal jurisdiction to Ontario under the *Ontario Business Corporations Act* (the "**OBCA**"). In January 2001 Wheaton River sold its majority interest in the Company.

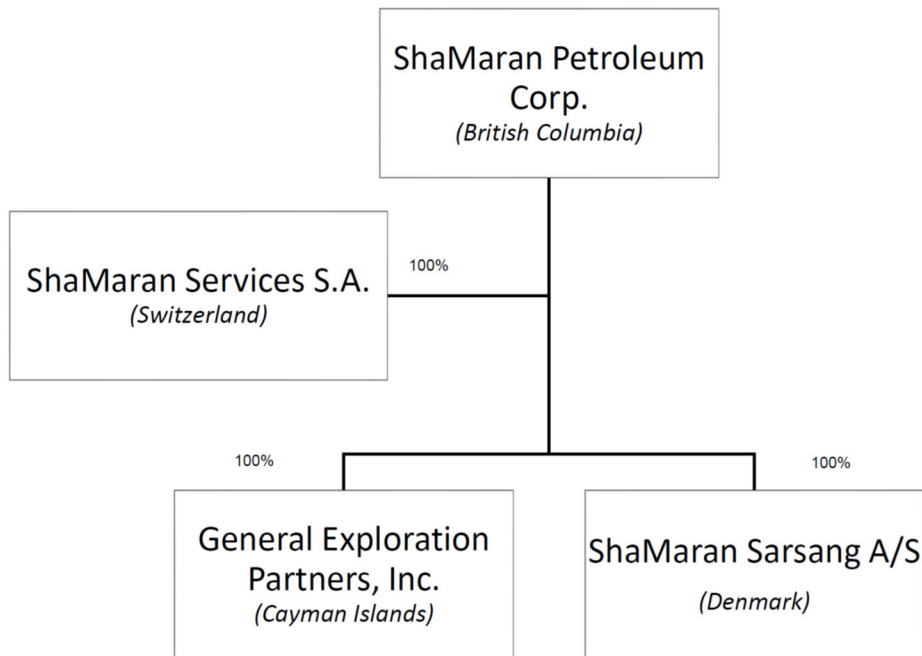
On November 15, 2001, Kit was extra-territorially registered in the Province of British Columbia and on December 29, 2006 was continued into British Columbia from Ontario under the *Business Corporations Act* (British Columbia).

On February 9, 2007 the corporate name of the Company was changed from Kit to Bayou Bend Petroleum Ltd. ("**Bayou Bend**").

On October 21, 2009, the corporate name of the Company was changed from Bayou Bend to ShaMaran Petroleum Corp.

### Intercorporate Relationships

Substantially all the Company's business is carried on through its various subsidiaries. The Company's initiative to eliminate redundancies in its legal structure resulted in the liquidation and windup of certain of the Company's legal entities during the year 2019 and 2020. The following chart illustrates, as at the date of this AIF, the Company's significant subsidiaries, including their respective jurisdiction of incorporation and the percentage of voting securities in each that are directly held by the Company:



### ITEM 3 - GENERAL DEVELOPMENT OF THE BUSINESS

ShaMaran is a Canadian independent oil development, exploration and production company currently engaged in the appraisal, development and production of oil and gas resources in the Atrush Block and the Sarsang Block in the Kurdistan Region of Iraq (“**Kurdistan**”).

ShaMaran holds a 27.6% participating interest in the Atrush Block PSC, through its wholly owned subsidiary GEP, related to a petroleum property located in Kurdistan. The Atrush Block is 269 km<sup>2</sup> and includes, on the surface, the Chiya Khere Mountain running east to west, which coincides with the Atrush Block subsurface structure. The Atrush Block is located approximately 85 kilometres northwest of Erbil, which is the capital of Kurdistan. Oil production from the Atrush Block commenced in July 2017. The oil discovery on the Atrush Block is continuously being appraised. Further phases of development will be defined based on production data, appraisal information and economic circumstances.

ShaMaran also holds an 18% participating interest (22.5% paying interest) in the Sarsang Block PSC, through its wholly owned subsidiary SNM Sarsang. The Sarsang Block covers a 420 km<sup>2</sup> area . HKN currently operates the Sarsang Block which comprises of 12 oil wells across two separate fields: the Swara Tika field and the East Swara Tika field. The Sarsang Block is located directly to the north of the Atrush Block.

The Atrush and Sarsang petroleum properties are continuously being appraised. Further phases of development will be defined based on production data, appraisal information and economic circumstances.

## THREE-YEAR HISTORY

### *Year Ended December 31, 2020*

#### Corporate Developments

Following the worldwide drop in oil prices in early 2020, ShaMaran addressed an imminent liquidity shortfall. ShaMaran projected that its normal operations at the then current depressed oil prices would not generate enough cash to pay for \$26.4 million of bond obligations when they would come due in July 2020. The global drop in the demand for oil and collapse in world oil prices placed rapid and extraordinary downward pressure on ShaMaran's gross margin and prevented the KRG from paying ShaMaran for past purchases of higher priced oil. This resulted in further significant negative impacts to ShaMaran's operational cash flows. Discussions commenced with the KRG as to the timing of payment of the \$42 million owed for oil deliveries and entitlements from November 2019 to February 2020; however, ShaMaran did not collect any of these past due amounts in 2020. ShaMaran retained advisors and engaged with stakeholders to examine options such as restructuring, recapitalization or other available alternatives to find a solution to address a potential imminent liquidity shortfall.

In May 2020, ShaMaran reported a \$48.6 million impairment loss on the book value of PP&E relating to ShaMaran's Atrush Block 2P reserves base and a \$67.6 million impairment loss on the book value of intangible exploration and evaluation costs relate to ShaMaran's Atrush Block 2C resource base. ShaMaran made these determinations by conducting an impairment assessment as required by accounting standards.

As a result of the impairment loss ShaMaran was in breach of its financial covenant related to the ShaMaran 2023 Bond 12% senior unsecured bond (ISIN NO 0010826456) (the "**2023 Bond**"). Following successful negotiations with, and approval of, its bondholders, on July 5, 2020 ShaMaran and Nordic Trust AS (the "**Bond Trustee**") entered into an amendment and restatement of the 2023 Bond terms ("**Amended Bond Terms**") that included:

- full and final discharge of the Liquidity Guarantee (as defined in the Amended and Restated Debenture dated July 30, 2021 (the "**Debenture**") between ShaMaran and Nemesia S.à.r.l. ("**Nemesia**")) given by Nemesia, a private company established by a trust settled by the estate of the late Adolf H. Lundin, in favor of the Bond Trustee (for the benefit of the bondholders) in consideration for Nemesia making a payment of \$22.8 million from the Liquidity Guarantee to ShaMaran's Debt Service Retention Account (the "**DSRA**");
- \$11.4 million of the amounts were credited to the DSRA and used by ShaMaran to pay the interest on the bonds due on the next interest payment date in July 2020, while the residual \$11.4 million remained in the DSRA to provide credit support for any future payment obligations of ShaMaran under the Amended Bond Terms;
- ShaMaran's obligations to make the \$15 million amortization payment due in early July 2020 were deferred until December 5, 2021, and substituted with a cash sweep mechanism whereby ShaMaran, on each interest payment date, would use any "free cash" (as defined in the Amended Bond Terms) exceeding \$15 million to repay the bonds, and any amount of free cash so used to redeem bonds would correspondingly reduce the deferred amortization payment amount;
- temporary waiver until July 5, 2021, granted with respect to the existing breach of the financial covenant relating to the equity ratio; and
- in conjunction with the temporary waivers of the amortization payment requirement and financial covenant breach, the Amended Bond Terms were to provide for a put right in favour of the bondholders to require that ShaMaran purchase the bonds (at par plus accrued interest and the existing call premium) at any time on ten (10) business days' notice subject to consent by holders of 50.01% of the bonds.

In early July 2020, the Liquidity Guarantee was fully drawn, as contemplated by the Amended Bond Terms, and on August 6, 2020 ShaMaran issued to Nemesia 2,280,000 common shares in ShaMaran (the “**Common Shares**”, each a “**Common Share**” in ShaMaran) in accordance with the terms of the Debenture and continued to issue such number of Common Shares monthly to Nemesia until the closing of the Sarsang Acquisition and the effectiveness of the Amended and Restated Debenture (as defined below, see “*Year Ended December 31, 2021 Corporate Developments*”).

### **Operational Developments**

On February 17, 2020, ShaMaran reported estimated reserves and contingent resources for the Atrush Block as at December 31, 2019. Total field 2P reserves on a Company gross basis for the Atrush Block increased by 40%; from 21.3 million barrels (“**MMbbl**”) reported as at December 31, 2018, to 29.9 MMbbl. Total unrisks best estimate contingent oil resources (“**2C**”) on a Company gross basis for the Atrush Block increased from the 2018 estimate of 53.9 MMbbl to 67.2 MMbbl as at December 31, 2019.

The annual Atrush Block production for 2020 was 45.1 thousand barrels of oil per day (“**Mbopd**”). ShaMaran’s entitlement share of 2020 exports was approximately 2.16 MMbbl which were sold at an average netback price of \$26.27 per barrel of oil and resulted in \$56.7 million of revenue from oil sales for the year 2020.

In the first quarter of 2020 the Atrush Block processing capacity was increased to 58.0 thousand barrels of liquid per day (“**Mblpd**”) during normal operations through commissioning of desalter units at PF-1 as well as the addition of a second train at the Pad E EPF.

Due to the COVID-19 pandemic (“**COVID-19**”), the 2020 drilling and completion campaign was suspended in the first quarter of 2020 with no new wells subsequently drilled or completed in 2020.

### **COVID-19 Response**

With the objectives of ensuring operations personnel safety and wellbeing as well as assuring business continuity, a COVID-19 action plan was implemented in February 2020 and continued throughout 2021. These policies and procedures initially looked to reduce exposure potential through minimization and deferment of non-critical field activities during 2020. With Atrush transitioning to the “new normal” COVID-19 operating environment, field activities in 2021 returned towards pre-pandemic levels.

Quarantine procedures and testing were implemented for all rotating staff, local nationals and expats, and special measures were taken to ensure staff wellbeing during extended rotations. Field activities were prepared with the consideration and minimization of exposure points as a primary concern and field development planning was continuously reviewed to suit the changed operating environment.

Key elements of the COVID-19 response strategy were:

- Maintaining and optimizing the COVID-19 action plan implemented in the first quarter of 2020:
  - Deployment of IT solutions facilitating communications and information sharing; and
  - Focus on flexibility to ensure the best outcomes in a physically distanced working environment.
- Anticipation of potential changes and pre-emptive action to ensure staff safety and wellbeing:
  - Work plans adjusted to minimize exposure points; and
  - Quarantine procedures and testing implemented for all rotating staff.

## **Year Ended December 31, 2021**

### Corporate Developments

In January and July 2021 ShaMaran timely paid in full all interest owed to its bondholders of the 2023 Bond.

On July 12, 2021, ShaMaran announced that it signed an agreement with a subsidiary of TotalEnergies S.E. (“TTE”) that holds an 18% interest in the Sarsang Block (the “**Sarsang Acquisition**”). The Sarsang Acquisition has an effective date of January 1, 2021. ShaMaran financed the Sarsang Acquisition through the issue of new debt, a vendor loan and by utilizing ShaMaran’s cash balance.

On July 16, 2021, ShaMaran announced the successful placement of a new \$300 million bond, with a 4-year tenor due July 2025 and priced at 12% fixed semi-annual coupon (the “**2025 Bond**”). The proceeds from the 2025 Bond issue was used to refinance \$172 million of the current outstanding 2023 Bond, to refinance \$7.2 million of existing subordinated debt to Nemesia, to partly finance the Sarsang Acquisition announced July 12, 2021 and for general corporate and administrative purposes.

On July 27, 2021, ShaMaran announced that the proposals for the conditional refinancing of the 2023 Bond as well as necessary waivers for the issuance of the 2025 Bond and other financial matters relating to the 2023 Bond were approved by the bondholders voting on the proposals.

On July 30, 2021, ShaMaran announced the issuance and settlement of the initial issue of the 2025 Bond in the amount of \$111.5 million. Proceeds from this initial issue were used to pay a portion of the purchase price of the Sarsang Acquisition and were placed into escrow subject to release following the satisfaction of conditions precedent to completion of the Sarsang Acquisition. Also, on this date ShaMaran entered into (i) an agreement with Nemesia to underwrite the rights offering in that was subsequently launched in Canada on April 5, 2022, and in Sweden on April 7, 2022 (the “**Rights Offering**”) and (ii) to amend and restate the debenture dated February 25, 2019 in favor of Nemesia (the “**Amended Debenture**”) so that contemporaneously with completion of the Sarsang Acquisition, ShaMaran will repay and settle \$7,200,000 of the then-current principal balance by way of the issuance at 98.5% of par equating to a face value of \$7,309,645 of new bonds issued in the 2025 Bond issue, and Nemesia will accept such new bonds in exchange for, and in repayment and settlement of certain amounts owed, whereupon the principal balance owed by ShaMaran was reduced by \$7,200,000 and ShaMaran’s total indebtedness to Nemesia under the Amended Debenture became \$15,600,000 at 12% interest payable semi-annually until maturity in July 2024 together with a payment in kind of an additional 2%.

### Operational Developments

On September 14, 2021, ShaMaran announced that cumulative oil production from the Atrush Block had reached 50 million barrels. By year-end 2021 such cumulative oil production from Atrush Block exceeded 54 million barrels.

Annual Atrush Block production for 2021 was 38.6 Mbopd. ShaMaran’s entitlement share of 2021 exports was approximately 1.87 million barrels which were sold at an average netback price of \$54.75 per barrel of oil and resulted in \$102.3 million of revenue from oil sales for the year 2021.

Measures put in place to mitigate impacts of the COVID-19 in the Atrush Block and Erbil operations were maintained and improved in 2021 enabling a return towards normal operating conditions. Capital programs were resumed with one new production well, CK-17, drilled and brought online in June 2021.

## ***Year Ended December 31, 2022***

### Corporate Developments

In January 2022 ShaMaran timely paid in full interest owed to its bondholders of the 2023 Bond and the 2025 Bond.

On April 5, 2022, the Rights Offering was launched by ShaMaran in Canada and on April 7, 2022 in Sweden. The proceeds of the Rights Offering will be used by ShaMaran for general corporate and administrative purposes.

On May 20, 2022, ShaMaran announced that the Rights Offering expired. Pursuant to the Rights Offering, each ShaMaran shareholder of record on April 13, 2022 who was an Eligible Holder or Approved Holder (as such terms were defined in ShaMaran's Rights Offering circular dated April 5, 2022, as amended) received one right (a "**Right**") and collectively the "**Rights**") for every Common Share held. Four Rights permitted the holder to purchase one Common Share at the price of CAD\$0.06825 (SEK 0.52 per Common Share). A total of 2,060,115,323 Rights were exercised.

On May 25, 2022, ShaMaran announced it issued 558,242,414 Common Shares at the price of CAD\$0.06825 (SEK 0.52) per Common Share being the maximum number of Common Shares approved for the Rights Offering for a total gross proceeds of approximately US\$30.15 million. No call on Nemesia was required to be made by ShaMaran pursuant to the underwriting of the Rights Offering as such offering was over-subscribed.

On September 14, 2022, ShaMaran completed the Sarsang Acquisition and subsequently changed the name of TEPKRI Sarsang A/S to ShaMaran Sarsang A/S. The additional interest in Sarsang Block: (i) adds immediate incremental participating interest production of approximately 5,000 bopd of light crude oil (36-38° API); (ii) is expected to double ShaMaran's average net production, exceeding 20,000 bopd, following the completion of the processing facility expansion at Swara Tika field by third quarter of 2022; and (iii) enhances ShaMaran's oil reserves through the addition of high API and low sulphur oil that achieves a low discount to Brent.

On September 27, 2022, ShaMaran announced that it exchanged the 2023 Bond for the 2025 Bond and accrued interest was paid in full as at September 26, 2022 to all bondholders.

On October 3, 2022, ShaMaran announced that it had prepaid in full (together with applicable interest) the convertible loan note issued to an affiliate of TTE in connection with the closing of the Sarsang Acquisition. The total consideration of \$15 million was paid by ShaMaran for the acquisition and only a contingent payment of \$15 million remains payable in the future upon (i) cumulative gross production from the Sarsang Block PSC reaching 130 million barrels of oil and (ii) subject to Brent crude oil prices averaging at least \$60 per barrel for a twelve months' period.

On October 4, 2022, ShaMaran confirmed that the Sarsang Operator, on behalf of itself and ShaMaran's wholly-owned subsidiary, SNM Sarsang, signed an amendment to the Sarsang Block lifting agreement with the KRG regarding the sale and purchase of all crude oil production from the Sarsang Block (the "**Sarsang Block Lifting Agreement**"). This amendment became effective retroactively to September 1, 2022. The new Sarsang Block Lifting Agreement changes the reference price for the Sarsang Block crude oil sales payments from Dated Brent (price assessment value of oil) to KBT (Kurdistan Blend) in order to reflect current market conditions for oil sales at Ceyhan, together with the necessary adjustments for crude oil quality due to the crude benchmark change.

### Operational Developments

On March 27, 2022, the drilling of a second water disposal well (CK-16) in the Atrush Block commenced in order to mitigate water production issues.

On April 25, 2022, ShaMaran reported estimated reserves and contingent resources for the Atrush Block as at December 31, 2021. Total 2P reserves on a ShaMaran gross basis for the Atrush Block increased from 30.3 million

barrels reported as at December 31, 2020, to 30.4 MMbbls which, in 2021 the Atrush Block gross production of 3.9 MMbbls is included, represents an increase of 13.1%. Total 2C resources on a ShaMaran gross basis for the Atrush Block decreased from the 2020 estimate of 60.6 million barrels to 34.8 million barrels as at December 31, 2021.

On July, 2022, ShaMaran announced that its drilling operations on the Atrush Block had commenced on the CK-18 production well in Kurdistan. ShaMaran also announced that it commenced workover operations on the CK-17 ST-1 production well in the Atrush Block. In addition, drilling operations concluded on CK-16, a water disposal well, drilled from the Chamanke G Pad and designed to provide redundancy to the existing Atrush Block water disposal well, CK-9.

On October 26, 2022, ShaMaran announced the commissioning of Sarsang's 25,000 bopd production facility and the commencement of export via pipeline for oil produced from that facility.

#### ***Events Subsequent to Year Ended December 31, 2022***

On February 16, 2023, ShaMaran reported (i) total Company's gross 2P reserves increased from 30.4 million barrels reported on December 31, 2021 to 68.3 million barrels on December 31, 2022, being an increase of 225%, (ii) that the Company had a 2P net reserves replacement ratio of 950%, and (iii) the Company' net 2C resources increased by close to 20% from 34.8 MMbbls on December 31, 2021 to 41.5 MMbbls at December 31, 2022, the increases and ratio reported in (i), (ii) and (iii) above were primarily associated with the closing of the Sarsang Acquisition. ShaMaran's 2P Reserves Life Index was also reported to be close to 12 years. As at December 31, 2022 the Atrush field had achieved cumulative production of approximately 67 MMbbls and the Sarsang field had achieved cumulative production of approximately 55 MMbbls.

On March 23, 2023 it was publicly reported that the long running arbitration case between Iraq and Turkey concerning the Iraq-Turkey export pipeline ("**ITP**") had been awarded in Iraq's favor. This arbitration dates back to 2014, when Iraq claimed at the International Chamber of Commerce ("**ICC**") in Paris that Turkey was violating the terms of a 1973 bilateral agreement by allowing the KRG to export crude oil through the ITP without Baghdad's consent. It has also been reported that the Government of Turkey informed the Government of Iraq that it would respect the ruling in this arbitration case.

On March 25, 2023, ShaMaran became aware of notification to the Atrush operator and the Sarsang operator as well as other operators in Kurdistan delivering oil into the Kurdistan trunk line pipeline that at the request of Turkey officials the ITP was being shutdown in light of the recent ICC arbitration ruling. Oil exports from the Atrush Block and the Sarsang Block temporarily ceased.

As at the date of this AIF, oil exports from the Kurdistan producers (including the Atrush Block and the Sarsang Block) are awaiting notice from the Kurdistan pipeline operator that the export pipeline has re-commenced operations.

#### **ITEM 4 - DESCRIPTION OF THE BUSINESS**

##### **Summary**

The Company is an independent oil development, exploration and production company currently engaged in the appraisal, development and production of oil and gas resources in Kurdistan. As part of its normal business the Company continues to evaluate new opportunities.

As at the date of this AIF, the Company holds two non-operated interests in Kurdistan: a 27.6% participating interest in the Atrush Block PSC and an 18% participating interest (22.5% paying interest) in the Sarsang Block PSC.

Both Blocks are high-quality oil fields that have a large production base with significant growth potential. They are both continuously being appraised and further phases of development, including further drilling and possible facilities expansion, will be defined based on production data, appraisal information and economic circumstances.

Oil production from Atrush commenced in July 2017. Installed production facilities have a capacity of over 58 Mblpd. Nineteen wells have been drilled to date in Atrush Block.

Oil production from Sarsang commenced in 2013 from early production facilities and exports began in 2017. Installed production facilities have a capacity of 55 Mblpd. Fourteen wells have been drilled to date in Atrush Block.

As at the date of this AIF, (i) all wells and the central processing facility in the Atrush field have been shut-in and (ii) certain wells in Swara Tika field have continued to produce at reduced levels as production is being trucked to offsite storage facilities; in the cases of both (i) and (ii) above are currently pending re-opening of the Iraq-Turkey export pipeline and re-commencement of full production activities and oil exports via pipeline.

A summary of ShaMaran's current interests in the Atrush Block and Sarsang Block as at the date of this AIF are set out in the following table:

Country	Block	Acreage (km <sup>2</sup> )	Participating interest <sup>(1)</sup>	
Iraq (Kurdistan)	Atrush Block	269	TAQA <sup>(2)</sup>	47.4%
			KRG	25.0%
			ShaMaran <sup>(3)</sup>	27.6%
Iraq (Kurdistan)	Sarsang Block	420	HKN <sup>(4)</sup>	62%
			KRG <sup>(5)</sup>	20%
			ShaMaran <sup>(6)</sup>	18%
Notes:				
<sup>(1)</sup> Participating interest means a percentage of the ownership in an oil and gas PSC granting its owner the right to explore and develop oil and gas from a specific property which normally bears its proportionate share of the costs of petroleum operations as well as any royalties or other production burdens.				
<sup>(2)</sup> The Operator of the Atrush Block.				
<sup>(3)</sup> Held through GEP, a wholly-owned subsidiary of the Company.				
<sup>(4)</sup> The Operator of the Sarsang Block				
<sup>(5)</sup> The KRG is carried by the Sarsang Contractors meaning HKN pays 77.5% and ShaMaran pays 22.5% of the petroleum costs of Sarsang Block.				
<sup>(6)</sup> Held through SNM Sarsang, a wholly-owned subsidiary of the Company.				

On February 15, 2023, the Company issued 2023 guidance for its interests in Atrush and Sarsang Blocks on a combined daily production net basis at 15 Mbopd to 18 Mbopd. However, following the shutdown of the Iraq-Turkey export pipeline on March 25, 2023 and subsequent well and facility shutdowns in both the Atrush and Sarsang blocks means that this previous guidance is at the date of this AIF viewed by the Company as suspended until such time as the export pipeline re-opens and full operations resume.

### ***Specialized Skills and Knowledge***

The Company relies on specialized skills and knowledge to gather, interpret and process geological and geophysical data, and to design, drill and complete wells, together with the numerous additional activities required to potentially, produce oil and natural gas. The Company is part of a joint venture for Atrush Block that employs a strategy of contracting consultants and other service providers to supplement the skills and knowledge of its permanent staff to provide the specialized skills and knowledge required to undertake its oil and natural gas operations efficiently and effectively.

### ***Competitive Conditions***

The petroleum industry is immensely competitive in all its phases. ShaMaran competes with other participants in the search for, and the acquisition of, oil and natural gas interests located in the Kurdistan Region of Iraq or elsewhere. ShaMaran's competitors include other resource companies which may have greater financial resources, staff and facilities than those of the Company. Competitive factors which may come into play in the future include the distribution and marketing of oil and natural gas, pricing, and methods of improving reliability of delivery.



### ***Economic Dependence***

The Company is dependent upon the results of appraisal and development activities obtained under various agreements, including the Atrush PSC, and the Atrush JOA and the Sarsang PSC and the Sarsang JOA that it has entered for the exploration, development and extraction of hydrocarbons in those Blocks.

### ***Environmental Protection***

The Company's oil and gas operations are in a region where there are environmental regulations including restrictions on where and when oil and gas operations can occur, the release of substances into groundwater, atmosphere and surface land and the potential routing of pipelines or location of production facilities. These restrictions and regulations are strictly followed. The Company could potentially be liable for contamination of properties acquired and it attempts to mitigate the risk of inheriting environmental liabilities when conducting due diligence on these acquisition opportunities. Breach of environmental regulations in any of the regions in which ShaMaran operates could result in restrictions or cessation of operations and the imposition of fines and penalties. See also "***Risk Factors.***"

### ***Employees***

As at December 31, 2022, the Company had 7 full-time employees based in Switzerland, two based in the United Kingdom and one based in Kurdistan. The Company relies on and engages consultants on a contract basis to provide services, management and personnel where required to assist the Company and its subsidiaries to carry on its administrative, legal, commercial or technical activities in Canada, Cayman Islands, Denmark, Kurdistan, Sweden, Switzerland and the United States.

### ***Foreign Operations***

ShaMaran's assets and operations are in Kurdistan, a federally recognized semi-autonomous political region in Iraq. The Company's assets and operations may be influenced by political developments between Kurdistan and the Iraq federal government, as well as political developments of neighbouring states within MENA, Turkey, and surrounding areas. Kurdistan and Iraq have a history of political and social instability.

### ***Bankruptcy and Similar Procedures***

There have been no bankruptcy, receivership or similar proceedings against the Company or any of its subsidiaries, or any voluntary bankruptcy, receivership or similar proceedings by the Company or any of its subsidiaries, within the three most recently completed financial years or during or proposed for the current financial year.

### ***Reorganizations***

There was no material reorganization of the Company or any of its subsidiaries in the year 2022.

### ***Social and Environmental Policies***

On August 24, 2007, the Company adopted its Business Code that sets out basic principles intended to guide all employees, consultants, directors and officers of the Company in the proper conduct of the business of the Company. ShaMaran's Business Code is intended to deter wrongdoing by those persons and to promote, amongst other things, honest and ethical conduct and the avoidance of conflicts of interest.

On August 12, 2020 the Company adopted an Environmental, Social and Governance Statement ("***ESG Statement***").

As announced in the Company's news release on April 12, 2022, the Company decided, as part of its ESG commitment, to participate as exclusive corporate sponsor for the Hasar Vision 2025 Program – a project to plant one million trees in the center of Erbil the capital of Kurdistan. As at the date of this AIF, this program has already planted 315,000 native trees. ShaMaran will also be assisting Hasar Organization to secure carbon credit accreditation for the Million Oaks Project and its other activities in Kurdistan. Carbon credits will be sought and will be the first-of-its-kind in Kurdistan and will be used by ShaMaran to offset its carbon emissions in the Atrush Block and Sarsang Block.

A full copy of the Company's Code of Business Code and the Company's ESG Statement can be found on the Company's website at [www.shamaranpetroleum.com](http://www.shamaranpetroleum.com).

### **Overview of Kurdistan Oil Industry**

Since the introduction of the Oil and Gas Law of The Kurdistan Region - Iraq in 2007, the KRG has developed an independent oil and gas industry and numerous international oil companies have signed PSCs with the KRG. This has resulted in a period of increased exploration and resulted in several oil and gas discoveries in reservoirs of Tertiary, Cretaceous, Jurassic and Triassic age.

In December 2013, the KRG announced the successful commissioning of its independent export oil pipeline from Khurmala to Fiskhkhabor and commencement of oil shipments from the Tawke and Taq Taq fields. Also in late 2013, an energy cooperation agreement was signed between the government of Turkey and Kurdistan which allows for transportation of Kurdistan oil through to the Mediterranean port of Ceyhan, Turkey.

As at the date of this AIF, while most of the oil producing oil fields in Kurdistan (including the Atrush and Sarsang Blocks) export their crude production via the Iraq-Turkey pipeline for onward export sales to the international oil market by the KRG at Ceyhan, Turkey that pipeline has been shutdown until new arrangements are agreed between Iraq's Ministry of Oil, BOTAS and the KRG.

In Kurdistan the export pipeline that connects to the Iraq-Turkey Pipeline was upgraded in 2018 and has the capacity to transport approximately 1.0 MMbopd. The International Energy Agency has stated that the Iraq-Turkey pipeline to Ceyhan, which is currently the only available export route for oil produced in Kurdistan, has a capacity of approximately 1.6 MMbopd

The KRG has had a general history of making consistent payments to International Oil Companies ("**IOCs**") selling their oil production to the KRG (other than certain limited times including during the four-month period as further described in Item 3 "*Year Ending December 31, 2021*" *Corporate Developments and "Year Ending December 31, 2022"*). As at the date of this AIF, the KRG receivable balance owed to the Company exceeds \$102 million for unpaid oil deliveries by the Company from Atrush and Sarsang Blocks for the period from October 2022 until March 25, 2023.

### **Regional Geology**

The Atrush and Sarsang Blocks lie in the Zagros sedimentary basin which is a world-class hydrocarbon province located on the north-eastern margin of the Arabian Platform. This basin is located along the Zagros thrust belt and covers an area of some 200,000 km<sup>2</sup>. It extends from the Taurus thrust zone in the north (Turkey) to the Arabian Gulf and Oman in the south. The basin is a typical foreland compressional basin formed by the collision of the Afro-Arabian and Iranian plates in Late Cretaceous and Cenozoic times. The Atrush structure is part of the high folded zone of the Zagros mountains.

The late Permian and Triassic rocks were deposited in relatively stable shelf conditions and consist of shallow water carbonates with minor evaporite and clastic content. Jurassic sediments were also deposited in the shelf environment and consist primarily of carbonates ranging from deep water mudstones-wackestones to shallow water packstones-grainstones interbedded with supra-tidal carbonates and anhydrites.

The main source rocks in the area are in the Jurassic Naokelekan and the Cretaceous Chia Gara formations. Hydrocarbon generation and migration in the Zagros Basin began during the late Cretaceous time when folding and uplift of the Zagros Mountains began. Faults and fracture development created vertical migration paths to hydrocarbons. Most likely a combination of vertical and horizontal migration charged the structures in the Atrush Block area and Sarsang Block area.

The following table indicates the Atrush Block stratigraphic summary showing reservoirs, source and seal formations:

Age	Epoch	Formation (1)	Lithology	Reservoir	Source	Seal
Cretaceous	Upper	Aqra-Bekhme	Karstic & Dolomitic Limestone			
		Qamchuqa	Karstic & Dolomitic Limestone			
	Lower	Sarmord	Interbedded Marls, Limestone & Shale			
		Garagu	Limestone			
		Chia Gara	Shale & Marls			
Jurassic	Upper	Chia Gara Transition Beds	Shale with layers of Anhydrite and Limestone			
		Barsarin	Shale & Marls over Limestone			?
		Naokelekan	Organic rich Shale with layers of Limestone			
	Middle	Upper Sargelu	Limestone & Shaly Limestone			
		Lower Sargelu	Dolomite with layers of Limestone			
	Lower	Alan	Anhydrites with a few layers of Dolomite			?
		Mus	Limestone & Dolomite			
		Adaiyah	Predominantly Anhydrite with some Dolomite			
Butmah		Dolomite with isolated layers of Anhydrite and Limestone				
Triassic	Upper	Baluti	Interbedded Marls, Dolomites & Shale			
		Kurra Chine A	Interbedded Anhydrite, Limestone & Dolomite		?	
		Kurra Chine B	Interbedded Anhydrite, Limestone & Dolomite		?	
		Kurra Chine C	Interbedded Anhydrite, Limestone & Dolomite		?	

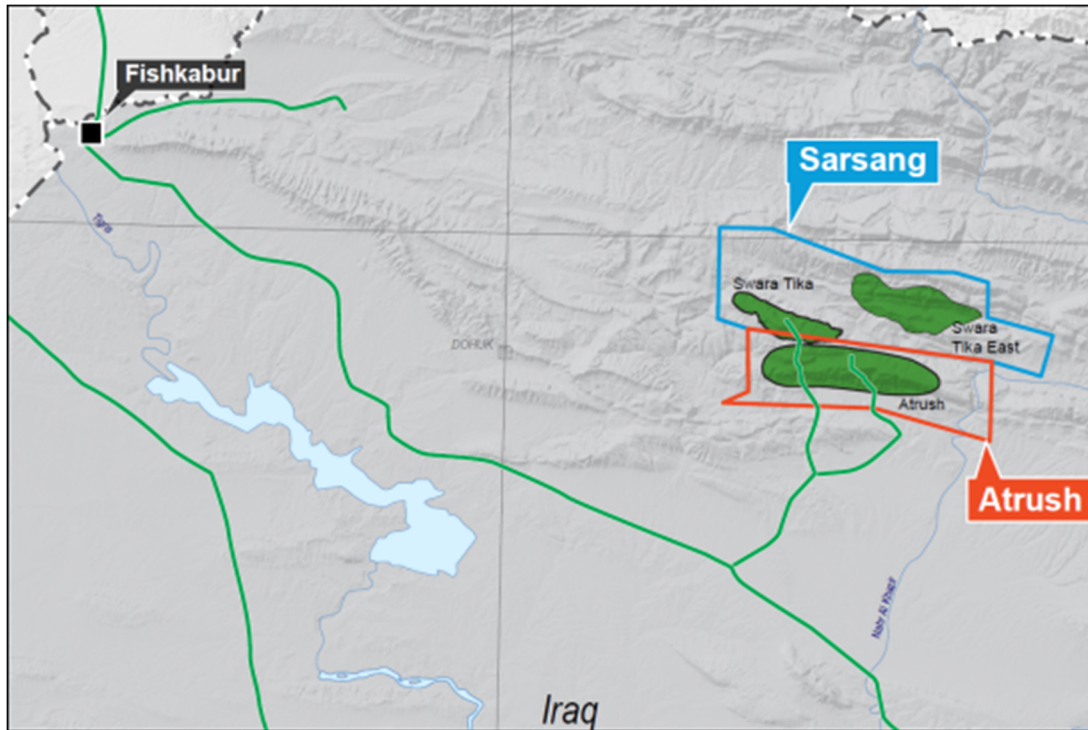
\*A wavy line between formations represents an unconformity.

The following table indicates the Sarsang Block stratigraphic summary showing reservoirs, source and seal formations:

Age	Epoch	Formation <sup>(1)</sup>	Lithology	Reservoir	Source	Seal
Cretaceous	Upper	Aqra-Bekhme	Karstic & Dolomitic Limestone			
		Qamchuqa	Karstic & Dolomitic Limestone			
	Lower	Sarmord	Interbedded Marls, Limestone & Shale			
		Garagu	Limestone			
		Chia Gara	Shale & Marls			
Jurassic	Upper	Chia Gara Transition Beds	Shale with layers of Anhydrite and Limestone			
		Barsarin	Shale & Marls over Limestone with Anhydrite			?
		Naokelekan	Organic rich Shale with layers of Limestone			
	Middle	Upper Sargelu	Limestone & Shaly Limestone			
		Lower Sargelu	Dolomite with layers of Limestone			
	Lower	Alan	Anhydrites with a few layers of Dolomite			
		Mus	Limestone & Dolomite			
		Adaiyah	Predominantly Anhydrite with some Dolomite			
Butmah		Dolomite with isolated layers of Anhydrite and Limestone				
Triassic	Upper	Baluti	Interbedded Marls, Dolomites & Shale			
		Kurra Chine A	Interbedded Anhydrite, Limestone & Dolomite		?	
		Kurra Chine B	Interbedded Anhydrite, Limestone & Dolomite		?	
		Kurra Chine C	Interbedded Anhydrite, Limestone & Dolomite		?	

\*A thick line between formations represents an unconformity.

## Atrush and Sarsang Blocks



### **Atrush Summary**

The Atrush Block is located approximately 85 km northwest of Erbil, the capital of Kurdistan, and is 269 km<sup>2</sup> in area. Oil has been proven in Jurassic fractured carbonates in the Chiya Khere structure and is estimated to contain between 1.7 and 2.3 billion barrels of oil in place, with a best estimate of 2.0 billion barrels of oil in place. The structure is expressed at surface by the Chiya Khere mountain which runs east-west for approximately 25 km with an approximate width of 3.5 km.

The Atrush structure is a complex faulted anticlinal structure developed along a possible shallow thrust zone oriented east-west. The proven and potential stacked oil reservoirs within the block Barsarin, Naokelekan (Upper Jurassic), Upper and Lower Sargelu (Middle Jurassic), Alan, Mus and Adaiyah/Upper Sarki (time equivalent Butmah)/(Lower Jurassic) with both fracture and matrix porosity. The Alan anhydrites form a pressure barrier between the Upper/Middle Jurassic and Lower Jurassic reservoirs.

Well tests have confirmed the existence of a 420m 25°-27° API oil column, underlain by a transition zone of around 250 m where API gravity decreases with depth from around 22° API to 14° API. The oil columns are present and producible with the help of electric submersible pumps (“ESPs”) in both the Upper/Middle Jurassic reservoirs and the Lower Jurassic reservoirs. Deepest producible oil was demonstrated by the CK-6 well at a depth of -460 m msl. Water was produced in the AT-3 well at a depth of -498 msl. None of the tests in the oil zone produced any formation water on test.

In the year 2008, GEP (then a subsidiary of Aspect Energy) acquired 143 km of 2D seismic data covering the Atrush Block. In April 2011, the Atrush structure was confirmed as an oil discovery by the Atrush-1 exploration well. This was followed by the AT-2 appraisal well in July 2012. 3D seismic covering the entire Atrush Block was acquired between July 2011 and August 2012 and a Declaration of Commerciality made on November 7, 2012. The eastern part of the field was successfully appraised in June 2013 by the AT-3 well.

TAQA became operator of the Atrush Block in December 2012 and submitted the Atrush Block Field Development Plan for approval by the KRG on May 6, 2013 which was subsequently approved by the Ministry of Natural Resources of the KRG effective October 1, 2013. Construction of the 30 Mbopd Atrush Phase 1 production facility commenced in the second quarter of 2014.

In 2014 three further development wells, AT-4, Chiya Khere-5 (“**CK-5**”) and Chiya Khere-8 (“**CK-8**”), were drilled in the Phase I area. Also in 2014, a second eastern appraisal well, CK-6, was drilled. In 2014 and 2015 extensive well testing was carried out in all newly drilled wells as well as re-testing of the AT-3 well. Interference testing demonstrated excellent communication from the eastern part of the field to the western part of the field and all wells showed good productivities.

The completions for both the AT-4 and the AT-2 wells were installed and successfully tested in second and third quarter of the year 2016.

Construction work and commissioning on the 30 Mbopd Atrush Phase 1 Production Facility, the pipeline between the Production Facility and the block boundary, the pump station, the intermediate pigging and pressure reduction station and the section of the pipeline from the block boundary to the tie-in point on the main export pipeline (“**Atrush Feeder Pipeline**”) necessary for exporting Atrush oil were all completed by early July 2017.

Oil production on the Atrush Block commenced in July 2017.

The CK-7 well was drilled in Q4 2017 and the reservoir section was encountered 114 meters shallower than prognosis. CK-7 was completed over the Alan and Lower Sargelu formation with an ESP. During the final completion test the well produced 7,040 bopd at only 14 psi draw-down. The well started production in July 2018.

The CK-10 well was drilled in Q2 2018 and the reservoir section was encountered some 60 meters shallow to prognosis. The well flow tested approximately 4.4 Mbopd at a low draw down and started production from the Lower Sargelu formation in July 2018.

The Chiya Khere-9 (“**CK-9**”) water disposal well was drilled in Q3 2018 and was completed early Q4 2018. Water injection started in January 2019.

A further two appraisal wells have previously been drilled and tested in the eastern part of the field and have proven reservoir communication between the eastern and the western parts of the field. A heavy oil extended well test was conducted on the AT-3 well in 2019. The test was inconclusive with respect to the producibility of the heavy oil in the Atrush field. The CK-6 well was in 2019 converted to a medium oil producer and began production on June 1, 2019 through temporary production facilities originally installed for the heavy oil test.

An extensive back-to-back four well drilling program was conducted in 2019 to increase well production capacity to over 50 Mbopd. The CK-11 production well was drilled through the upper and lower Jurassic reservoirs and came online producing from the upper reservoir on May 10, 2019. The rig went directly to the CK-12 location on Chamanke E pad. This well was drilled through the back-limb of the structure into the front limb thereby producing valuable information on the geometry of the Atrush fold. CK-12 is the first producer dedicated to the lower Jurassic Mus formation and came online August 10, 2019. CK-13 and CK-15 were both drilled both as infill well locations at the structurally shallow parts of the field and are completed Upper Jurassic Sargelu formation producers. CK-13 started producing oil on September 18, 2019 followed by CK-15 on December 8, 2019.

As the new 2019 wells came into production an increase in processing capacity was required to fully utilize available well capacity. An early production facility (“**EPF**”), with a capacity of 10,000 blpd was installed on the Chamanke E pad. Additionally, a debottlenecking initiative was run on the central processing facility with a resulting increase in processing capacity from 30 Mblpd to 40 Mblpd.

In 1Q 2020, the EPF was upgraded to 18 Mblpd capacity through the addition of a second processing train. Due to the COVID-19 pandemic, the 2020 Work Plan was revised, suspending the ongoing drilling and completion campaign as well as all non-critical projects.

During 2021, as measures imposed to mitigate the operational impacts of the COVID-19 pandemic were proven effective, suspended capital programs were restarted. The CK-17 well was drilled from the Pad A targeting the Naokelekan and Upper Sargelu reservoirs to the South East and brought online in June 2021.

During 2022 three wells were drilled in the field: CK-16, CK-18 and CK-19ST. The CK-16 is a water disposal well drilled on the northern limb of the structure. This well was drilled to 3,404 metres to appraise the deeper Triassic reservoirs. The Triassic Kurra Chine reservoirs tested gas and water and justified further appraisal drilling planned for 2023. The CK-18 well was a horizontal well targeting the Mus Formation but, due to an unsuccessful test, the decision was taken to recomplete this well into the Upper Jurassic reservoirs. The well CK-19 ST was drilled at the end of 2022 as an infill production well but results were not available as of the date of this AIF.

### ***Sarsang Summary***

The Sarsang Block is located along the northern border of the Atrush Block approximately 85 kilometers northwest of Erbil, the capital of Kurdistan. Spanning 420 km<sup>2</sup>, the Sarsang Block is operated by HKN Energy and, as at December 31, 2022 comprised thirteen producing wells across two fields: Swara Tika (ten online and one offline) and East Swara Tika (two online).

The Sarsang Block PSC was signed on November 7, 2007 between HKN and the KRG. In October 2010, Marathon acquired the KRG's third party interest in the Sarsang Block. In April 2014, HKN assigned 30% of its interest to Maersk Oil Kurdistan A/S ("**Maersk Kurdistan**") giving it an 18% participating interest (22% paying interest) in the Sarsang Block. This company changed its name to be TEPKRI Sarsang A/S following the acquisition of the world-wide assets of AP Moeller A/s (which included Maersk Kurdistan) by TTE. On September 14, 2022, ShaMaran announced their entry into the Sarsang Block PSC with the closing of the Sarsang Acquisition, from a subsidiary of TTE, which holds an 18% non-operated participating interest in the Sarsang Block PSC. HKN now holds a 62% interest (77.5% paying interest) and operatorship of the Sarsang Block, the KRG holds a 20% carried interest and ShaMaran (through its wholly-owned subsidiary SNM Sarsang) holds an 18% participating interest (22.5% paying interest).

In 2011, the Swara Tika discovery was made with the exploration well Swara Tika-1, which encountered multiple hydrocarbon-bearing zones and ultimately tested light oil from all three reservoirs of the Kurra Chine Formation. Swara-Tika 1 was subsequently completed in the Kurra Chine C Reservoir. In late 2012, the Swara Tika-2 well was drilled and successfully tested all three reservoirs of the Kurra Chine Formation, confirming the results of the initial exploration well. This well also produced 1,360 barrels of 12-14-degree API crude oil from the Jurassic Naokelekan-Sargelu over 13 hours. The well was subsequently completed in the Kurra Chine B Reservoir. A pressure interference test was performed between the two wells in October and November 2012 to investigate the pressure communication between the two wells through the Kurra Chine C Reservoir and investigate any possible cross-communication between the Kurra Chine B and Kurra Chine C reservoirs. The test confirmed communication of the two wells but no cross communication between the Kurra Chine B and Kurra Chine C reservoirs. Commercial production from the Swara Tika Field began in 2014 and production was approx. 29,000 bopd as of December 2021 from six wells.

In alignment with the Swara Tika Field Development Plan ("**ST FDP**") Five additional development wells (ST-B3, ST-B4, ST-B5, ST-B6 & ST-B7) were drilled and completed over 2021/2022, coming online on September 22, 2022 to produce in to the newly constructed and commissioned Swara Tika permanent production facility (the "**ST-PPF**"). The ST-PPF has a processing capacity of 25,000 bopd, with 160,000 stb of storage capacity (four 40,000stb floating roof storage tanks) and ability to export up to 100,000stb/d via export pipeline tied into the existing Atrush Feeder Pipeline. The wells and facility came online at initial rates of ~18,000 bopd.

During 2022, the Sarsang Operator, expanded the scope of ST FDP from 8 to 17 additional development wells, incremental to the existing 12 at year end 2022.

A second discovery, East Swara Tika, located approximately 10 kilometers from the Swara Tika field, was subsequently made in 2014 through the drilling of the ESWT-1 well and its sidetracks. ESTW-1Z successfully tested

light crude oil from the Kurra Chine B and Kurra Chine C reservoirs. This well also tested 10-degree API crude from the Jurassic Sargelu at 580 bopd with an ESP. ESTW-1Y tested crude oil from the Kurra Chine A and Kurra Chine B reservoirs although the rates for the Kurra Chine B were much lower and intermittent. Commercial production from the East Swara Tika field began in 2018 and due to the current export pipeline shutdown production from this field has been shutdown. The EST FDP calls for production of 5,000 bopd from the Triassic Kurra Chine A Reservoir and for additional seismic data and drilling to further refine development of East Swara Tika field. The 3D seismic program for East Swara Tika has been delayed due to access issues in East Swara Tika and the western part of Swara Tika.

### ***PSC and Related Agreements***

#### **Atrush Summary**

On August 27, 2010, ShaMaran Ventures B.V., then an indirect subsidiary of the Company (“**SVBV**”), entered into a Subscription Agreement and a Shareholders Agreement with Aspect Energy International LLC (“**AEI**”) and GEP to acquire 33.5% of the fully-diluted share capital of GEP, then a wholly-owned subsidiary of AEI. GEP then held an 80% participating interest in the Atrush Block PSC. In October 2010, the KRG nominated MOKDV as the KRG’s Third Party Interest Participant to hold a 20% participating interest. Accordingly, the Company, through its wholly-owned subsidiary GEP, held an indirect interest in Atrush Block PSC of 26.8% until the KRG’s back-in right became effective on November 7, 2012.

On December 31, 2012, GEP completed two principal transactions (the “**Transactions**”) resulting in: (i) the sale of a 53.2% participating interest in the Atrush Block to TAQA Atrush B.V.; and (ii) the repurchase of AEI’s 66.5% shareholding interest in GEP. Due to the Transactions, SVBV became the sole remaining shareholder of GEP which held a 26.8% direct participating interest in the Atrush Block PSC, its principal asset, and TAQA assumed operatorship of the Atrush Block. SVBV’s interest in GEP was subsequently assigned to the Company and SVBV thereafter liquidated.

On March 12, 2013, TAQA, GEP and MOKDV (at that time being the members in the Contractor Group to the Atrush Block PSC) were notified by the KRG that it intended to exercise its option to take a 25% participating interest in accordance with the provisions of the Atrush Block PSC. On November 7, 2016 the KRG exercised its option for such 25% participating interest in Atrush Block which was effective November 7, 2012 after which GEP held a 20.1% participating interest.

On September 18, 2017, an agreement for the sale of Atrush oil was executed by Taqa Atrush BV. (on behalf of the Atrush co-venturers) and the KRG. Under the agreement, the KRG agreed to buy oil produced by the Atrush Block and delivered to the Atrush Block’s boundary. The Atrush oil sales price is based upon the Dated Brent oil price minus a certain price discount (originally \$16.04 per barrel for quality discount and all local and international transportation costs) and such oil sales price is determined on the same principles as other oil sales agreements in Kurdistan. The agreement has been subsequently amended to adjust the discount downward to \$15.73 per barrel from February 1, 2018 until September 30, 2018, and to \$15.43 per barrel from October 1, 2018 to October 30, 2019 to reflect the better oil quality from Atrush. Effective November 1, 2019 the Atrush Feeder Pipeline transportation tariff waiver granted under the terms of the 2016 Facilitation Agreement added a transportation tariff of \$0.35 to the Atrush oil sales price discount making it \$15.77. Negotiations on additional amendments to the Atrush Lifting Agreement are at the date of this AIF continuing between the Atrush Contractor Group and the KRG.

On April 3, 2019, the MOKDV, TAQA Atrush BV and the Company, through its wholly owned subsidiary, GEP, agreed to back-to-back separate purchase and sale agreements whereby GEP acquired directly MOKDV’s full 15% participating interest in the Atrush Block and immediately thereafter sold a 7.5% participating interest to TAQA Atrush B.V., Operator of the Atrush Block. Following the close of the transaction on May 30, 2019, and as at the date of this AIF, the participating interests in the Atrush Block PSC were held 47.4% by TAQA, 25% by the KRG and 27.6% by GEP.

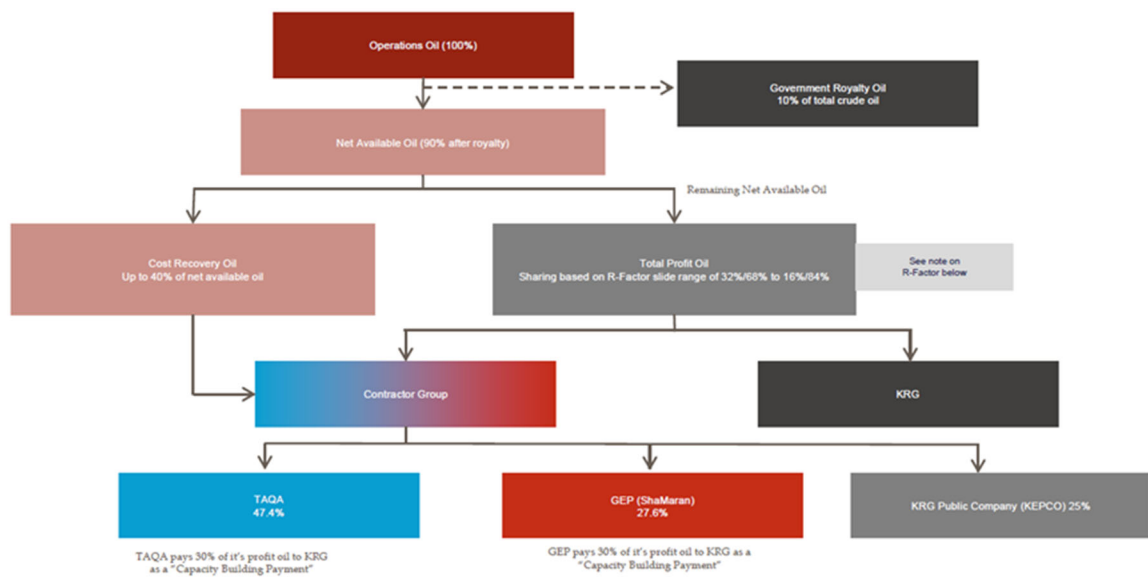


## Fiscal Terms under Atrush Block PSC

Fiscal terms under the Atrush Block PSC include a 10% royalty and a variable profit split based on a percentage share paid to the KRG. GEP has the right to recover costs using up to 40% of the available oil (produced oil less royalty oil) and 55% of the produced non-associated gas. Atrush Block has no non-associated gas. The Contractor Group is entitled to cost recovery in respect of all costs and expenditures incurred for exploration, development, production and decommissioning operations, as well as certain other allowable direct and indirect costs.

The portion of profit oil available to the Atrush Contractor Group is based on a sliding scale from 32% to 16% depending on the “R-Factor”, which is a ratio of cumulative revenues to cumulative costs. As at the date of this AIF since the ratio is below one, the Atrush Contractor Group is entitled to 32% of profit oil, with a reducing scale to 16% when the ratio is greater than 2.25.

## ATRUSH BLOCK PSC REVENUE FLOW



**R-Factor:** Determines what % of Profit oil goes to the Contractor Group (TAQA, GEP)

$$R = \frac{\text{Cumulative Revenues}}{\text{Cumulative Costs}}$$

}	R < or = 1	32%
	1 < R < or = 2.25	$32\% - (32\% - 16\%) * (R - 1) / (2.25 - 1)$
	R > 2.25	16%

## Sarsang Summary

The Company acquired ShaMaran Sarsang AS (formerly known as TEPKRI Sarsang AS) on September 14, 2022 (the “**Sarsang Acquisition Date**”), a Danish company with a non-operating interest in Sarang Block PSC.

The Sarsang Block PSC was entered into by the KRG with HKN on November 10, 2007 and no amendments to the Sarsang Block PSC have been entered into since the Sarsang Acquisition Date.

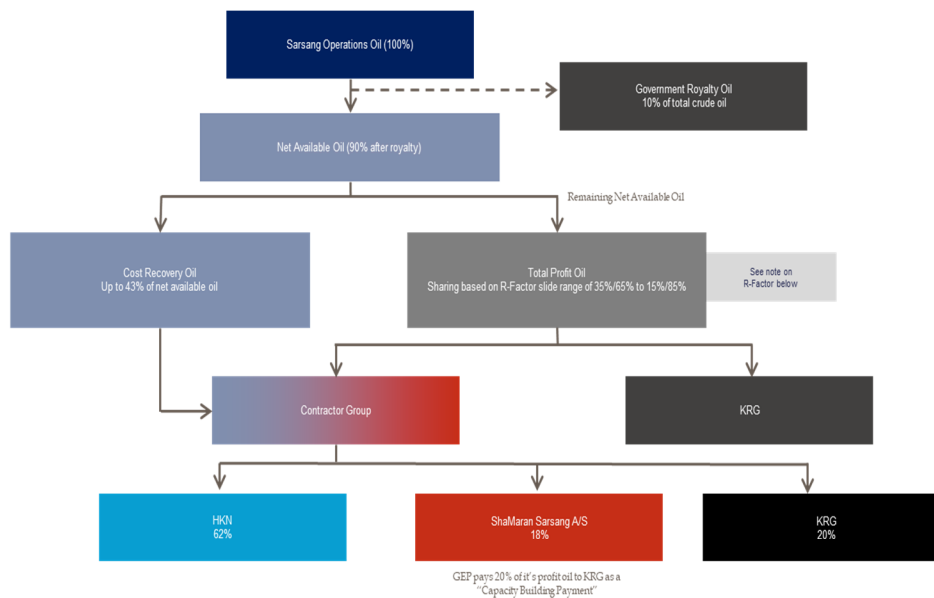
Effective September 1, 2022, HKN, on behalf of itself and SNM Sarsang, entered into an amendment to the Sarsang Lifting Agreement to change the reference price for Sarsang crude oil sales payments from Dated Brent to KBT (Kurdistan Blend) in order to reflect current market conditions for oil sales at Ceyhan, together with the necessary adjustments for crude quality due to the crude benchmark change.

### Fiscal Terms under Sarsang Block PSC

Fiscal terms under the Sarsang Block PSC include a 10% royalty and a variable profit split based on a percentage share paid to the KRG. SNM Sarsang has the right to recover costs using up to 40% of the available oil (produced oil less royalty oil) and 55% of the produced non-associated gas. The Sarsang Block has no non-associated gas. The Sarsang Contractor Group is entitled to cost recovery in respect of all costs and expenditures incurred for exploration, development, production and decommissioning operations, as well as certain other allowable direct and indirect costs.

The portion of profit oil available to the Sarsang Contractor Group is based on a sliding scale from 35% to 15% depending on the “R-Factor”, which is a ratio of cumulative revenues to cumulative costs. As at the date of this AIF since the ratio is below 1, the Sarsang Contractor Group is entitled to 35% of profit oil, with a reducing scale to 15% when the ratio is greater than 2.

### SARSANG BLOCK PSC REVENUE FLOW



**R-Factor:** Determines what % of Profit oil goes to the Contractor Group (HKN, ShaMaran Sarsang A/S)

$$R = \frac{\text{Cumulative Revenues}}{\text{Cumulative Costs}}$$

}	$R < \text{or} = 1$	35%
	$1 < R \leq 2$	$(-20\% \times R) + 55\%$
	$R > 2$	15%

The Atrush Block PSC and Sarsang Block PSC, as at the date of this AIF, are both in the Development Period, and during this period the Contractor Group has the right to terminate the respective PSC at any time by surrendering all production areas provided its current obligations have been satisfied in accordance with the respective terms.

## Risk Factors

ShaMaran Petroleum Corp. is engaged in the development and production of crude oil and its operations are subject to various risks and uncertainties which include but are not limited to those listed below. **If any of the risks described below materialize the effect on the Company's business, financial condition or operating results could be materially adverse.**

The following sections describe material risks identified by the Company; however, risks and uncertainties of which the Company is not currently aware or currently believes to be immaterial could develop and may adversely affect the Company's business, financial condition or operating results.

**Investors should carefully consider the risk factors set out below and consider all other information contained herein, and in the Company's other public filings before making an investment decision. The risks set out below are not an exhaustive list and should not be taken as a complete summary or description of all the risks associated with the Company's business and the oil and natural gas industry generally.**

### *Political and Regional Risks*

#### International operations:

Oil and gas exploration, development and production activities in emerging countries are subject to significant political, social and economic uncertainties which are beyond ShaMaran's control. Uncertainties include, but are not limited to, the risk of war, terrorism, criminal activity, expropriation, nationalization, renegotiation or nullification of existing or future contracts, the imposition of international sanctions, a change in crude oil or natural gas pricing policies, a change in taxation policies, a limitation on the Company's ability to export, and the imposition of currency controls. Should these uncertainties materialize they could result in adverse effects to the Company's business including, but not limited to, increased costs associated with planned projects, impairment or termination of future revenue generating activities, impairment of the value of the Company's assets and or its ability to meet its contractual commitments as they become due.

#### Political instability:

ShaMaran's assets and operations are in Kurdistan, a federally recognized semi-autonomous political region in Iraq, and may be influenced by political developments between Kurdistan and the Iraq federal government, as well as political developments of neighbouring states within MENA, Turkey, and surrounding areas. Kurdistan and Iraq have a history of political and social instability. As a result, the Company is subject to political, economic and other uncertainties that are not within its control. These uncertainties include, but are not limited to, changes in government policies and legislation, adverse legislation or determinations or rulings by governmental authorities and disputes between the Iraq federal government and Kurdistan.

Iraq is a political democracy with a federal system of government. Iraq passed its constitution which was ratified in October 2005 and came in effect in 2006. The Constitution of Iraq contains a list of powers which are reserved exclusively for the Iraq federal government ("**Federal Government**") and a list of powers which are shared by the Federal Government and the regional governments of Iraq ("**Regional Governments**"). Jurisdiction over matters that are not within the exclusive powers granted to the Federal Government resides with the Regional Governments and the governments of the Iraq provinces not forming part of the regions. Concerning powers shared by the Federal Government and Regional Governments, in the event of a dispute priority is given under the Constitution of Iraq to the laws of the region.

The delineation of powers under the Constitution of Iraq has been subject to different interpretations which has resulted in a number of outstanding political issues and differences between Federal Government and the KRG including, but not limited to, the financial support to be provided to the KRG by the Federal Government, the validity of PSCs signed by the KRG and the jurisdiction over oil and gas matters in Kurdistan.

The unfavourable outcome of political uncertainties such as those discussed above could result in adverse effects to the Company's asset and business in Kurdistan including, but not limited to, increased costs associated with

planned projects, impairment or termination of future revenue generating activities and impairment of the value of the Company's asset and or its ability to meet its contractual commitments as they become due.

Political uncertainty:

There is a risk that levels of authority of the KRG, and corresponding systems in place, could be transferred to the Federal Government under the terms of a Federal Petroleum Law. Changes to the current political regime could result in delays in operations and additional costs which could materially adversely impact the operations and prospects of the Company and could have a material adverse effect on the Company's business and financial condition. Refer also to the discussion in the section below under *"Risks associated with petroleum contracts in Iraq."*

Regional boundary issues:

Although the Kurdistan Region is recognized by the Constitution of Iraq as a semi-autonomous region, its geographical extent is neither defined in the Constitution of Iraq nor definitively agreed in practice between the Federal Government and the KRG. There have been unresolved differences between the KRG and the Federal Government regarding certain areas which are commonly known as "disputed territories". The Company believes that its current area of operation in Atrush Block and in Sarsang Block are not within these "disputed territories".

**Industry and Market Risks**

Exploration, development and production risks:

ShaMaran's business is presently no longer involved in exploration activities but is subject to all the risks and hazards inherent in businesses involved in the development, production and marketing of oil, many of which cannot be overcome even with a combination of experience, knowledge and careful evaluation. The risks and hazards typically associated with oil and gas operations include drilling of unsuccessful wells, fire, explosion, blowouts, sour gas

releases, pipeline ruptures and oil spills, each of which could result in substantial damage to oil wells, production facilities, other property or the environment, or in personal injury.

Oil and gas operations involve geological, technical and commercial risks. ShaMaran's success will depend on its ability to find, appraise, develop and commercially produce oil resources and reserves. Future oil development may involve risks relating to dry holes, wells which do not produce sufficient petroleum to return a profit after drilling, operating and other costs. In addition, operations can be affected by drilling hazards, environmental damage, and other field operating conditions which could adversely affect production and increase the cost of operations. Diligent operations can contribute to maximizing production rates over time but production delays and declines from normal field operating conditions cannot be eliminated and can adversely affect revenue and cash flow levels.

The Company is not fully insured against all of these risks, nor are all such risks insurable and, as a result, these risks could still result in adverse effects to the Company's business not fully mitigated by insurance coverage including, but not limited to, increased costs or losses due to events arising from accidents or other unforeseen outcomes including clean-up, repair, containment and or evacuation activities, settlement of claims associated with injury to personnel or property, and or loss of revenue as a result of downtime due to accident.

General market conditions:

ShaMaran's business and operations depend upon conditions prevailing in the oil and gas industry including the current and anticipated prices of oil and gas and the global economic activity. A reduction of the oil price, a general economic downturn, or a recession could result in adverse effects to the Company's business including, but not limited to, reduced cash flows associated with the Company's future oil and gas sales. Worldwide crude oil commodity prices are expected to remain volatile in the future due to the war in Ukraine, and the compounded effects on global supply and demand balances, actions taken by the Organization of the Petroleum Exporting Countries, and ongoing global credit and liquidity concerns. This volatility may affect the Company's ability to obtain additional equity or debt financing on acceptable terms.

### Competition:

The petroleum industry is intensely competitive in all aspects including the acquisition of oil and gas interests, the marketing of oil and natural gas, and acquiring or gaining access to necessary drilling and other equipment and supplies. ShaMaran competes with numerous other companies in the search for and acquisition of such prospects and in attracting skilled personnel. ShaMaran's competitors include oil companies which have greater financial resources, staff and facilities than those of the Company. ShaMaran's ability to increase reserves in the future will depend on its ability to develop its present property, to select and acquire suitable producing properties or prospects on which to conduct future exploration and to respond in a cost-effective manner to economic and competitive factors that affect the distribution and marketing of oil and natural gas. Oil and natural gas producers are also facing increased competition from alternative forms of energy, fuel and related products that could have an impact on the demand for oil and gas and could lead to reduction in oil prices which may have a negative impact on the Company's cash flow and profitability.

### Reliance on key personnel:

ShaMaran's success depends in large measure on certain key personnel and directors. The loss of the services of such key personnel could negatively affect ShaMaran's ability to deliver projects according to plan and result in increased costs and delays. ShaMaran has not obtained key person insurance in respect of the lives of any key personnel. In addition, competition for qualified personnel in the oil and gas industry is intense and there can be no assurance that ShaMaran will be able to attract and retain the skilled personnel necessary for the operation and development of its business.

### ***Business Risks***

#### Risks associated with petroleum contracts in Iraq:

The Constitution of Iraq grants a role for the regions of Iraq in awarding of petroleum contracts for certain types of operations, and in regulating those petroleum operations occurring within the regions. No federal Iraq legislation has yet been agreed or enacted by the Iraq federal parliament to govern the future organization and management of Iraq's petroleum industry (including in Kurdistan) as there are a number of material issues which need to be resolved between the Federal Government and the KRG. There is uncertainty concerning the promulgation of the Federal legislation and the timing of such adoption, if at all. Failure to enact federal legislation could extend or increase uncertainty within Iraq's petroleum industry which may result in additional burdens being placed on the Company including, but not limited to, difficulty obtaining clear title to its assets or in obtaining adequate financing for its future projects.

The KRG developed the Oil and Gas Law to be consistent with the role granted to the regions in the Constitution of Iraq and in conformity with the principles reflected in the Draft Federal Petroleum Law and in the draft federal law governing revenue sharing for petroleum activities proposed in June 2007 (but never enacted).

In the absence of progress on the Draft Federal Petroleum Law, on August 6, 2007, the Kurdistan National Assembly approved the Oil and Gas Law which came into force in Kurdistan with effect from August 9, 2007 declaring it to be supported by the Constitution of Iraq and providing the foundation for economic development of the then largely untapped resources of Kurdistan. Under the Oil and Gas Law domestic and international investors in oil and gas, including ShaMaran, came to Kurdistan, generated revenue and provided employment and training opportunities for citizens in the region. Consistent with the Constitution of Iraq, the Oil and Gas Law requires Kurdistan to share revenue with the Federal Government and other regions of Iraq, just as other areas of Iraq will share oil revenues with Kurdistan. The KRG has signed numerous PSCs with international oil companies based on the Oil and Gas Law. The Company currently has a 27.6% participating interest in the Atrush Block PSC and an 18% participating interest in the Sarsang Block PSC which are both under the jurisdiction of the Oil and Gas Law. In February 2022 the Iraq Federal Supreme Court ruled that the Oil and Gas Law was unconstitutional and the KRG has publicly denounced this as a political rather than judicial ruling. Following such ruling actions against some IOCs were commenced by the Iraq Ministry of Oil in the Karkh Commercial Court in Baghdad to invalidate such IOC's PSC in Kurdistan. The Company has never been served in these 2022 court proceedings and to the Company's knowledge no judgement of such court has ever been enforced against any IOC's PSC in Kurdistan. Currently there is no assurance that the KRG PSCs

are enforceable or binding in accordance with ShaMaran's interpretation of their terms or that, if breached, the Company would have remedies.

The Company believes that it has valid title to its oil and gas assets and the right to produce oil and gas from such assets under the relevant PSCs. However, should the Federal Government pursue and be successful in a claim that the KRG PSCs are invalid, or should any unfavourable changes develop which impact on the economic and operating terms of the PSCs, it could result in adverse effects to the Company's business including, but not limited to, impairing the Company's claim and title to the assets held, and or increasing the obligations required, under the PSCs.

#### Government regulations, licenses and permits:

The Company is affected by changes in taxes, regulations and other laws or policies affecting the oil and gas industry generally as well as changes in taxes, regulations and other laws or policies applicable to oil and gas development in Kurdistan specifically.

ShaMaran, through the joint operating agreement its wholly-owned subsidiary has entered into with TAQA, conducts its operations pursuant to the rights granted under the Atrush Block PSC and related licenses, permits and other authorizations. The grant of licenses and permits may require fulfilment of certain conditions or the exercise of discretion by the concerned authorities. The Company's ability to execute its projects may be hindered if it cannot secure the necessary approvals or the discretion is exercised in a manner adverse to the Company. Any significant delay in obtaining or renewing a license or permit may result in a delay of the Company's planned activities and the future development of any oil and gas resources.

The taxation system applicable to the operating activities of the Company in Kurdistan is pursuant to the Oil and Gas Law governed by general Kurdistan tax law and the terms of the PSCs. However, it is possible that the arrangements under the PSCs in Kurdistan may be overridden or negatively affected by the enactment of any future oil and gas or tax law in Iraq or in Kurdistan which could result in adverse effects to the Company's business including, but not limited to, increasing the Company's expected future tax obligations associated with its activities in Kurdistan. Notwithstanding the foregoing, the management of the Company is, at the date of this AIF, not aware of any current effort by the KRG to override or negatively effect the tax provisions granted in the Atrush Block PSC.

#### Marketing, markets and transportation:

The export of oil and payments relating to such exports from Kurdistan remains subject to uncertainties which could negatively impact on ShaMaran's ability to sell its oil production to the KRG for the KRG's export and for payments relating to such oil deliveries. Potential government regulation relating to price, quotas and other aspects of the oil and gas business could result in adverse effects to the Company's business including, but not limited to, impairing the Company's ability to sell oil and receive full payment for all sales of such delivered oil.

#### Payments for oil deliveries that the KRG exports:

Cash payments to IOCs for oil the KRG exports from Kurdistan has been under the sole control of the KRG since the beginning of exports in 2009. The KRG has established certain periods of delivering regular payments to IOCs for their entitlement revenues in respect of monthly petroleum production deliveries (other than the four month period as previously noted from November 2019 through February 2020 and from October 2022 through March 2023). The risk continues that the Company may face significant delays in the receipt of cash for its entitlement share of future oil deliveries to the KRG for its export to the international market.

#### Paying interest:

On November 7, 2016, the KRG exercised its back-in right under the terms of the Atrush Block PSC and the Atrush Facilitation Agreement and assumed a 25% participating interest in the Atrush Block. The KRG has, since the commencement of oil production exports from Atrush (with the exception of the four-month period November 2019 to February 2020) paid for its share of project development costs in conjunction with the payment cycle for oil deliveries. Going forward, there is still a risk that the Atrush operator and the Company may be exposed to funding the KRG's 25% share of operating and development costs if not paid by the KRG.

#### Default under the PSCs and JOAs:

Both PSCs include a number of provisions if a Contractor should fail to meet its obligations under these contracts. Defaults include where a Contractor does not carry out drilling and seismic acquisition as prescribed, interrupts production for more than 90 consecutive days without reasonable cause, intentionally extracts other materials than permitted, becomes bankrupt, or there is a change of control in a party which is not approved by KRG (see below for further risk discussion). If a default is not remedied within three (3) months following notice of intention to terminate, the KRG may terminate the PSC with respect to the defaulting party and allocate its interest among the other contractors. Consequently, the Company could upon a default lose all its rights and interests in the Atrush field without any compensation.

The JOAs definition of “default” includes payment default and failure to provide security as required under the JOAs. If a party does not remedy such default within 5 business days after having been notified of the default, its entitlement shall vest with and be the property of the other parties should the default remain un-remedied. The operator will in this period be entitled to sell the entitlement at arms’ length on reasonable terms and apply proceeds to cover costs and liabilities and a reserve fund before releasing any remaining surplus. If a default has remained for 60 days or more a non-defaulting party has the option to acquire the defaulter’s participating interest at a price equal to the fair market value of such interest less the following (i) the total amount in default (ii) all costs; including the costs of an expert, to obtain such valuation and (iii) ten per cent (10%) of the fair market value of the defaulting party’s participating interest

Should the Company fail to meet its obligations under either PSC or JOA it could result in adverse effects to the Company’s business including, but not limited to, a default under one or both contracts, the termination of future revenue generating activities of the Company and impairment of the Company’s ability to meet its contractual commitments as they become due.

#### Kurdistan legal system:

The Kurdistan Region has a less developed legal system than that of many more established regions. This could result in risks associated with predicting how existing laws, regulations and contractual obligations will be interpreted, applied or enforced. In addition, it could make it more difficult for the Company to obtain effective legal redress in courts in case of breach of law, regulation or contract and to secure the implementation of arbitration awards and may give rise to inconsistencies or conflicts among various laws, regulations, decrees or judgments. The Company’s recourse may be limited in the event of a breach by a government authority of an agreement governing the PSC in which ShaMaran acquires or holds an interest.

#### Enforcement of judgments in foreign jurisdictions:

The Company is party to contracts with counterparties located in a number of countries, most notably Kurdistan. Certain of its principal contracts are subject to English law with legal proceedings in England. However, the enforcement of any judgments thereunder against a counterparty will be a matter of the laws of the jurisdictions where counterparties are domiciled.

#### Change of control in respect of the PSCs and JOAs:

Both the Atrush Block PSC and Sarsang Block PSC definition of “change of control” in a Contractor Entity includes a change of voting majority in the Contractor, or in a parent company, provided the value of the interest in the relevant field represents more than 50% of the market value of assets in the Company in respect to Atrush Block PSC/Atrush JOA and more than 75% of the assets in the Company in respect to Sarsang Block PSC/Sarsang JOA.

### ***Project and Operational Risks***

#### Shared ownership and dependency on partners:

ShaMaran’s operations are to a significant degree conducted together with a partner through contractual arrangements with the execution of the operations being undertaken by the operator in accordance with the terms of the Atrush JOA or the Sarsang JOA respectively. As a result, ShaMaran has limited ability to exercise influence

over the deployment of those assets or their associated costs and this could adversely affect ShaMaran's financial performance.

ShaMaran's return on assets operated by others will therefore depend upon factors that may be outside of ShaMaran's control, including the timing and amount of capital expenditures, the operator's expertise and financial resources, the approval of other participants, the selection of technology and risk management practices. The operator may have a different opinion from the Company on how to conduct certain operations which may result in delays, losses or increased costs not anticipated by the Company. In addition, if the operator or other partners fail to perform, ShaMaran may, among other things, risk losing rights or revenues or incur additional obligations or costs to itself perform in place of its partners. If a dispute would arise with one or more partners such dispute may have significant negative effects on the Company's operations relating to its projects.

#### Security risks:

Kurdistan and other regions in Iraq have a history of political and social instability which have culminated in security problems which may put at risk the safety of the Company's personnel, interfere with the efficient and effective execution of the Company's operations and ultimately result in significant losses to the Company. There have been no significant security incidents in the Company's area of operation.

#### Risks relating to infrastructure:

The Company is dependent on access to available and functioning infrastructure (including third party services in Kurdistan) relating to the properties on which it operates, such as roads, power and water supplies, pipelines and gathering systems. If any infrastructure or systems failures occur or access is not possible or does not meet the requirements of the Company, the Company's operations may be significantly hampered which could result in lower production and sales and or higher costs.

#### Environmental regulation and liabilities:

Drilling for and producing, handling, transporting and disposing of oil and gas and petroleum by-products are activities that are subject to extensive regulation under national and local environmental laws, including in those countries in which ShaMaran currently operates. Environmental regulations may impose, among other things, restrictions, liabilities and obligations relating to water and air pollution control, waste management, permitting requirements and restrictions on operations in environmentally sensitive areas. The Company's operations in Kurdistan are subject to general and specific regulations and restrictions governing drilling, production and processing, land tenure use, environmental requirements (including site specific environmental licenses, permits and remediation requirements), workplace health and safety requirements, social impacts and other laws and regulations. The environmental laws of Kurdistan are limited as compared to those in jurisdictions such as Europe or North America. The Company is obliged to follow both Kurdish law, the terms of the Atrush Block PSC and the Sarsang Block PSC towards protecting the environment and the health and safety of its employees and third parties.

The Company has implemented health, safety and environment policies since its incorporation, complies with industry environmental practices and guidelines for its operations in Kurdistan and is currently in compliance with these obligations in all material aspects. Environmental protection requirements have not, to date, had a significant effect on the capital expenditures and competitive position of ShaMaran.

Future changes in environmental or health and safety laws, regulations or community expectations governing the Company's operations could result in adverse effects to the Company's business including, but not limited to, increased monitoring, compliance and remediation costs and or costs associated with penalties or other sanctions imposed on the Company for non-compliance or breach of environmental regulations.

#### Risk relating to community relations / labor disruptions:

The Company's operations may be in or near communities that may regard operations as detrimental to their environmental, economic or social circumstances. This may result in disputes with national or local governments or with local communities and may give rise to incremental financial commitments. Additionally, there is a risk that



strikes or labour unrest/disruptions may occur near the Company's operation. Negative community reactions and labour disruptions or disputes could increase operational costs and result in delays in the execution of projects.

Petroleum costs and cost recovery:

Under the terms of the Atrush Block PSC and the Sarsang Block PSC, the KRG is entitled to conduct an audit to verify the validity of incurred petroleum costs which the operator has reported to the KRG and is therefore entitled under the terms of the relevant PSC to recover through cash payments from future petroleum production. No such audit has yet taken place in either block. Should any future audits result in negative findings concerning the validity of reported incurred petroleum costs the Company's petroleum cost recovery entitlement could ultimately be reduced.

Legal claims and disputes:

The Company may suffer unexpected costs or other losses if a counterparty to any contractual arrangement entered by the Company does not meet its obligations under such agreements. In particular, the Company cannot control the actions or omissions of its partner in the Atrush Block PSC or the Sarsang Block PSC. If such parties were to breach the terms of the Atrush Block PSC or the Sarsang Block PSC or any other documents relating to the Company's interest in such block, it could cause the KRG to revoke, terminate or adversely amend the Atrush Block PSC.

The Atrush JOA and the Atrush Block PSC as well as the Sarsang JOA and the Sarsang Block PSC provide mitigating provisions for circumstances whereby action can be taken to remedy or cure the breach, but in certain circumstances such disputes may disrupt business operations and could materially adversely affect the business prospects or results of operations of the Company. In addition, the Company may be exposed to third party credit risks through its commercial arrangements with any with any co-venture marketer of its petroleum products, suppliers, contractors and other parties and this could result in additional costs, delays, losses to the Company.

Uninsured losses and liabilities:

Although the Company maintains insurance in accordance with industry standards to address risks relating to its operations, the Company's insurance coverage may under certain circumstances not protect it from all potential losses and liabilities that could result from its operations. The occurrence of a casualty, loss or liability against which the Company is not fully insured against, or the insolvency of the insurer of such event could impair the Company's ability to meet its obligations. The Company had no material uninsured losses or claims at the date of this AIF.

Availability of equipment and services:

ShaMaran's oil and natural gas development activities are dependent on the availability of third-party services, drilling and related equipment and qualified staff in the area where such activities are or will be conducted. ShaMaran currently leases all the drilling rigs used for its exploration and development activities. Shortages of such equipment or staff may affect the availability of such equipment to ShaMaran and may delay and or increase the cost of ShaMaran's development activities.

Production risks:

As at the date of this AIF, ShaMaran has conducted (or participated in the conduct of) oil and gas exploration and development activities in Kurdistan for more than ten years. There can be no assurance that ShaMaran's operations in Atrush Block and/or Sarsang Block will be profitable in the future or will generate sufficient cash flow to satisfy its future commitments.

**Financial and Other Risks**

Financial statements prepared on a going concern basis:

The Company's financial statements have been prepared on a going concern basis under which an entity is able to realize its assets and satisfy its liabilities in the ordinary course of business. Management has made assumptions regarding projected oil sale volumes and pricing, and the timing and extent of capital, operating, and general and administrative expenditures. Should production be materially less than anticipated or in case there are extended delays to the forecasted receipt of cash from the sale of oil exports or in the magnitude of those cash receipts, which

are under the control of the KRG, and the Company was unable to defer certain planned cost activities, the Company could require additional liquidity to fund the forecasted Atrush and Sarsang operating and development costs and its commitments under the 2025 Bond Terms in the next 12 months. The Company's future operations are dependent upon certain factors the identification and successful completion of additional equity or debt financing or the achievement of profitable operations. There can be no assurances that the Company will be successful in completing additional debt or equity financing or achieving profitability. The consolidated financial statements do not give effect to any adjustments relating to the carrying values and classification of assets and liabilities that would be necessary should ShaMaran be unable to continue as a going concern.

Atrush Block and Sarsang Block capital requirements:

ShaMaran anticipates making capital expenditures in the future for the continued development and production of oil in the Atrush and Sarsang Blocks. ShaMaran's results could impact its access to the capital necessary to undertake or complete future drilling and development programs. To meet its operating costs and planned capital expenditures, ShaMaran may require financing from external sources, including from the sale of equity and debt securities. There can be no assurance that such financing will be available to the Company or, if available, that it will be offered on terms acceptable to ShaMaran. If it is unable to secure financing on acceptable terms, the Company may have to cancel or postpone certain of its planned development activities and may not be able to take advantage of acquisition opportunities.

Dilution:

The Company may make future acquisitions or enter into financings or other transactions involving the issuance of securities of the Company. If additional financing is raised through the issuance of equity or convertible debt securities, control of the Company may change and the interests of shareholders in the net assets of ShaMaran may be diluted.

Tax legislation:

As at the date of this AIF, the Company has entities incorporated and resident for tax purposes in Canada, the Cayman Islands, Denmark, the Kurdistan Region of Iraq, the United States and Switzerland. Changes in the tax legislation or tax practices in these jurisdictions may increase the Company's expected future tax obligations associated with its activities.

Commodity price risk:

The prices that the Company receives for its oil production may have a significant impact on the Company's revenues and cash flows provided by operations. World prices for oil and gas are characterized by significant fluctuations that are determined by the global balance of supply and demand and worldwide political developments and, in particular, the price received for the Company's oil production in Kurdistan is dependent upon the KRG and its ability to export production outside of Iraq. A significant decline in the price at which the Company can sell future oil production could adversely affect the amount of funds available for capital reinvestment purposes as well as impair the value of the Company's oil asset.

Foreign currency risk:

A substantial portion of the operations in Atrush Block require purchases denominated in USD, which is the functional and reporting currency of the Company and the currency in which the Company maintains the substantial portion of its cash and cash equivalents. Certain of its operations require the Company to make purchases denominated in foreign currencies, which are currencies other than USD and correspond to the various countries in which the Company conducts its business, most notably, Swiss Francs and Canadian dollars. As a result, the Company holds some cash and cash equivalents in foreign currencies and is therefore exposed to foreign currency risk due to exchange rate fluctuations between the foreign currencies and the USD. The Company considers its foreign currency risk is limited because it holds relatively insignificant amounts of foreign currencies at any point in time and since its volume of transactions in foreign currencies is currently relatively low. The Company has elected not to hedge its exposure to the risk of changes in foreign currency exchange rates.

#### Interest rate risk:

The Company earns interest income at variable rates on its cash and cash equivalents and is therefore exposed to interest rate risk due to a fluctuation in short-term interest rates. The Company's policy on interest rate management is to maintain a certain amount of funds in the form of cash and cash equivalents for short-term liabilities and to have the remainder held on relatively short-term deposits. ShaMaran is leveraged through bond financing at the corporate level. However, the Company is not exposed to interest rate risks associated with the bonds as the interest rate is fixed until July 2023.

#### Credit risk:

If a counterparty defaults on its contractual obligations the Company could incur a financial loss. The Company is primarily exposed to credit risk on its cash and cash equivalents and other receivables. The Company manages credit risk by monitoring counterparty ratings and credit limits and by maintaining excess cash and cash equivalents on account in instruments having a minimum credit rating of R-1 (mid) or better (as measured by Dominion Bond Rate Services) or the equivalent thereof according to a recognized bond rating service.

#### Liquidity risk:

The Company bears the risk that it will have difficulties meeting its financial obligations as they become due. In common with many IOCs the Company has previously raised financing for its exploration and development activities in discrete tranches to finance its activities for limited periods. The Company may seek to raise additional funding as and when required for future development and production operations. The Company anticipates making additional capital expenditures in the future for the development and production of oil in Atrush Block and as the Company's projects move further into the potential additional development stages, specific financing, including the possibility of additional debt, may be required to enable future development to take place. The financial results of the Company will impact its access to the capital markets necessary to undertake or complete future drilling and development programs. There can be no assurance that debt or equity financing, or future cash generated by operations, would be available or sufficient to meet these requirements or, if debt or equity financing is available, that it will be on terms acceptable to the Company.

The Company manages liquidity risk by maintaining adequate cash reserves and by continuously monitoring forecast and actual cash flows. Annual capital expenditure budgets are prepared, which are regularly monitored and updated as considered necessary. In addition, the Company requires authorisations for expenditure on both operating and non-operating projects to further manage capital expenditures.

#### Capital and lending markets:

Due to general economic uncertainties and, in particular, the potential lack of risk capital available to the junior resource sector, the Company, along with other junior resource entities, may have reduced access to bank debt and to equity. As future capital expenditures will be financed out of funds generated from operations, bank borrowings if available, and possible issuances of debt or equity securities, the Company's ability to do so is dependent on, among other factors, the overall state of lending and capital markets and investor and lender appetite for investments in the energy industry generally and, in particular, the Company's securities. To the extent that external sources of capital become limited or unavailable or available only on onerous terms, the Company's ability to invest and to maintain existing assets may be impaired, and its assets, liabilities, business, financial condition and results of operations may be materially and adversely affected as a result.

#### Uncertainty in financial markets:

In the future the Company could require financing to maintain or grow its business. The uncertainty which periodically affects financial markets and the possibility that financial institutions may consolidate or go bankrupt has reduced levels of activity in the credit markets which could diminish the amount of financing available to companies. The Company's liquidity and its ability to access the credit or capital markets may also be adversely affected by changes in the financial markets and the global economy.

### Risks in estimating resources:

There are uncertainties inherent in estimating the quantities of reserves/resources including factors which are beyond the control of the Company. Estimating reserves and resources is a subjective process and the results of drilling, testing, production and other new data after the date of an estimate may result in revisions to original estimates.

Reservoir parameters may vary within reservoir sections. The degree of uncertainty in reservoir parameters used to estimate the volume of hydrocarbons, such as porosity, net pay and water saturation, may vary. The type of formation within a reservoir section, including rock type and proportion of matrix and or fracture porosity, may vary laterally and the degree of reliability of these parameters as representative of the whole reservoir may be proportional to the overall number of data points (wells) and the quality of the data collected. Reservoir parameters such as permeability and effectiveness of pressure support may affect the recovery process. Recovery of reserves and resources may also be affected by the availability and quality of water, fuel gas, technical services and support, local operating conditions, security, performance of the operating company and the continued operation of well and plant equipment.

Additional risks associated with estimates of reserves and resources include risks associated with the oil and gas industry in general which include normal operational risks during drilling activity, development and production; delays or changes in plans for development projects or capital expenditures; the uncertainty of estimates and projections related to production, costs and expenses; health, safety, security and environmental risks; drilling equipment availability and efficiency; the ability to attract and retain key personnel; the risk of commodity price and foreign exchange rate fluctuations; the uncertainty associated with dealing with governments and obtaining regulatory approvals; performance and conduct of the operator; and risks associated with international operations.

The Company's project is in the early production stage and, as such, additional information must be obtained by further drilling and testing to ultimately determine the economic viability of developing any of the contingent or prospective resources. There is no certainty that the Company will be able to commercially produce any portion of its contingent or prospective resources. Any significant change, in particular, if the volumetric resource estimates were to be materially revised downwards in the future, could negatively impact investor confidence and ultimately impact the Company's performance, share price and total market capitalisation.

The Company has engaged professional geologists and engineers to evaluate reservoir and development plans; however, process implementation risk remains. The Company's reserves and resource estimations are based on data obtained by the Company which has been independently evaluated by McDaniel & Associates Consultants Ltd.

### Conflict of interests:

Certain directors of ShaMaran are also directors or officers of other companies, including oil and gas companies, the interests of which may, in certain circumstances, come into conflict with those of ShaMaran. In case a conflict arises with respect to a particular transaction, the affected directors must disclose the conflict and abstain from voting with respect to matters relating to the transaction. All conflicts of interest will be addressed in accordance with the provisions of the Business Corporations Act (British Columbia) and other applicable laws.

### *Risks Related to the ShaMaran Bonds*

#### Possible termination of Atrush Block PSC / Sarsang Block PSC / bond agreement in event of default scenario:

Should the Company default in its obligations under the 2025 Bond Terms it may also not be able to fulfil its obligations under the Atrush Block PSC and/or Atrush Block JOA, the Sarsang Block PSC and/or Sarsang Block JOA, with the effect that these contracts may be terminated or limited. In addition, should ShaMaran default in its obligations under the Atrush Block PSC and/or Atrush Block JOA and/or the Sarsang Block PSC and/or Sarsang Block JOA, with the effect that these contracts may be terminated or limited, ShaMaran may also default in respect of its obligations under the 2025 Bond Terms. Either default scenario could result in the termination of the Company's future revenue generating activities and impair the Company's ability to meet its contractual commitments as they become due.

Ability to service indebtedness:

The Company's ability to make scheduled payments on or to refinance its obligations under the 2025 Bond Terms will depend on ShaMaran's financial and operating performance which, in turn, will be subject to prevailing economic and competitive conditions beyond ShaMaran's control. It is possible that ShaMaran's activities will not generate sufficient funds to make the required interest payments on the 2025 Bonds which could, among other things, result in an event of default under the 2025 Bond Terms.

Significant operating and financial restrictions:

The 2025 Bond Terms contain restrictions on ShaMaran's and the ShaMaran Bond Guarantors' activities which restrictions may prevent ShaMaran and the ShaMaran Bond Guarantors from taking actions that it believes would be in the best interest of ShaMaran's business and may make it difficult for ShaMaran to execute its business strategy successfully or compete effectively with companies that are not similarly restricted. No assurance can be given that it will be granted the necessary waivers or amendments if for any reason ShaMaran is unable to comply with the terms of the bond agreement. A breach of any of the covenants and restrictions could result in an event of default and acceleration of the redemption and early payment in full of the ShaMaran Bonds under the ShaMaran Bond Agreement.

Mandatory prepayment events:

Under the 2025 Bond Terms the 2025 Bonds are subject to mandatory prepayment by ShaMaran on the occurrence of certain specified events, including if (i) the ownership in the Atrush Block is reduced to below 27.6% (ii) the ownership in the Sarsang block is reduced to below 18% (iii) an event of default occurs or there is a total loss in either the Atrush or Sarsang blocks. Following an early redemption after the occurrence of a mandatory prepayment event, it is possible that ShaMaran will not have sufficient funds to make the required redemption of the 2025 Bonds which could, among other things, result in an event of default under the 2025 Bond Terms.

## **Statement of Reserves Data and Other Oil and Gas Information**

### ***Date of Statement***

The Statement of Reserves Data and Other Information is prepared as at December 31, 2022. The information is presented on a consolidated basis for ShaMaran.

### ***Disclosure of Reserves Data***

ShaMaran engaged McDaniel & Associates Consultants Ltd ("**McDaniel**") to evaluate 100% of ShaMaran's reserves and resource data as at December 31, 2022. The conclusions of this evaluation have been presented in a detailed property report which has been prepared in accordance with standards set out in the Canadian National Instrument NI 51-101 – *Standards of Disclosure for Oil and Gas Activities* ("**NI 51-101**") and the Canadian Oil and Gas Evaluation Handbook (the "**COGEH**").

ShaMaran's crude oil reserves as at December 31, 2022 were, based on ShaMaran's participating interest of 27.6 % in the Atrush Block and 18% participating interest in the Sarsang Block, estimated to be as follows:

**ShaMaran estimated reserves  
As at December 31, 2022**

	Proved Developed	Proved Undeveloped	Total Proved	Probable	Total Proved & Probable	Possible	Total Proved, Probable & Possible
<b>Light/Medium Oil (Mbbbl)<sup>(1)</sup></b>							
Gross <sup>(2)</sup>	23,831	10,575	<b>34,407</b>	26,485	<b>60,891</b>	43,033	<b>103,924</b>
Net <sup>(3)</sup>	12,073	4,209	<b>16,282</b>	7,590	<b>23,872</b>	9,345	<b>33,217</b>
<b>Heavy Oil (Mbbbl)<sup>(1)</sup></b>							
Gross <sup>(2)</sup>	2,913	1,523	<b>4,436</b>	3,009	<b>7,445</b>	3,932	<b>11,377</b>
Net <sup>(3)</sup>	1,568	626	<b>2,194</b>	952	<b>3,146</b>	1,353	<b>4,499</b>

Notes:

- (1) The Atrush Block contains crude oil of variable density. Fluid type is classified according to COGEH: Light/Medium Oil is based on density less than 920 kg/m<sup>3</sup> and Heavy Oil is between 920 and 1000 kg/m<sup>3</sup>.
- (2) ShaMaran gross reserves are based on ShaMaran's 27.6 % participating interest share of the property gross reserves in the Atrush Block plus an 18.0% participating interest share of the property gross reserves in the Sarsang Block.
- (3) ShaMaran net reserves are based on ShaMaran share of total Cost and Profit Revenues. Note, as the government pays income taxes on behalf of ShaMaran out of the government's profit oil share, the net reserves were based on the effective pre-tax profit revenues by adjusting for the tax rate.

ShaMaran's crude oil resources as at December 31, 2022, were estimated to be as follows:

**ShaMaran estimated contingent resources<sup>(1) (2)(4)(5)</sup>  
As at December 31, 2022**

	Low Estimate (1C)	Best Estimate (2C)	High Estimate (3C)	Riskd Best Estimate
<b>Light/Medium Oil (Mbbbl)<sup>(3)</sup></b>				
Gross (Development On Hold)	2,799	9,486	36,895	6,640
Gross (Development Not Viable)	0	0	0	0
<b>Heavy Oil (Mbbbl)<sup>(3)</sup></b>				
Gross (Development On Hold)	3,364	6,263	20,932	4,384
Gross (Development Not Viable)	11,633	25,793	33,339	2,579
Gross Total	17,797	41,542	91,166	13,603

Notes:

- (1) ShaMaran gross interest resources are based on a 27.6 % participating interest share of the property gross resources in the Atrush Block plus an 18.0% participating interest of the property gross resources in the Sarsang Block.
- (2) There is no certainty that it will be commercially viable to produce any portion of the contingent resources.
- (3) The Atrush Block contains crude oil of variable density. Fluid type is classified according to COGEH: Light/Medium Oil is based on a density less than 920 kg/m<sup>3</sup> and Heavy Oil is between 920 and 1000 kg/m<sup>3</sup>.
- (4) The "Riskd Best Estimate" contingent resources account for the chance of development, which is defined as the probability of a project being commercially viable. Quantifying the chance of development requires consideration of both economic contingencies and other contingencies, such as legal, regulatory, market access, political, social license, internal and external approvals and commitment to project finance and development timing. As many of these factors are extremely difficult to quantify, the chance of development is uncertain and must be used with caution. The chance of development was estimated to be 70 % for the Light/Medium and Heavy Crude Oil Development "On Hold" contingent resources and 10% for the Heavy Crude Oil Development "Not-Viable" contingent resources.
- (5) The contingent resources are sub-classified as "development unclarified" with an "undetermined" economic status.

The contingent resources represent the likely recoverable volumes associated with further phases of development during Phase 1 which differ from reserves mainly due to the uncertainty over the future development plan.

Prospective resources have not been re-evaluated since December 31, 2013.

For further information please refer to the Company's Form 51-101 F1 *Statement of Reserves Data and Other Oil and Gas Information*, Form 51-101 F2 *Report on Reserves Data by Independent Qualified Reserves Evaluator or Auditor*, Form 51-101 F3 *Report of Management* and Form 51-101F4 *Notice of Filing of 51-101 F1 Information* filed under the Company's profile on SEDAR at [www.sedar.com](http://www.sedar.com) posted on February 16, 2023 and attached hereto as Schedules A, B, C and D.

## ITEM 5 - DESCRIPTION OF CAPITAL STRUCTURE AND DIVIDENDS

### Capital Structure

The Company's authorized capital consists of an unlimited number of common shares without par value. All the issued common shares are fully paid and non-assessable.

The holders of common shares are entitled to receive notice of, and to one vote per share at, every meeting of shareholders of the Company, to receive such dividends as the Board of Directors declares and to share equally in the assets of the Company remaining upon the liquidation, dissolution or winding up of the Company after the creditors of Company have been satisfied.

Under the terms of the ShaMaran Bond Agreement the Company is restricted from making any dividend payment, repurchase of shares, loans or other equity or capital distributions or payments to its shareholders, whether in cash or in kind (including without limitation servicing of shareholder loans or any total return swaps or instruments with similar effect).

At December 31, 2022, the Company had an aggregate of 2,808,850,904 common shares issued and outstanding.

Under the Company's Stock Option Plan and Share Unit plans, the Company may grant options to purchase up to 10% of the issued and outstanding Common Shares at the time of grant to its directors, officers, employees and consultants. The number of shares issuable under these plans at any specific time to any one recipient shall not exceed 5% of the issued and outstanding common shares of the Company. As at the date of this AIF, the Company had 82,183,000 outstanding options to purchase Common Shares at an average exercise price of CAD 0.07 per share. The options relate to (i) grants made in the year 2019 totalling 25,070,000 plus (ii) one grant made in the year 2020 of 35,840,000 plus (iii) one grant made in the year 2021 for 15,590,000 plus (iv) one grant made in the year 2022 for 15,750,000, (v) 14,510,000 of these options were cancelled in the year 2021 due to the end of service of plan participants and (vi) in the year 2022, 557,000 options were exercised and grants made in totalling 20,750,000. The options vest over a period of two years and will expire at the end of five years if not exercised. The Company also had outstanding at the date of this AIF under its Deferred Share Unit Plan 11,814,611 Deferred Share Units ("DSUs") and under its Restricted Stock Unit Plan 10,243,337 Restricted Share Units ("RSUs"). The DSUs were granted to non-executive directors of the Company, are fully vested and at the end of service of a director are redeemable in either cash or shares of the Company or a combination of both. The RSUs were granted to certain officers, employees and consultants, vest over three years, and are redeemable into shares of the Company after vesting.

### Dividends

To date the Company has not paid dividends on its common shares and has no plans to pay dividends. In accordance with the 2025 Bond Terms the Company is prohibited from distributing dividends until such time as the net debt of the Company is less than \$100 million. Any decision to pay dividends in the future will be based on the then applicable restrictions under the 2025 Bond Terms, the Company's earnings and financial requirements and other factors that its Board of Directors may consider appropriate in the circumstances.

## ITEM 6 - MARKET FOR SECURITIES

### Trading Price and Volume

The common shares of the Company are currently listed and posted for trading on both the TSX.V in Canada and NASDAQ First North Growth Market in Sweden under the trading symbol "SNM".

The following table sets out, for the calendar periods indicated, the high and low trading prices and volumes for the common shares as reported on such markets:

Month	TSX.V (Canada)			NASDAQ First North (Sweden)		
	High (CAD)	Low (CAD)	Volume	High (SEK)	Low (SEK)	Volume
January 2022	0.09	0.085	1,999,167	0.705	0.65	41,860,488
February 2022	0.093	0.0605	8,145,520	0.667	0.4259	167,842,903
March 2022	0.1116	0.0651	12,224,012	0.8835	0.5134	319,950,774
April 2022	0.11	0.0791	38,387,800	0.772	0.5589	151,985,069
May 2022	0.105	0.07	30,264,933	0.796	0.562	125,841,757
June 2022	0.2	0.08	24,440,946	0.767	0.61	84,440,066
July 2022	0.09	0.07	7,548,516	0.708	0.56	46,762,131
August 2022	0.08	0.07	6,729,553	0.653	0.544	62,939,903
September 2022	0.09	0.075	1,086,671	0.76	0.608	113,416,872
October 2022	0.105	0.08	1,587,837	0.821	0.668	83,220,459
November 2022	0.115	0.085	23,251,136	0.945	0.685	170,858,891
December 2022	0.095	0.085	1,715,733	0.75	0.655	54,594,197
January 2023	0.09	0.085	1,999,167	0.705	0.65	41,860,488
February 2023	0.095	0.08	4,193,943	0.725	0.63	47,293,741
March 2023	0.09	0.06	2,587,387	0.716	0.49	104,293,251

## ITEM 7. ESCROWED SECURITIES AND SECURITIES SUBJECT TO CONTRACTUAL RESTRICTION ON TRANSFER

The Company has no securities currently held in escrow or that are subject to a contractual restriction on transfer.

## ITEM 8 - DIRECTORS AND OFFICERS

### Name, Address and Occupation

The Board of Directors of the Company is currently comprised of six directors who are elected annually and whose term of office is until the next annual meeting of shareholders or until his successor is duly elected unless his office is earlier vacated in accordance with the articles of the Company.

The names, provinces/states and countries of residence of each of the directors and officers of the Company, their respective positions and offices held with the Company, their principal occupations within the preceding five years, as at December 31, 2022 are set forth in the following table:



Name, province or state and country of residence	Current position(s) held in the Company	Principal Occupation during the Past Five Years
Chris Bruijnzeels Abcoude, The Netherlands	Chairman since May 15, 2019 and Director since January 19, 2015	From January 15, 2015 to May 15, 2019, Mr. Bruijnzeels was President & CEO of the Company. Mr. Bruijnzeels is a qualified Professional Engineer with over 35 years of experience in the oil and gas industry. Mr. Bruijnzeels is a Director of International Petroleum Corporation and was Senior Vice President, Development of Lundin Petroleum AB from January 2003 up until he joined the Company in 2015.
Adel Chaouch Geneva, Switzerland	President, CEO and Director since May 15, 2019	Prior to joining the Company, Dr. Chaouch headed Marathon Oil Company's interests in the MENA region. He presided over Marathon Oil Kurdistan, a business that he had overseen since 2011. He was the chairman of the consortium of private owners for the Waha operating company in Libya until early 2018. Dr. Chaouch was instrumental in establishing the mega gas hub in Equatorial Guinea and also directed the opportunity team that successfully re-entered Gabon through operated and non-operated interests in deep water exploration off the Gulf of Guinea. Dr. Chaouch was previously the director of Corporate Social Responsibility for Marathon's worldwide activities and Sustainable Growth Manager for Marathon Central Africa Operations based in Equatorial Guinea. He also served over the years on a number of corporate and non-profit boards, such as Ophir Energy, the Bilateral Chamber of Commerce and the World Bank Global Gas Flaring Reduction Initiative and the International Petroleum Industry Environmental Conservation Association (IPIECA). Dr. Chaouch holds a Ph.D. in Engineering from Texas A&M University.
Michael S. Ebsary Geneva, Switzerland	Director since January 1, 2019	Mr. Ebsary was previously the Chief Executive Officer and a director of Oryx Petroleum Limited from 2010 to 2016. Mr. Ebsary served as the Chief Financial Officer of Addax Petroleum Corporation, an international oil and gas exploration and production company, for 11 years between 1998 and 2009, after having held various positions in project finance and treasury with oil companies Elf Aquitaine and Occidental Petroleum both in France and the United Kingdom. Mr. Ebsary began his career with positions at multinational banking institutions in Canada and the United Kingdom. Mr. Ebsary holds an MBA from Queen's University.

Name, province or state and country of residence	Current position(s) held in the Company	Principal Occupation during the Past Five Years
Keith C. Hill Florida, USA	Director since February 19, 2007	Mr. Hill is currently President and CEO of Africa Oil Corp., a publicly traded oil and gas company focused on Africa. Mr. Hill has over 30 years of experience in the oil industry and has previously served as President of each of Valkyries Petroleum, BlackPearl Resources and ShaMaran. Prior to that, Mr. Hill's experience included international new venture management and senior exploration positions at Occidental Petroleum and Shell Oil Company. His education includes a Master of Science degree in Geology and Bachelor of Science degree in Geophysics from Michigan State University as well as an MBA from the University of St. Thomas in Houston.
William A.W. Lundin Geneva, Switzerland	Director since June 26, 2019	Mr. Lundin is the Chairman of the Board of Africa Energy Corp., a Director of the Board of Filo Mining Corp., a Director of the Board of the Lundin Foundation and is the Chief Operating Officer of International Petroleum Corp. Mr. Lundin holds a Bachelor of Engineering in Mineral Resource Engineering from Dalhousie University and he is recognized as a professional engineer in the Province of Alberta.
Nick Walker Geneva, Switzerland	Director since June 23, 2022	Mr. Walker is currently Chief Executive Officer of Vedanta – Cairn Oil & Gas, the largest private sector producer of crude oil in India. Mr. Walker has over 30 years of experience in the oil and gas industry and previously served as President and CEO of Lundin Energy AB, as Chief Operating officer of Africa Oil Corp., and various senior roles with Talisman Energy Inc., including as Executive Vice President International Operations and country manager positions in the United Kingdom and Malaysia/Vietnam. His education includes degrees in Mining Engineering from Imperial College London, Computer Science from University College London as well as an MBA from City University Business School, London.

Name, province or state and country of residence	Current position(s) held in the Company	Principal Occupation during the Past Five Years
Elvis Pellumbi Canterbury, United Kingdom	Chief Financial Officer since October 1, 2022	Mr. Pellumbi has 25 years of investing and capital market experience, with an exclusive focus on the global energy markets for the last 15 years. Most recently he held a senior advisory role to ShaMaran's management team, focusing on debt advisory and M&A, including the recently closed acquisition of TotalEnergies affiliate holding an interest in the Sarsang block in the Kurdistan Region. As part of his previous mandates, Elvis has invested well in excess of \$500 million in oil & gas companies focused in the Kurdistan Region since 2009 and is very familiar with the key players in the sector.
Alex C. Lengyel London, United Kingdom	Chief Commercial Officer since January 1, 2020 and Corporate Secretary since August 12, 2020	Mr. Lengyel has negotiated oil and gas transactions in over 20 countries in over 30 years. He also has experience in energy project financings, bank finance, equipment leasing, U.S. securities, country debt restructuring and corporate matters (including oil and gas joint ventures and consortium work). He holds a Juris Doctorate degree from Notre Dame Law School and is a member of the New York bar. He was a Fulbright Scholar to Italy and holds a Bachelor of Music degree (violin performance) from Eastman School of Music.

There are four standing committees of the Board; namely, the Audit Committee, the Compensation Committee, the Corporate Governance and Nominating Committee and the Reserves Committee.

The following table identifies the members of each of these Committees as at December 31, 2022:

Audit Committee	Compensation Committee	Corporate Governance and Nominating Committee	Reserves Committee
Michael S. Ebsary* Chris Bruijnzeels Keith C. Hill	Keith C. Hill* Chris Bruijnzeels Michael S. Ebsary	Nick Walker* Michael S. Ebsary William A.W. Lundin	William A.W. Lundin* Chris Bruijnzeels Nick Walker

\*Committee Chair

### Security Holdings

As at the date of this AIF, the directors and executive officers of the Company beneficially own, directly or indirectly, have control of or direction over an aggregate of 19,863,029 Common Shares, representing approximately 0.7% of the issued and outstanding Common Shares (excluding securities issuable on exercise of stock options).

## **Cease Trade Orders, Bankruptcies, Penalties or Sanctions**

### ***Cease Trade Orders***

Other than as disclosed below, no director or officer or person holding sufficient securities of the Company to affect materially the control of the Company, is, or within the past ten years before the date of this Annual Information Form has been, a director or officer of any other issuer that, while such person was acting in that capacity:

- (i) was the subject of a cease trade or similar order, or an order that denied the other issuer access to any exemptions under Canadian securities legislation, for a period of more than 30 consecutive days
- (ii) was subject to an event that resulted in such an order after the person ceased to be a director or officer
- (iii) became bankrupt, made a proposal under any legislation relating to bankruptcy or insolvency or was subject to or instituted any proceedings, arrangement or compromise with creditors or had a receiver, receiver-manager or trustee appointed to hold its assets, or
- (iv) was subject to such bankruptcy proceedings within a year of that person ceasing to act in that capacity

### ***Penalties or Sanctions***

No director or officer of the Company, or shareholder holding a sufficient number of shares of the Company to materially affect control of the Company, has been the subject of any penalties or sanctions imposed by a court relating to Canadian securities legislation or by a Canadian securities regulatory authority or has entered a settlement agreement with a Canadian securities regulatory authority, or been subject to any other penalties or sanctions imposed by a court or regulatory body that would be likely to be considered important to a reasonable investor in making an investment decision.

### ***Personal Bankruptcies***

During the ten years preceding the date of this AIF, no director, officer or shareholder holding a sufficient number of shares of the Company to affect materially the control of the Company, or a personal holding company of any such person, has become bankrupt, made a proposal under any legislation relating to bankruptcy or insolvency, or was subject to or instituted any proceeding, arrangement or compromise with creditors or had a receiver, receiver-manager or trustee appointed to hold his or her assets.

**The foregoing information, not being within the knowledge of the Company, has been furnished by the respective directors, officers and any control shareholder of the Company individually.**

### **Conflicts of Interest**

The Company's directors and officers may serve as directors or officers of other companies or have significant shareholdings in other resource companies and, to the extent that such other companies may participate in ventures in which the Company may participate, the directors of the Company may have a conflict of interest in negotiating and concluding terms respecting the extent of such participation. If such a conflict of interest arises at a meeting of the Company's directors, a director who has such a conflict will abstain from voting for or against the approval of such participation or the terms of such participation. From time to time, several companies, including the Company, their participation in larger programs, the involvement in a greater number of programs or a reduction in financial exposure in respect of any one program. It may also occur that a corporation will assign all or a portion of its interest in a program to another of these companies due to the financial position of the company making the assignment. In accordance with the laws of Canada, the directors of the Company are required to act honestly, in good faith and in the best interests of the Company. In determining if the Company will participate in a program and the interest therein to be acquired by it the directors will primarily consider the possible return and degree of risk to which the Company may be exposed, as well as the financial position of the Company at that time.

The directors and officers of the Company are aware of the existence of laws governing the accountability of directors and officers for corporate opportunity and requiring disclosure by the directors of conflicts of interest and the Company will rely upon such laws in respect of any directors' and officers' conflicts of interest or in respect of

any breaches of duty by any of its directors and officers. All such conflicts will be disclosed by such directors or officers in accordance with the *Business Corporations Act* (British Columbia) and they will govern themselves in respect thereof to the best of their ability in accordance with the obligations imposed upon them by law. The directors and officers of the Company are not aware of any conflicts of interest in any existing or contemplated contracts with or transactions involving the Company.

## **ITEM 9 - LEGAL PROCEEDINGS AND REGULATORY ACTIONS**

### **Legal Proceedings**

The Company is not involved in any legal proceedings that it believes might have a materially adverse effect on its business or results of operations.

### **Regulatory Actions**

No penalties or sanctions were imposed by a court relating to securities legislation or by a securities regulatory authority during the Company's recently completed financial year, nor were there any other penalties or sanctions imposed by a court or regulatory body against the Company that would likely be considered important to a reasonable investor in making an investment decision, nor were any settlement agreements entered before a court relating to securities legislation or with a securities regulatory authority during the Company's recently completed financial year.

## **ITEM 10 - AUDIT COMMITTEE**

The Audit Committee of the Company oversees the accounting and financial reporting processes of the Company and its subsidiaries and all audits and external reviews of the financial statements of the Company on behalf of the Board, and has general responsibility for oversight of internal controls, accounting and auditing activities of the Company and its subsidiaries. All auditing services and non-audit services to be provided to the Company by the Company's auditors are pre-approved by the Audit Committee. The Audit Committee is responsible for examining all financial information, including annual and quarterly financial statements, prepared for securities commissions and similar regulatory bodies prior to filing or delivery of the same. The Audit Committee also oversees the annual audit process, quarterly review engagements, the Company's internal accounting controls, the Code of Business Conduct and Ethics, as amended (the "Code"), any complaints and concerns regarding accounting, internal controls or auditing matters and the resolution of issues identified by the Company's external auditors. The Audit Committee recommends to the Board the firm of independent auditors to be nominated for appointment by the shareholders and the compensation of the auditors. The Audit Committee meets a minimum of four times per year.

The Company's Audit Committee Charter is attached as Schedule E to this AIF.

### **Composition of the Audit Committee**

The current members of the Audit Committee are: Michael S. Ebsary (Chair), Chris Bruijnzeels and Keith C. Hill. Messrs. Ebsary and Hill are considered independent within the meaning of National Instrument 52-110 - Audit Committees ("NI 52-110") but Mr. Bruijnzeels is not considered "independent" within the meaning of NI 52-110, as he was a paid advisor to the Corporation compensated in excess of CAD 75,000 annually until May 2021. All members of the Audit Committee are "financially literate" within the meaning of applicable Canadian securities regulations in that they each can read and understand a set of financial statements that present a breadth and level of complexity of accounting issues that are generally comparable to the breadth and complexity of the issues that can reasonably be expected to be raised by the Company's financial statements.

### **Relevant Education and Experience**

Mr. Ebsary was previously the Chief Executive Officer and a director of Oryx Petroleum Limited from 2010 to 2016. He served as the Chief Financial Officer of Addax Petroleum Corporation, an international oil and gas exploration

and production company, for 11 years between 1998 and 2009, after having held various positions in project finance and treasury with oil companies Elf Aquitaine and Occidental Petroleum both in France and the United Kingdom. Mr. Ebsary began his career with positions at multinational banking institutions in Canada and the United Kingdom. Mr. Ebsary holds an MBA from Queen’s University.

Mr. Bruijnzeels was previously the President and Chief Executive Officer of the Corporation from January 2015 to May 2019 and a director of the Corporation from 2015 to the present and became the Chairman of the Board of the Corporation in May 2019. He is a graduate of Delft University where he obtained a degree in Mining Engineering and has obtained financial experience and exposure to accounting and financial issues through his roles in the Corporation as President and Chief Executive Officer, Director and Chairman of the Board.

Mr. Hill has been a Director of the Corporation since February 19, 2007 and served as Chairman of the Board from February 19, 2007 to May 15, 2019. Mr. Hill is President, Chief Executive Officer and a director of Africa Oil Corp.; a director of Africa Energy Corp., Eco (Atlantic) Oil & Gas Ltd. and TAG Oil Corp. Prior to his appointment as Chief Executive Officer of Africa Oil Corp., Mr. Hill was President and CEO of BlackPearl Resources Inc. and of Valkyries Petroleum Corp. Mr. Hill holds a Master of Science degree in Geology and Bachelor of Science degree in Geophysics from Michigan State University, as well as an MBA in Finance from the University of St. Thomas in Houston.

### Audit Committee Oversight

Since the commencement of the Company’s most recently completed financial year, there has not been a recommendation of the Audit Committee to nominate or compensate an external auditor that was not adopted by the Board of Directors.

### Reliance on Certain Exemptions

Since the commencement of the Company’s recently completed financial year, the Company has not relied on the exemptions contained in section 2.4 (*De Minimis* Non-Audit Services) or an exemption from **NI 52-110**, in whole or in part, granted under Part 8 (Exemptions) of NI 52-110.

### Pre-Approval Policies and Procedures

The Audit Committee has adopted specific policies and procedures for the engagement of non-audit services as described in the Audit Committee Charter.

### External Auditor Service Fees (By Category)

The following table discloses the fees billed to the Company by its external auditor during the last two years ended December 31, 2021 and December 31, 2022.

Financial Year Ending	Audit Fees <sup>(1)</sup>	Audit Related Fees <sup>(2)</sup>	Tax Fees <sup>(3)</sup>	All Other Fees <sup>(4)</sup>
2021	126,399	48,012	118,724	Nil
2022	152,765	20,894	48,850	Nil

Notes:

- (1) The aggregate fees billed for audit services.
- (2) The aggregate fees billed for assurance and related services that are reasonably related to the performance of the audit or review of the Company’s financial statements and are not disclosed in the audit fees column.
- (3) The aggregate fees billed for tax compliance, tax advice, and tax planning services.
- (4) The aggregate fees billed for professional services other than those listed in the other three columns.

### Exemption

As a “venture issuer” (as such term is defined in NI 52-110) the Company is exempt from the requirements of Part 3, Composition of the Audit Committee, and Part 5, Reporting Obligations, of NI 52-110.

## ITEM 11 - INTEREST OF MANAGEMENT AND OTHERS IN MATERIAL TRANSACTIONS

Other than as set out below, no director or executive officer of the Company or any person or company that is the direct or indirect beneficial owner of, or who exercises control or direction over more than 10 per cent of the Common Shares, and no associate or affiliate of any of the foregoing, has or has had, any material interest, direct or indirect, in any transaction within the three most recently completed financial years or during the most recently completed financial year, or any proposed transaction, that has materially affected or will materially affect the Company.

In connection with the Corporation's \$240 million senior bond issue completed in July 2018 (the "2023 Bond"), Nemesia agreed to guarantee the Corporation's obligations under the 2023 Bond up to \$22.8 million (an equivalent of one year of bond interest, the "Liquidity Guarantee"). In exchange for the Liquidity Guarantee, the Corporation entered into a Debenture in favour of Nemesia dated February 25, 2019 (the "Debenture") and agreed to issue an initial 2,000,000 common shares to Nemesia for providing the Liquidity Guarantee and a further 50,000 common shares of the Corporation for each \$500,000 drawdown per month until the drawn amount is repaid. In July 2020, the Corporation announced a full drawdown of the Liquidity Guarantee in the amount of \$22.8 million followed by the full and final discharge of such Liquidity Guarantee by Nordic Trust as Bond Trustee. The Corporation then commenced the monthly issuance of common shares to Nemesia. In addition, the Corporation was required to accrue interest on the amount due to Nemesia at an annual rate of 5% with payment of the accrued interest and principal by the Company to Nemesia being payable on or before July 5, 2023, and such claim for repayment was subordinated to all obligations under the Corporation's 2023 and 2025 Bond Terms. The Debenture was amended and restated in connection with the closing of the Sarsang Acquisition. After the successful closing of the Sarsang Acquisition and the 2023 Bond conversion into the 2025 Bond on September 27, 2022, \$7.2 million of the existing \$22.8 million debt owed by the Corporation to Nemesia was refinanced into the new 2025 Bond, the balance of \$15.6 million remains as a loan to the Corporation with an adjusted interest rate to match the interest rate on the new 2025 Bond of 12% (payable in cash semi-annually) plus an additional interest amount of 2% per annum payable in kind. The monthly common share allotment to Nemesia by the Corporation has been eliminated.

## ITEM 12 - REGISTRAR AND TRANSFER AGENT

Computershare Investor Services Inc. ("Computershare") acts as the registrar and transfer agent for the Common Shares at its offices in Vancouver. Computershare is located at 3<sup>rd</sup> Floor, 510 Burrard Street, Vancouver, BC V6C 3B9.

## ITEM 13 - MATERIAL CONTRACTS

Except as set forth below or as disclosed in this AIF, there were no contracts, other than those entered in the ordinary course of business, that were material to the Company and that were entered between January 1, 2022 (being the commencement of the Company's most recently completed financial year) and up to the date of this AIF or that were entered prior to January 1, 2022 and remain in effect during 2022, other than as disclosed in this AIF.

The Company was a party to material contracts which were in effect at the date of this AIF as follows:

- The Atrush Block PSC through the Company's wholly-owned subsidiary GEP and the Atrush Block JOA.
- The Sarsang Block PSC through the Company's wholly-owned subsidiary SNM Sarsang and the Sarsang Block JOA.
- On May 30, 2019, ShaMaran, through its wholly-owned subsidiary GEP, completed its acquisition of an additional 7.5% participating interest in the Atrush Block. Under two separate purchase and sale agreements, done in contemplation of one another, GEP acquired directly MOKDV's full 15% participating interest in Atrush Block and immediately thereafter sold a 7.5% Atrush participating interest to TAQA, bringing the Company's total participating interest in Atrush Block to 27.6%. Only certain general and customary tax indemnities of the Seller still survive as at the date of this AIF.

- On July 30, 2021, the Company entered into the 2025 Bond Terms and issued the 2025 Bond on September 27, 2022 as further described in Item 3 - General Development of the Business “Year ending December 31, 2021” of this AIF.

#### **ITEM 14 - NAMES AND INTERESTS OF EXPERTS**

There is no person or company whose profession or business gives authority to a statement made by such person or company and who is named as having prepared or certified a statement, report or valuation described or included in a filing, or referred to in a filing made under NI 51-102 by the Company during the current financial year other than McDaniel, the Company’s independent resource evaluators and PricewaterhouseCoopers SA, the Company’s auditors. None of the employees of McDaniel have any registered or beneficial interests, direct or indirect, in any securities or property of the Company or of the Company’s associates or affiliates either at the time they prepared the statement, report or valuation prepared by it, at any time thereafter, or to be received by them. PricewaterhouseCoopers SA, the Company’s auditors, are independent in accordance with the auditor’s rules of professional conduct in Canada. In addition, none of the aforementioned persons or companies, nor any director, officer or employee of any of the aforementioned persons or companies, is or is expected to be elected, appointed or employed as a director, officer or employee of the Company or any associate or affiliate of the Company.

#### **ITEM 15 - ADDITIONAL INFORMATION**

Additional information, including directors’ and officers’ remuneration and indebtedness, principal holders of the Company’s securities, options to purchase securities and interests of insiders in material transactions, where applicable, is contained in the Company’s information circular for its most recent annual meeting of security holders that involved the election of directors.

Additional financial information is provided in the Company’s audited consolidated financial statements and the MD&A as at and for the year ended December 31, 2022.

Additional information relating to the Company may be found under the Company’s profile on SEDAR at [www.sedar.com](http://www.sedar.com) and on the Company’s website at [www.shamaranpetroleum.com](http://www.shamaranpetroleum.com).



**SCHEDULE A**

FORM 51-101 F1

**Form 51-101 F1**

**ShaMaran Petroleum Corp.**

**Statement of Reserves Data**

**And Other Oil and Gas Information**

**As of December 31, 2022**

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**Part 1                    Date of Statement**

**Item 1.1                Relevant Dates**

1.        Date of Statement:        February 15, 2023
2.        Effective Date:            December 31, 2022
3.        Preparation Date:         February 15, 2023

**Part 2                    Disclosure of Reserves Data**

ShaMaran Petroleum Corp., herein after referred to as “ShaMaran” or the “Company”, has as of December 31, 2022 reserves relating entirely to the Company’s interest in the Atrush and Sarsang Blocks, located in the Kurdistan Region of Iraq (“Kurdistan”). ShaMaran currently has a 27.6 percent working interest in the Atrush Block and, from September 15 2022, an 18.0 percent working interest in the Sarsang Block . For stating the Company’s oil and gas reserves publicly, the Company retained the services of McDaniel & Associates Consultants Ltd. (“McDaniel”), who are independent qualified reserves evaluators appointed by the Company pursuant to NI 51-101, to conduct independent evaluations of all the Company’s oil and gas properties. McDaniel has provided the Company with an evaluation (the “McDaniel Report”) prepared in compliance with NI 51-101 in respect of the Company’s oil and gas reserves as at December 31, 2022.

The definitions of the various categories of reserves are those set out in NI 51-101 and in the Canadian Oil and Gas Evaluation Handbook (“COGE Handbook”). The Company engaged McDaniel to provide an evaluation of the Company's proved, probable and possible reserves. The following are the definitions of proved, probable and possible reserves as set out in the COGE Handbook:

"**proved reserves**" are those reserves that can be estimated with a high degree of certainty to be recoverable. It is likely that the actual remaining quantities recovered will exceed the estimated proved reserves. At least a 90% probability that the quantities actually recovered will equal or exceed the estimated proved reserves is the targeted level of certainty.

"**probable reserves**" are those additional reserves that are less certain to be recovered than proved reserves. It is equally likely that the actual remaining quantities recovered will be greater or less than the sum of the estimated proved plus probable reserves. At least a 50% probability that the quantities actually recovered will equal or exceed the sum of the estimated proved plus probable reserves is the targeted level of certainty.

"**possible reserves**" are those additional reserves that are less certain to be recovered than probable reserves. It is unlikely that the actual remaining quantities recovered will exceed the sum of the estimated proved plus probable plus possible reserves. At least a 10% probability that the quantities actually recovered will equal or exceed the sum of the estimated proved plus probable plus possible reserves is the targeted level of certainty.

It should not be assumed that the present worth of estimated future net revenue represents the fair market value of the reserves. There is no assurance that the forecast price and cost assumptions contained in the McDaniel Report will be attained and variances could be material. The reserves and revenue estimates set forth below are estimates only and the actual reserves and realized revenue may be greater or less than those calculated.

Unless otherwise stated herein all currency amounts indicated as “\$” in this Statement of Reserves Data are expressed in thousands of United States dollars (“USD”).

## Item 2.1 Reserves Data (Forecast Prices and Costs)

### Breakdown of Reserves (Forecast Case)

The following table discloses, in the aggregate, the Company's gross and net proved, probable and possible reserves, estimated using forecast prices and costs, by product type.

#### SUMMARY OF OIL AND GAS RESERVES AS OF DECEMBER 31, 2022 (Forecast Prices & Costs)

	ShaMaran's Interest in Reserves <sup>(1)(2)(3)</sup>							
	Light and Medium Oil (Mbbbl)		Heavy Oil (Mbbbl)		Conventional Natural Gas (MMcf)		Natural Gas Liquids (Mbbbl)	
	Gross <sup>(4)</sup>	Net <sup>(5)</sup>	Gross <sup>(4)</sup>	Net <sup>(5)</sup>	Gross <sup>(4)</sup>	Net <sup>(5)</sup>	Gross <sup>(4)</sup>	Net <sup>(5)</sup>
<u>Iraq</u>								
Proved developed producing .	23,831	12,073	2,913	1,568	-	-	-	-
Proved developed non- producing .....	-	-	-	-	-	-	-	-
Proved developed .....	23,831	12,073	2,913	1,568	-	-	-	-
Proved undeveloped .....	10,575	4,209	1,523	626	-	-	-	-
<b>Total proved reserves.....</b>	<b>34,407</b>	<b>16,282</b>	<b>4,436</b>	<b>2,194</b>	-	-	-	-
Probable.....	26,485	7,590	3,009	952	-	-	-	-
<b>Total Proved Plus Probable Reserves.....</b>	<b>60,891</b>	<b>23,872</b>	<b>7,445</b>	<b>3,146</b>	-	-	-	-
Possible .....	43,033	9,345	3,932	1,353	-	-	-	-
<b>Total Proved Plus Probable Plus Possible Reserves.....</b>	<b>103,924</b>	<b>33,217</b>	<b>11,377</b>	<b>4,499</b>	-	-	-	-
<u>Total</u>								
Proved developed producing .	23,831	12,073	2,913	1,568	-	-	-	-
Proved developed non- producing .....	-	-	-	-	-	-	-	-
Proved developed .....	23,831	12,073	2,913	1,568	-	-	-	-
Proved undeveloped .....	10,575	4,209	1,523	626	-	-	-	-
<b>Total proved reserves.....</b>	<b>34,407</b>	<b>16,282</b>	<b>4,436</b>	<b>2,194</b>	-	-	-	-
Probable.....	26,485	7,590	3,009	952	-	-	-	-
<b>Total Proved Plus Probable Reserves.....</b>	<b>60,891</b>	<b>23,872</b>	<b>7,445</b>	<b>3,146</b>	-	-	-	-
Possible .....	43,033	9,345	3,932	1,353	-	-	-	-
<b>Total Proved Plus Probable Plus Possible Reserves.....</b>	<b>103,924</b>	<b>33,217</b>	<b>11,377</b>	<b>4,499</b>	-	-	-	-

#### Notes:

- (1) Totals may not add due to rounding.
- (2) The definitions of the various categories of reserves and expenditures are those set out in NI 51-101.
- (3) The Atrush Field contains crude oil of variable density. Fluid type is classified according to COGEH: Light/Medium Oil is based on density less than 920 kg/m<sup>3</sup> and Heavy Oil is between 920 and 1000 kg/m<sup>3</sup>.
- (4) "Gross" reserves refer to ShaMaran's working interest share before deducting royalties and are based on a 27.6 percent working interest share of the property gross resources.
- (5) "Net" reserves refer to ShaMaran's share of total cost and profit revenues. Note, as the government pays income taxes on behalf of ShaMaran out of the government's profit oil share, the net reserves were based on the effective pre-tax profit revenues by adjusting for the tax rate.

### Net Present Value of Future Net Revenue (Forecast Case)

The following table discloses, by country and in the aggregate, the net present value of the ShaMaran's future net revenue attributable to the reserves categories in the previous table, estimated using forecast prices and costs, before and after deducting future income tax expenses, and calculated without discount and using discount rates of 5%, 10%, 15% and 20%.

#### SUMMARY OF NET PRESENT VALUE OF FUTURE NET REVENUE AS OF DECEMBER 31, 2022 (Forecast Prices & Costs)

Reserves Category	Net Present Values of Future Net Revenue <sup>(1)(2)(3)(4)(5)(6)(7)</sup>										Unit Value <sup>(8)</sup> before Income Tax Discounted at 10%/year \$/bbl
	Before Income Taxes Discounted at (%/year)					After Income Taxes Discounted at (%/year)					
	0	5	10	15	20	0	5	10	15	20	
	\$000	\$000	\$000	\$000	\$000	\$000	\$000	\$000	\$000	\$000	
<b>Iraq</b>											
Proved developed producing..	464,396	416,341	378,605	348,173	323,088	464,396	416,341	378,605	348,173	323,088	27.75
Proved developed non-producing.....	-	-	-	-	-	-	-	-	-	-	-
Proved developed.....	464,396	416,341	378,605	348,173	323,088	464,396	416,341	378,605	348,173	323,088	27.75
Proved undeveloped .....	109,729	88,137	72,265	60,206	50,793	109,729	88,137	72,265	60,206	50,793	14.95
<b>Total Proved Reserves .....</b>	<b>574,125</b>	<b>504,478</b>	<b>450,870</b>	<b>408,379</b>	<b>373,881</b>	<b>574,125</b>	<b>504,478</b>	<b>450,870</b>	<b>408,379</b>	<b>373,881</b>	<b>24.40</b>
Probable .....	257,877	183,873	137,599	107,348	86,781	257,877	183,873	137,599	107,348	86,781	16.11
<b>Total Proved Plus Probable Reserves .....</b>	<b>832,002</b>	<b>688,352</b>	<b>588,469</b>	<b>515,727</b>	<b>460,662</b>	<b>832,002</b>	<b>688,352</b>	<b>588,469</b>	<b>515,727</b>	<b>460,662</b>	<b>21.78</b>
Possible.....	301,227	177,441	113,925	78,629	57,617	301,227	177,441	113,925	78,629	57,617	10.65
<b>Total Proved Plus Probable Plus Possible Reserves ....</b>	<b>1,133,229</b>	<b>865,793</b>	<b>702,394</b>	<b>594,356</b>	<b>518,279</b>	<b>1,133,229</b>	<b>865,793</b>	<b>702,394</b>	<b>594,356</b>	<b>518,279</b>	<b>18.62</b>
<b>Total</b>											
Proved developed producing	464,396	416,341	378,605	348,173	323,088	464,396	416,341	378,605	348,173	323,088	27.75
Proved developed non-producing.....	-	-	-	-	-	-	-	-	-	-	-
Proved developed.....	464,396	416,341	378,605	348,173	323,088	464,396	416,341	378,605	348,173	323,088	27.75
Proved undeveloped .....	109,729	88,137	72,265	60,206	50,793	109,729	88,137	72,265	60,206	50,793	14.95
<b>Total Proved Reserves .....</b>	<b>574,125</b>	<b>504,478</b>	<b>450,870</b>	<b>408,379</b>	<b>373,881</b>	<b>574,125</b>	<b>504,478</b>	<b>450,870</b>	<b>408,379</b>	<b>373,881</b>	<b>24.40</b>
Probable .....	257,877	183,873	137,599	107,348	86,781	257,877	183,873	137,599	107,348	86,781	16.11
<b>Total Proved Plus Probable Reserves .....</b>	<b>832,002</b>	<b>688,352</b>	<b>588,469</b>	<b>515,727</b>	<b>460,662</b>	<b>832,002</b>	<b>688,352</b>	<b>588,469</b>	<b>515,727</b>	<b>460,662</b>	<b>21.78</b>
Possible.....	301,227	177,441	113,925	78,629	57,617	301,227	177,441	113,925	78,629	57,617	10.65
<b>Total Proved Plus Probable Plus Possible Reserves ....</b>	<b>1,133,229</b>	<b>865,793</b>	<b>702,394</b>	<b>594,356</b>	<b>518,279</b>	<b>1,133,229</b>	<b>865,793</b>	<b>702,394</b>	<b>594,356</b>	<b>518,279</b>	<b>18.62</b>

#### Notes:

- (1) Based on a 27.6 percent Company working interest in Atrush and 18.0 in Sarsang.
- (2) Totals may not add due to rounding.
- (3) The definitions of the various categories of reserves and expenditures are those set out in NI 51-101.
- (4) Based on forecast prices and costs at January 1, 2023.
- (5) Interest expenses and corporate overhead, etc. were not included.
- (6) The net present values may not necessarily represent the fair market value of the reserves.
- (7) Government pays income taxes on behalf of ShaMaran out of the government's profit oil share and as such the before and after-tax values are identical.
- (8) Unit values are calculated using estimated net present value of future net revenue before income taxes using a discount rate of 10% and the Company net reserves. Unit values are presented on a \$/bbl basis for the light/medium and heavy oil reserves combined.

## Total Future Net Revenue (Undiscounted)

### Sub-Item 3b – Breakdown of Future Net Revenue

The following table discloses, by country and in the aggregate, certain elements of the Company's future net revenue attributable to proved reserves, proved plus probable reserves and proved plus probable plus possible reserves, estimated using forecast prices and costs, and calculated without discount.

Reserves Category	Revenue <sup>(1)</sup> \$000	Royalties <sup>(2)</sup> \$000	Operating Costs <sup>(3)</sup> \$000	Development Costs \$000	Abandonment and Reclamation Costs \$000	Future Net Revenue Before Income Taxes <sup>(4)</sup> \$000	Income Taxes <sup>(5)</sup> \$000	Future Net Revenue after Income Taxes \$000
<u>Iraq</u>								
Total Proved Reserves .								
	1,184,548	-	490,378	98,203	21,841	574,125	-	574,125
Total Proved Plus								
Probable Reserves ...	1,739,374	-	743,738	137,881	25,752	832,002	-	832,002
Total Proved Plus								
Probable Plus								
Possible Reserves ....	2,527,888	-	1,199,808	163,696	31,155	1,133,229	-	1,133,229
<u>Total</u>								
Total Proved Reserves .	1,184,548	-	490,378	98,203	21,841	574,125	-	574,125
Total Proved Plus								
Probable Reserves ...	1,739,374	-	743,738	137,881	25,752	832,002	-	832,002
Total Proved Plus								
Probable Plus								
Possible Reserves ....	2,527,888	-	1,199,808	163,696	31,155	1,133,229	-	1,133,229

#### Notes:

- (1) Revenue comprises cost oil, profit oil revenue and carry repayment.
- (2) Royalties are taken off before determining revenue and so are not included in this table.
- (3) Operating costs included bonuses and capacity building value.
- (4) Totals may not add or subtract due to rounding.
- (5) Government pays income taxes on behalf of ShaMaran out of the government's profit oil share and so income taxes are excluded.

### Sub-Item 3c – Total Future Net Revenue by Production Group

The following table discloses, by production group, the net present value and the unit value of the Company's future net revenue attributable to its proved reserves, its proved plus probable reserves and its proved plus probable plus possible reserves, before deducting future income tax expenses, estimated using forecast prices and costs, and calculated using a 10% discount rate.

Reserves Category	Production Group <sup>(1)</sup>	Future Net Revenue before Income Taxes (Discounted at 10%/Year)	Unit Value <sup>(2)</sup>
		\$000	(\$/bbl) (\$/Mcf) (\$/boe)
Proved Reserves.....	Light and Medium Crude Oil	399,374	24.53
	Heavy Oil	51,496	23.47
	Conventional Natural Gas	–	–
	Natural Gas Liquids	–	–
	<b>Total</b>	<b>450,870</b>	<b>24.40</b>
Proved Plus Probable Reserves.....	Light and Medium Crude Oil	524,357	21.97
	Heavy Oil	64,112	20.38
	Conventional Natural Gas	–	–
	Natural Gas Liquids	–	–
	<b>Total</b>	<b>588,469</b>	<b>21.78</b>
Proved Plus Probable Plus Possible Reserves..	Light and Medium Crude Oil	633,089	19.06
	Heavy Oil	69,305	15.40
	Conventional Natural Gas	–	–
	Natural Gas Liquids	–	–
	<b>Total</b>	<b>702,394</b>	<b>18.62</b>

Notes:

- (1) The Atrush Field contains crude oil of variable density even within a single reservoir unit and as such the actual split between Light/Medium Oil and Heavy Oil is uncertain. To give an indicative split of the "Future Net Revenue before Income Taxes by Production Group", the ratio of the Light/Medium and Heavy Oil reserves has been applied in a simplistic manner to calculate the total future net revenue.
- (2) Unit values are calculated using estimated net present value of future net revenue before income taxes using a discount rate of 10% and the Company net reserves. Unit values are presented on a \$/bbl basis for crude oil reserves.

A Summary of Contingent Resources as at December 31, 2022 has been included in the Appendix at the end of this document.



**Part 3 Pricing Assumptions**

**Item 3.1 Supplemental Estimates**

Not relevant

**Item 3.2 Forecast Prices Used in Estimates**

The following table sets forth the benchmark reference prices as at December 31, 2022, provided by McDaniel which were McDaniel's then current forecast prices at the effective date of the McDaniel Report.

Year	Brent Crude Oil Price <sup>(1)</sup> (\$/bbl)	Atrush field Price differential <sup>(2)</sup> (Atrush, Iraq) (\$/bbl)	Atrush field Sales Oil Price <sup>(2)</sup> (Atrush, Iraq) (\$/bbl)	Sarsang Block Price differential <sup>(2)</sup> (Sarsang, Iraq) (\$/bbl)	Sarsang Block Sales Oil Price <sup>(2)</sup> (Sarsang, Iraq) (\$/bbl)	Inflation Rates (%/Year)
2022 achieved price sales price	101.64	15.78	85.86	13.34	88.30	N/A
2023	84.00	20.78	63.22	11.86	72.14	2.00
2024	80.58	15.78	64.80	6.86	73.72	2.00
2025	79.59	15.78	63.81	6.86	72.73	2.00
2026	78.53	15.78	62.75	6.86	71.67	2.00
2027	80.10	15.78	64.32	6.86	73.24	2.00
2028	81.70	15.78	65.92	6.86	74.84	2.00
2029	83.34	15.78	67.56	6.86	76.48	2.00
2030	85.00	15.78	69.22	6.86	78.14	2.00
2031	86.70	15.78	70.92	6.86	79.84	2.00
Inflation after 2031						2.00

Notes:

(1) Brent price forecast based on the McDaniel January 1, 2023 price forecast.

(2) Atrush and Sarsang field prices are adjusted for quality differential, transportation tariffs and marketing fees and are based on ShaMaran's current marketing agreements.

**Part 4 Reconciliations of Changes in Reserves**

**Item 4.1 Reserves Reconciliation**

The following table provides a reconciliation of ShaMaran's gross reserves between December 31, 2021 to December 31, 2022 based on forecast prices and costs.

Iraq (and Total)	Light and Medium Oil (Mbbbl)			Heavy Oil (Mbbbl)			Conventional Natural Gas (MMcf)		
	Gross Proved	Gross Probable	Total Gross Proved plus Probable	Gross Proved	Gross Probable	Total Gross Proved plus Probable	Gross Proved	Gross Probable	Total Gross Proved plus Probable
Opening balance <sup>(1)(2)</sup> December 31, 2021	14,104	9,592	23,696	3,149	3,560	6,709	-	-	-
Plus:									
Extensions	644	462	1,105	223	168	392	-	-	-
Improved recovery	-	-	-	-	-	-	-	-	-
Technical revisions	731	(1,839)	(1,108)	1,998	(720)	1,278	-	-	-
Discoveries	-	-	-	-	-	-	-	-	-
Acquisitions	22,457	18,270	40,727	-	-	-	-	-	-
Less:									
Dispositions	-	-	-	-	-	-	-	-	-
Economic factors	-	-	-	-	-	-	-	-	-
Production	(3,529)	-	(3,529)	(933)	-	(933)	-	-	-
Ending balance – December 31, 2022	34,407	26,485	60,891	4,436	3,009	7,445	-	-	-

Notes:

- (1) Gross reserves are based on a 27.6 percent Company working interest in Atrush and 18.0 percent in Sarsang.  
(2) Reserves reconciliation for year ended December 31, 2022 was based on forecast prices and costs.

## **Part 5 Additional Information Relating to Reserves Data**

### **Atrush Block**

Atrush reserves were first recognized in the year ended December 31, 2013. In addition to sufficient accumulated technical data supporting recoverability, the declaration of commerciality by the contractor group in November 2012 and the KRG approval of the initial Field Development Plan (“FDP”) in October 2013 formed an adequate commercial basis for initial reserves recognition. During 2014 and 2015 several well tests and re-tests were executed and established the well-connected nature of the upper Jurassic reservoir in the Atrush field. These tests also demonstrated the producibility of the heavy oil in the lower part of the oil column. The combined effect of these results allowed a reclassification of a portion of the contingent resources into reserves. In November 2015 an update to the FDP was presented to the KRG and later approved. In the second quarter of 2017 installation and commissioning of the Atrush Production Facilities was completed. Production started on 3<sup>rd</sup> July 2017. In 2017 one new well Chiya Khere-7 (“CK-7”) was drilled and found the top of the reservoir 114m shallow to prognosis, which resulted in upwards shift of the mapped reservoirs and thus an increase in medium and a decrease in heavy oil in place.

Drilling, testing and completion of CK-7 was completed in early 2018. The Chiya Khere-10 (“CK-10”) production well and the Chiya Khere-9 (“CK-9”) water disposal wells were also drilled, tested and completed. CK-10 found the top of the reservoir 45m shallow to prognosis in a crestal part of the structure, whilst CK-9, targeting the aquifer for water disposal, encountered the top of the Barsarin formation about 55m low to prognosis.

During the testing phases of the CK-7 well, the lower Jurassic Mus reservoir produced oil of a gravity of 20.1 degree API at a depth shallower than anticipated. This resulted in an upwards shift of the medium to heavy oil transition in the Mus reservoir and thus in a readjustment of medium versus heavy oil in place in that reservoir.

Following positive well test results, the CK-7 and CK-10 wells were connected to the Production Facilities and came online during July 2018.

An extended well test was run on AT-3 during 2019 to evaluate the productivity and characteristics of the heavy (13 degrees API) oil within the Lower Sargelu and Naokelekan. This testing was inconclusive and a further testing is currently being planned.

Development plans for 2020 were put on hold due to the COVID-19 pandemic, however subsurface work continued to be matured to support resumption of field development activities in 2021 as the HSSE and oil price environment improve.

During 2021, as measures imposed to mitigate the operational impacts of the COVID-19 pandemic were proven effective, suspended capital programs were restarted. The CK-17 well was drilled from the Pad A targeting the Naokelekan and Upper Sargelu reservoirs to the South East and brought online in June 2021.

Continuation of drilling program delivered the CK-16 water disposal well and the CK-18 production well in 2022. During the testing of the CK-16 Triassic Kurra Chine C reservoir, the well flowed hydrocarbons to surface indicating development potential further up dip on the Triassic structures. The CK-18 well produced only trace hydrocarbons during the initial flowback and is currently shut-in pending sidetrack in 2023.

Crude oil reserves have been assigned as part of this evaluation to the development of the core medium-oil region. The remainder of the discovered, potentially recoverable volumes are classified as contingent resources.

### **Sarsang Block**

Shamaran announced their entry into the Sarsang Production Sharing Contract (“Sarsang PSC”) with the acquisition of TEPKRI Sarsang A/S, a subsidiary of Total Energies S.E., which held an 18 percent non-operated participating interest in the Sarsang PSC. HKN Energy now holds a 62 percent interest and operatorship of the Sarsang Block and Shamaran holds an 18 percent working interest with the remaining interest held by the Kurdistan Regional Government of Iraq (“KRG”).

The Sarsang Block is located along the northern border of the Atrush Block and comprises twelve producing wells across two fields: Swara Tika and East Swara Tika (11 online and 1 offline as of December 2022).

Both the Main Swara Tika and Swara Tika are under development, producing reserves from hydrocarbon-bearing formations in the Triassic interval:

- Kurra Chine A
- Kurra Chine B
- Kurra Chine C

Pending approval of an FDP, Contingent resources are also booked in both fields in the Jurassic intervals; Chia Gara, Naokelkan and Sargelu.

Total Swara Tika field production was approx. 40,000 bopd from 11 wells (1 well offline) as of December 2022.

### Item 5.1 Undeveloped Reserves

The following tables set forth the proved undeveloped gross reserves and the probable undeveloped gross reserves, each by product type, attributed to ShaMaran's assets for the years ended December 31, 2016, December 31 2017, December 31 2018, December 31 2019, December 31 2020, December 31 2021 and December 31 2022 in the aggregate, and before that time based on forecast prices and costs. The reserves have been classified as undeveloped due to the significant facility expenditure required to get to first oil production.

#### SUMMARY OF COMPANY UNDEVELOPED RESERVES (Forecast Prices & Costs)

Proved Undeveloped	Light/Medium Oil		Heavy Oil		Conventional Natural Gas	
	First		First		First	
	Attributed	Booked	Attributed	Booked	Attributed	Booked
	(Mbbl)	(Mbbl)	(Mbbl)	(Mbbl)	(MMcf)	(MMcf)
Prior to 2015.....	–	4,653	–	–	–	–
2016.....	–	4,653	–	2,287	–	–
2017.....	2,607	3,026	–	282	–	–
2018.....	576	3,402	–	484	–	–
2019.....	3,323	4,058	–	414	–	–
2020.....	1,932	4,929	379	957	–	–
2021.....	–	4,758	–	882	–	–
2022.....	6,462	10,575	223	1,523	–	–
<b>Probable Undeveloped</b>	<b>First</b>	<b></b>	<b>First</b>	<b></b>	<b>First</b>	<b></b>
	<b>Attributed</b>	<b>Booked</b>	<b>Attributed</b>	<b>Booked</b>	<b>Attributed</b>	<b>Booked</b>
	<b>(Mbbl)</b>	<b>(Mbbl)</b>	<b>(Mbbl)</b>	<b>(Mbbl)</b>	<b>(MMcf)</b>	<b>(MMcf)</b>
Prior to 2015.....	–	7,779	–	–	–	–
2016.....	–	7,779	–	2,394	–	–
2017.....	3,684	9,779	–	745	–	–
2018.....	1,254	9,654	–	740	–	–
2019.....	1,667	5,142	–	287	–	–
2020.....	1,795	4,666	572	1,190	–	–
2021.....	–	3,336	–	945	–	–
2022.....	5,379	7,938	168	1,071	–	–

### Item 5.2 Significant Factors or Uncertainties

McDaniel conducted its independent reserves evaluation on ShaMaran's reserves as at December 31, 2022. The process of establishing reserves requires significant judgments and decisions based on available geological, geophysical, engineering and economic data. These estimates may change substantially as additional data from ongoing development activities and production performance becomes available and as economic conditions impacting oil and gas prices and costs change.

As circumstances change and additional data become available, reserves estimates also change. Estimates made are reviewed and revised, either upward or downward, as warranted by the new information. Revisions are often required due to changes in well performance, prices, economic conditions and governmental restrictions.

Although every reasonable effort is made to ensure that reserves estimates are accurate, reserves estimation is an inferential science. As a result, the subjective decisions, new geological or production information and a changing environment may impact these estimates. Revisions to reserves estimates can arise from changes in year-end oil and gas prices, and reservoir performance.

**Item 5.3 Future Development Costs**

The following table provides information regarding the development costs deducted in the estimation of future net revenue attributable to the ShaMaran's reserves.

FUTURE DEVELOPMENT COSTS (UNDISCOUNTED)<sup>(1)(2)</sup>

	Proved Reserves \$ millions	Proved Plus Probable Reserves \$ millions	Proved Plus Probable Plus Possible Reserves \$ millions
<u>Iraq (and Total)</u>			
2023 .....	47.0	47.0	47.0
2024 .....	18.7	18.7	18.7
2025 .....	21.1	21.1	26.9
2026 .....	11.5	15.3	19.1
2027 .....	-	11.7	15.6
Thereafter .....	-	24.2	36.4
<b>Total Future Development Costs .....</b>	<b>98.2</b>	<b>137.9</b>	<b>163.7</b>

Note:

- (1) Future Development Costs shown are associated with booked reserves in the McDaniel Report and do not necessarily represent the Company's full exploration and development budget.

**Part 6 Other Oil and Gas Information**

**Item 6.1 Oil and Gas Properties and Wells**

Summary of Producing and Non-Producing Wells

	Light/Medium Oil (wells)	Heavy Oil (wells)	Conventional Natural Gas (wells)	Total
<u>Iraq (and Total)</u>				
<b>Gross Wells<sup>(1)</sup></b>				
Producing <sup>(3)</sup> .....	22.0	–	–	22.0
Non-producing <sup>(4)</sup> .....	5.0	–	–	5.0
<b>Total Gross Wells</b> .....	<b>27.0</b>	<b>–</b>	<b>–</b>	<b>27.0</b>
<b>Net Wells<sup>(2)</sup></b>				
Producing <sup>(3)</sup> .....	5.0	–	–	5.0
Non-producing <sup>(4)</sup> .....	1.3	–	–	1.3
<b>Total Net Wells</b> .....	<b>6.3</b>	<b>–</b>	<b>–</b>	<b>6.3</b>

Notes:

- (1) "Gross Wells" represent the number of wells in which the Company has a working-interest.
- (2) "Net Wells" represent the number of wells obtained by aggregating the Company's working-interests in each of its Gross Wells.
- (3) "Producing" includes wells presently producing and contributing revenue or wells presently producing that are expected to contribute revenue in the foreseeable future through the sale of presently produced oil. Light/Medium Oil wells are completed in the medium oil zones but there is a contribution from the heavy oil zones through life of field
- (4) "Non-Producing" includes wells that are presently non-producing or wells presently producing but are not expected to contribute revenue in the foreseeable future through the sale of presently produced oil. Oil wells are completed in the medium oil zones but there is a contribution from the heavy oil zones through life of field

The Company currently holds a 27.6% direct interest in the Atrush Block PSC and, since September 15 2022, an 18% direct interest in the Sarsang Block PSC. Details of the Blocks are provided below.

**Atrush Block**

***Production Facility and Pipeline***

The Atrush Field came online in July 2017, reaching peak rates in excess of 50,000 bopd during 2019 before suspension of development activities in 2020 resulted in declines thereafter. With the resumption of development activities in 2021 (facilities expansion and development well drilling), field decline is being stabilized through increased water handling capacity and delivery of additional dry oil producing wells. The 2023 WP&B continues these efforts to maintain Atrush production at a long-term plateau rate between 30,000 and 40,000 bopd.

***Development Wells***

In 2014, three development wells were drilled:

- The AT-4 well was drilled up-dip towards the undrilled crest of the structure from the AT-1 drilling site. AT-4 was tested, producing a 27-28 degree API oil at a combined rate of 9,059 bopd from two of the intervals tested.
- The CK-5 was drilled from the Chamanke-A well pad with the bottom hole location in the Adaiyah formation approximately 870 metres west southwest of the surface location, penetrating a gross vertical oil column of approximately 540 metres.
- CK-8 was also drilled from the Chamanke-A well and encountered the reservoir higher than expected some 1.4 kilometres east southeast of the surface location.

In 2015, the CK-5 and CK-8 development wells were successfully tested and completed. The CK-5 well tested 3 separate intervals at a combined rate of 7,350 bopd. The CK-8 well tested 2 intervals at a combined rate of 8,400 bopd.

The completions for both the AT-4 and the AT-2 well were installed and successfully tested in the second and third quarters of 2016 respectively.

The CK-7 well was spudded in Q4 2017 and the reservoir section was encountered 114 metres shallower than prognosis. In March and April 2018 three intervals were successfully tested: the Mus formation tested 20.1 degree API oil at a rate of 0.8 Mbopd, with a final productivity of 13 stb/d/psi; the Alan formation tested 27.1 degree API oil at a rate of 0.9 Mbopd, with

a final productivity of 6 stb/d/psi; and the main Lower Sargelu formation tested 26.4 degree API oil at 1.0 Mbopd at a drawdown of only 2 psi, yielding a final productivity of 446 stb/d/psi. No water was produced at the end of the test.

CK-7 is now completed over the Alan and Lower Sargelu formation with an electric submersible pump. During the final completion test the well produced 7,040 bopd at only 14 psi drawdown.

The CK-10 well was spudded on May 15, 2018 was drilled to a total depth of 1,985 metres, which was reached on time and within budget on June 16, 2018. The reservoir section was encountered some 60 metres shallow to prognosis. The well flow tested approximately 4.4 Mbopd at a low drawdown, yielding a final productivity index of 313 stb/d/psi. The well is now completed over the Lower Sargelu formation.

The Chiya Khere-9 ("CK-9") water disposal well was spudded on 20<sup>th</sup> July 2018 and was drilled to a total depth of 3015 metres, which was reached on time and within budget on 18<sup>th</sup> October 2018. The well was injection tested between 7<sup>th</sup> and 20<sup>th</sup> November, achieving the targeted daily injection volume of 10,000bbl/d.

The 2019 development campaign entailed drilling CK-11, CK 12, CK-13 and CK-15:

- The CK-11 well targeted the upper and lower Sargelu which produced at 8,200 bopd with an estimated maximum reservoir rate of 8,550 bopd.
- The CK-12 well targeted the Mus formation; however, it initially tested with a lower than expected reservoir productivity index, and subsequently only reached initial rates of approximately 600bopd.
- The CK-13 well targeted the Naokelekan and the upper Sargelu and produced at 5,500bopd with an estimated maximum reservoir rate of 8,160bopd.
- CK-15 targeted the upper and lower Sargelu and produced at rates of 5,000bopd with the potential to exceed 7,000bopd.

Due to the COVID-19 pandemic, the 2020 Work Plan was revised, suspending the ongoing drilling and completion campaign as well as all non-critical projects.

During 2021, as measures imposed to mitigate the operational impacts of the COVID-19 pandemic were proven effective, suspended capital programs were restarted. The CK-12 well was worked over in March/April to recomplete over the Upper Jurassic reservoir and was successful in increasing rate from ~500bopd to over 4,500 bopd. The CK-17 well was then drilled from Pad A targeting the Naokelekan and Upper Sargelu reservoirs to the South East and brought online in June 2021.

The CK-16 well was spudded from Pag G in March 2022, drilled vertically through the Triassic reservoirs and TD'd in the Geli Khane interval at 3293mMD in May 2022. Planned as a water disposal well, the well was tested over the Kurra Chine C, Kurra Chine B and Kurra Chine A zones for injectivity. During the KCC testing, the well flowed hydrocarbons to surface indicating development potential further updip on the Triassic structures. The KCC was isolated and the well was eventually completed for water disposal over the KCA where high injectivities were measured during testing.

The CK-18 well was spudded from pad G in July 2022, drilled and landed with a 1000m horizontal drain section in the Mus in September 2022. The well was completed to allow selective production from the horizontal section, however losses during the drilling and stimulation phases established a connection to the aquifer and the well produced only trace volumes of hydrocarbons during the flowback phase. It is anticipated that the CK-18 well will be side-tracked into a dry oil zone during 2023.

As of December 22, The Artush field was producing 33,000 bopd from 11 wells with 4 wells offline.

Plans for 2023 include:

- Drilling and completion of one new upper Jurassic infill production well
- Drilling and completion of one new upper Jurassic front limb production well
- Drilling and completion of one new lower Jurassic production well
- Drilling of Triassic appraisal well

### ***Location and Operational History***

The Atrush Block is located approximately 85 kilometres northwest of Erbil, the capital of Kurdistan, and has a surface area of 269 square kilometres. Oil has been proven in Jurassic fractured carbonates in the Chiya Khere structure and is estimated to contain a low estimate of 1.5 billion barrels, a best estimate of 2.0 billion barrels and a high estimate of 2.6 billion barrels

of discovered oil in place. The structure is expressed at surface by the Chiya Khere mountain which runs east-west for approximately 25 kilometres with an approximate width of 3.5 kilometres.

In the year 2008 GEP acquired 143 kilometres of 2D seismic data covering the Atrush Block. In April 2011 the Atrush structure was confirmed as an oil discovery by the Atrush-1 ("AT-1") exploration well. This was followed by the AT-2 appraisal well in July 2012. 3D seismic covering the entire Atrush Block was acquired between July 2011 and August 2012 and a Declaration of Commerciality made on November 7, 2012. The eastern part of the field was successfully appraised in June 2013 by the Atrush-3 ("AT-3") well.

The AT-2 appraisal well was drilled to a depth of 1,750 metres, below the base of Jurassic reservoir section, which was reached in July 2012. The Company announced on September 13, 2012 the results of the comprehensive AT-2 well testing program which confirmed through three separate DSTs the AT-1 Jurassic oil discovery. Individual test rates for the three Jurassic DSTs, constrained by surface testing equipment, were over 10,000 bopd (approximately 27.0 degree API) and confirmed the significant potential for production from the highly fractured Jurassic reservoir. An additional two DSTs conducted in two deeper Jurassic formations confirmed them to be oil bearing and productive, with test rates limited by the gas lift test method. GEP submitted in October 2012 to the Ministry of Natural Resources ("MNR") of Kurdistan an AT-2 Discovery Report giving notice of the additional discovery formations in the lower part of the Jurassic.

On November 7, 2012 TAQA, GEP and MOKDV, collectively being the Contractor under the Atrush PSC at that time, submitted to the Atrush Block Management Committee a Declaration of Commercial Discovery ("DCD") with effect from November 7, 2012 in accordance with the terms of the Atrush PSC. The DCD was submitted together with an Appraisal Report covering the Atrush field.

The AT-3 eastern area appraisal well was spudded on March 25, 2013 and the well was drilled to a measured depth of 1,806 metres which was reached on June 23, 2013. The well encountered an estimated oil column of 286 metres in the Jurassic reservoir and successfully extended the Atrush accumulation 6.5 kilometres further to the east, while proving producible oil 180 metres deeper than previous wells thereby reducing the uncertainty on the Oil Water Contact/Free Water Level. AT-3 was suspended pending the planned re-entry and successful retest in January 2015.

In June 2013 an interference test was conducted between AT-1 and AT-2. The wells, which are 3.1 kilometres apart, confirmed excellent pressure communication and multi-Darcy horizontal permeability through the fracture system in the Jurassic reservoir. This reservoir connectivity was further confirmed, as announced by the Company in February 2015, by pressure communication between the tested Chiya Khere-6 ("CK-6") and AT-3 wells and the AT-2 well, over a distance of 6.5 kilometres, demonstrating that the eastern appraisal area is in pressure communication with the Phase 1 development area.

The Atrush Block Field Development Plan ("FDP") was submitted for approval to the KRG on May 6, 2013, in accordance with the terms of the Atrush PSC within 180 days after the DCD made on November 7, 2012. The FDP was presented in detail to the MNR in June 2013. Phase 1 of the FDP was duly approved with an effective date October 1, 2013.

On October 7, 2013 the Company announced that Phase 1 of the FDP for the Atrush Block had been approved by the KRG. The initial 20-year Development Phase (as defined in the Atrush PSC) commenced on October 1, 2013.

Following submission of the FDP the AT-1 discovery well was determined to be unsuitable for long-term production and was plugged and abandoned in October 2013.

In 2014 CK-6, an eastern area appraisal well, was drilled from the Chamanke-C well pad and reached the Jurassic reservoir approximately 139 metres structurally higher than the nearby AT-3 well, approximately 600 metres South-southeast of the surface location. Three well tests were conducted, showing excellent reservoir quality and demonstrating producible oil as deep as -460m AMSL, nearly 200m deeper than the equivalent interval that successfully tested the higher viscosity oil in the AT-2 well.

Also in 2015, the AT-3 eastern appraisal well was re-entered and tested at a maximum oil rate of 4,900 bopd comingled from two intervals.

The Atrush field facilities were completed and commissioned in the second quarter of 2017. Production started up on the 3<sup>rd</sup> of July, taking production from AT-2, AT-4, CK-5 and CK-8 and ramping up to an average production of 26.3 Mbopd of 25.1 degree API for the month of December 2017.

Production for the first two months of 2018 remained stable at an average daily production of 26.8 Mbopd and 24.0 Mbopd for the months of January and February respectively. In March 2018, production dropped to approximately 20.3 Mbopd due to a partial blockage of a Production Facility heat exchanger by sediments. In early April 2018 production was temporarily



suspended to address the partial blockage of the heat exchanger. The sediments were successfully removed from the heat exchanger during this plant shut down.

Analysis of the removed sediments indicate high concentrations of salts lost to the formation during drilling operations. These materials were flowed back into the production facilities with the produced dry oil where they caused capacity restrictions. To target these materials, fresh water was introduced at the CK-5 wellhead from June 2018 onwards. The salt materials are now diluted into the fresh water, which is then separated and disposed of during normal processing operations.

During the third quarter of 2018, daily production was constrained by exceptionally high export pipeline downtime during the month of August (over 6 days) as well as salt fill in the Production Facilities stripper column. The stripper column fill became apparent once additional well capacity from the Chiya Khere-7 ("CK-7") and Chiya Khere-10 ("CK-10") wells enabled Production Facility rates to exceed 26.0 Mbopd. The stripper column was flushed during a two-day shutdown in late September which successfully removed all salt restrictions and enabled the high stabilized rates throughout the fourth quarter.

During the fourth quarter 2018, well rates were steadily increased to test and evaluate the limits of the Production Facility. By end November 2018 and through early December 2018, several days with daily rates over 30.0 Mbopd were recorded until the onset of failure of the CK-10 Electric Submersible Pump (ESP), which reduced the available well capacity and therefore daily production rates. The CK-10 well was brought back on production late January 2019 after a successful work-over.

The AT-3 well was re-completed as a Heavy Oil production well during December 2018. An extended well test was run on AT-3 during 2019 to evaluate the productivity and characteristics of the heavy (13 degrees API) oil within the Lower Sargelu and Naokelekan. This testing was inconclusive, and a further testing is currently being planned.

The 2019 development campaign entailed drilling CK-11, CK 12, CK-13 and CK-15. The CK-11 well targeted the upper and lower Sargelu which produced at 8,200 bopd. The CK-13 well targeted the Naokelekan and the upper Sargelu and produced at 5,500bopd. CK-15 targeted the upper and lower Sargelu and produced at rates of 5,000bopd. The CK-12 well targeted the Mus formation; however, it initially tested with a lower-than-expected reservoir productivity index, and subsequently only reached initial rates of approximately 600bopd.

Due to the COVID-19 pandemic, the 2020 Work Plan was revised, suspending the ongoing drilling and completion campaign as well as all non-critical projects.

During 2021, as measures imposed to mitigate the operational impacts of the COVID-19 pandemic were proven effective, suspended capital programs were restarted. The CK-17 well was drilled from Pad A targeting the Naokelekan and Upper Sargelu reservoirs to the Southeast and brought online in June 2021.

Continuation of drilling program in 2022 delivered the CK-16 water disposal well and the CK-18 production well.

Reservoir surveillance and modelling work during 2021 and 2022 indicated positive reservoir performance, with the delayed onset of water production and slow gas cap growth justifying increases in recovery factor assumptions. The resumption of development activities in 2021 will stabilize production declines observed during since 2020 and maintain Atrush production at a long-term plateau rate between 30,000 and 40,000 bopd.

## **Sarsang Block**

### ***Production Facility and Pipeline***

The Swara Tika fields have been developed using Early Well Testing facilities (“EWT”) with export via road tanker to achieve early production and de-risk the subsurface uncertainties. The combined well, processing and export capacity before 2022 was approx. 30,000 bopd.

During 2022 Q3, the Sarsang permanent production facility (“ST PPF”) processing and export pipeline was brought online. This increased field processing capacity to from ~30,000 bopd to over 50,000 bopd, provides oil storage of up to 160,000 stb (four 40,000 stb storage tanks) and allows for export of production via pipeline or road tanker.

During 2023, further ST PPF systems will be commissioned to support increase of Sarsang field rates up to a 50,000 bopd plateau.

### ***Development Wells***

Pre 2022 wells include:

- EST-1 Facility; EST-1, EST-A1W wells
- ST-1 (Pad B) Facility; ST-1Z, ST-B1A & STB2Y wells
- ST-2 (Pad A) Facility; ST-2, ST-4Z & ST-A1 wells (ST-A1 not producing at end 2022 due to high BS&W)
- 25K facility (Pad B); ST-B3, ST-B4, ST-B5, ST-B6 & ST-B7 wells

A batch drilling campaign comprising five wells (ST-B3, ST-B4, ST-B5, ST-B6 & ST-B7) was started at Pad ST-B during 2021 to provide well capacity to the permanent production facility. This campaign continued over into 2022 with all wells coming online with the permanent facility startup on September 22<sup>nd</sup> 2022.

During 2023, further development wells will be deployed at the ST-A, ST-B and ST-C pad locations to support increase of Sarsang field rates up to a 50,000 bopd plateau.

### ***Location and Operational History***

The Sarsang Block is located along the northern border of the Atrush Block approximately 85 kilometers northwest of Erbil, the capital of the Kurdish administered part of Iraq. Spanning 420 square kilometers (“km<sup>2</sup>”), the Block is currently operated by HKN Energy and comprises twelve producing wells across two fields: Swara Tika and East Swara Tika (11 online and 1 offline as of December 2022).

The Sarsang PSC was originally signed in 2007 between HKN Energy and the KRG. In October 2010, Marathon acquired the KRGs interest in the Sarsang Block. In April 2014, HKN Energy assigned 30 percent of its interest to Maersk Oil Kurdistan A/S (“Maersk Kurdistan”) giving it an 18 percent participating interest (22 percent paying interest). This became known as TEPKRI following the acquisition of Maersk by Total Energies S.E. On July 12, 2021, ShaMaran announced their entry into the Sarsang Production Sharing Contract (“Sarsang PSC”) with the acquisition of TEPKRI Sarsang A/S, a subsidiary of Total Energies S.E., which held an 18 percent non-operated participating interest in the Sarsang PSC. HKN Energy now holds a 62 percent interest and operatorship of the Sarsang Block and ShaMaran holds an 18 percent working interest with the remaining interest held by the Kurdistan Regional Government of Iraq (“KRG”).

In 2011, the Main Swara Tika discovery was made with the exploration well Swara Tika-1, which encountered multiple hydrocarbon-bearing zones and ultimately tested light oil from all three reservoirs of the Kurra Chine Formation. Swara-Tika 1 was subsequently completed in the Kurra Chine C Reservoir. In late 2012, the Swara Tika-2 well was drilled and successfully tested all three reservoirs of the Kurra Chine Formation, confirming the results of the initial exploration well. This well also produced 1,360 barrels of 12–14-degree API crude oil from the Jurassic Naokelekan-Sargelu over 13 hours. The well was subsequently completed in the Kurra Chine B Reservoir. A pressure interference test was performed between the two wells in October and November 2012 to investigate the pressure communication between the two wells through the Kurra Chine C Reservoir and investigate any possible cross-communication between the Kurra Chine B and Kurra Chine C reservoirs. The test confirmed communication of the two wells but no cross communication between the Kurra Chine B and Kurra Chine C reservoirs. Commercial production from the Main Swara Tika Field began in 2014 and production was approx. 29,000 bopd as of December 2021 from six wells.

In alignment with the Swara Tika Field Development Plan (“ST FDP”) Five additional development wells (ST-B3, ST-B4, ST-B5, ST-B6 & ST-B7) were drilled and completed over 2021/2022, coming online on September 22<sup>nd</sup> 2022 to produce in to the newly constructed and commissioned Swara Tika permanent production facility (“ST PPF”). The ST-PPF has a processing capacity of 25,000 bopd, with 160,000 stb of storage capacity (four 40,000stb floating roof storage tanks) and ability to export up to 100,000stb/d via export pipeline tied into the existing Atrush feeder pipeline. The wells and facility came online at initial rates of ~18,000bopd. Total Swara Tika field production was approx. 40,000 bopd from 11 wells (1 well offline) as of December 2022.

During 2022, the Sarsang operator, HKN, expanded the scope of ST FDP from 8 to 17 additional development wells, incremental to the existing 12 at year end 2022 (11 online and 1 offline as of December 2022).

A second discovery, East Swara Tika, located approximately 10 kilometers from the Main Swara Tika, was subsequently made in 2014 through the drilling of the ESWT-1 well and its sidetracks. ESTW-1Z successfully tested light crude oil from the Kurra Chine B and Kurra Chine C reservoirs. This well also tested 10-degree API crude from the Jurassic Sargelu at 580 bopd with an ESP. ESTW-1Y tested crude oil from the Kurra Chine A and Kurra Chine B reservoirs although the rates for the Kurra Chine B were much lower and intermittent. Commercial production from the East Swara Tika Field began in 2018 and there were two wells producing over 2,000 bopd as of December 2022.

The EST FDP calls for production of 5,000 bopd from the Triassic Kurra Chine A Reservoir and for additional seismic data and drilling to further refine development of East Swara Tika Field. The 3D seismic program for East Swara Tika has been delayed until 2022 due to access issues in East Swara Tika and the western part of Swara Tika.

**Item 6.2 Properties With No Attributed Reserves**

The Company held no properties through the year ended December 31, 2022 which have no attributed reserves.

**Item 6.3 Forward Contracts**

The Company has not entered into any forward contracts.

**Item 6.4 Additional Information Concerning Abandonment and Reclamation Costs**

Properties	Abandonment and Reclamation Costs	
	Undiscounted \$000	Discounted @ 10% \$000
Atrush Block	16.023	12.026
Sarsang Block	6.053	3.794
Kurdistan Region of Iraq (including wells and production facilities)	22.076	15.820

The table above shows the Company's 27.6% Atrush and 18.0% Sarsang participating interests at December 31, 2022 in the estimated well and facilities abandonment and reclamation costs (not including any "credits" for equipment salvage). Abandonment and reclamation costs have been estimated using industry practice and are in line with estimates provided in the Atrush Field Development Plan.

Future net revenue as prepared by McDaniel and as disclosed in item 2.1, is based on McDaniel's estimate of well abandonment timing and cost, excluding facilities and site reclamation costs. According to the Atrush Production Sharing Contract, all abandonment and site reclamation costs are cost recoverable. Should there not be sufficient cost recovery to cover abandonment and site reclamation costs, which is likely to be the case at end of field life when final abandonment occurs, the Government will pay any remaining balance. Therefore final facilities abandonment and site reclamation costs do not impact the Company's future net revenue.

**Item 6.5 Tax Horizon**

The Company has no foreseeable material tax liabilities associated with its oil and gas operations.

## Item 6.6 Costs Incurred

The costs included in the following represent the Company's share of the total costs incurred.

Properties in Kurdistan	Costs incurred in the year ended Dec 31, 2021			
	Acquisition Costs \$ millions	Exploration Costs \$ millions	Development Costs \$ millions	Other Costs \$ millions
Atrush Block	0	0.0	22.0	0.0
Sarsang Block	0	0.0	31.3	0.0
<b>TOTAL</b>	<b>0.0</b>	<b>0.0</b>	<b>53.3</b>	<b>0.0</b>

## Item 6.7 Exploration and Development Activities

### Summary of Exploration and Development wells drilled in 2022

Iraq (and Total)	Exploration wells (wells)	Stratigraphic Test wells (wells)	Production wells (wells)	Service wells (wells)	Total (wells)
Atrush Gross Wells <sup>(1)</sup>			1.0	1.0	
Sarsang Gross Wells <sup>(1)</sup>			4.0	0.0	
<b>Total Gross Wells</b> .....	<b>–</b>	<b>–</b>	<b>5.0</b>	<b>1.0</b>	<b>0</b>
Atrush Net Wells <sup>(2)</sup>			0.3	0.3	
Sarsang Net Wells <sup>(2)</sup>			0.7	0.0	
<b>Total Net Wells</b> .....	<b>–</b>	<b>–</b>	<b>1.0</b>	<b>0.3</b>	<b>0</b>

Notes:

(1) "Gross Wells" represent the number of wells in which the Company has a working-interest.

(2) "Net Wells" represent the number of wells obtained by aggregating the Company's working-interests in each of its Gross Wells.

### Atrush Block

#### Production Facility and Pipeline

During 2022, the Atrush permanent production facility processing capacity was increased with the addition of water processing infrastructure. This additional infrastructure will contribute to increase the total produced water capacity to 20,000 bwpd from ~8.500bwpd in 2021.

#### Development Wells

Continuation of drilling program delivered the CK-16 water disposal well and the CK-18 production well in 2022. During the testing of the CK-16 Triassic Kurra Chine C reservoir, the well flowed hydrocarbons to surface indicating development potential further up dip on the Triassic structures. The CK-18 well produced only trace hydrocarbons during the initial flowback and is currently shut-in pending sidetrack in 2023.

### Sarsang Block

#### Production Facility and Pipeline

During 2022 Q3.2022, the Sarsang permanent production facility processing and export pipeline was brought online. This increased field processing capacity to from ~30,000 bopd to over 50,000bopd, provides oil storage of up to 160,000stb (four 40,000stb storage tanks) and allows for export of production via pipeline or road tanker.

#### Development Wells

A batch drilling campaign comprising five wells (ST-B3, ST-B4, ST-B5, ST-B6 & ST-B7) was started at Pad ST-B during 2021 to provide well capacity to the permanent production facility. This campaign continued over into 2022 with all wells coming online with the permanent facility startup on September 22<sup>nd</sup> 2022.

## Item 6.8 Production Estimates

At Atrush, first oil was produced on July 3<sup>rd</sup> 2017. The operator reported a total exported field production of 13.098 MMbbl for the year 2022 or a company share of 3.615 MMbbl.

At Sarsang, first oil was produced on March 13<sup>th</sup> 2013. The operator reported a total exported field production of 12.343 MMbbl for the year 2021 or a company share of 0.657 MMbbl from acquisition date 15<sup>th</sup> September.

The Company forecast for 2023 is:

### SUMMARY OF COMPANY GROSS PRODUCTION ESTIMATES<sup>(1),(2)</sup> (Forecast Prices & Costs)

Iraq (and Total)	Light and Medium Oil (Mbbl) Year 2023	Heavy Oil (Mbbl) Year 2023	Conventional Natural Gas (MMcf) Year 2023
<b>Proved</b>			
Atrush	2,388.6	828.6	-
Sarsang	2,903.6	-	-
Total	5,292.2	828.6	-
<b>Probable</b>			
Atrush	275.8	115.8	-
Sarsang	108.5	-	-
Total	384.4	115.8	-
<b>Possible</b>			
Atrush	54.8	82.9	-
Sarsang	339.9	-	-
Total	394.7	82.9	-

Notes:

(1) Estimates are calculated based on the McDaniel Report.

(2) Represents estimated production from January 1, 2023 to December 31, 2023

## Item 6.9 Production History

### Atrush Block

- Between July 3<sup>rd</sup> and December 31<sup>st</sup> 2017 the Atrush field operator TAQA reported sales of 3,355,462 bbl of medium gravity oil from the Atrush field.
- For the full year 2018 the sales from the Atrush field reported by TAQA was 8,071,703 bbl of oil.
- In 2019 the exported production from the Atrush field reported by TAQA was 11,813,366 bbl of oil.
- In 2020 the exported production from the Atrush field reported by TAQA was 16,512,640 bbl of oil.
- In 2021, the exported production from the Atrush field reported by TAQA was 14,080,346 bbl of oil.
- In 2022, the exported production from the Atrush field reported by TAQA was 13,097,703 bbl of oil.

### Sarsang Block

- In 2022, the exported production from the Sarsang field reported by HKN was 12,342,857 bbl of oil.

## Appendix

### SUMMARY OF CONTINGENT RESOURCES

AS OF DECEMBER 31, 2022

McDaniel has prepared for ShaMaran an assessment of the crude oil and conventional natural gas contingent resources as of December 31, 2022.

Contingent resources are those quantities of petroleum estimated, as of a given date, to be potentially recoverable from known accumulations using established technology or technology under development, but which are not currently considered to be commercially recoverable due to one or more contingencies. Contingencies may include factors such as economic, legal, environmental, political, and regulatory matters, or a lack of markets. It is also appropriate to classify as contingent resources the estimated discovered recoverable quantities associated with a project in the early evaluation stage. Contingent resources are further classified in accordance with the level of certainty associated with the estimates and may be sub-classified based on project maturity and/or characterized by their economic status.

The resource estimates have been prepared in accordance with standards set out in the Canadian National Instrument NI 51-101 and the COGE Handbook.

The Atrush and Sarsang Blocks (see descriptions from page 9 onwards ) crude oil and conventional natural gas contingent resources as of December 31, 2022 were estimated to be as follows:

Contingent Resources <sup>(2)(4)(5)</sup>	Light & Medium Oil (Mbbbl) <sup>(3)</sup>			Heavy Oil (Mbbbl) <sup>(3)</sup>			Conventional Natural Gas (MMcf)		
	Gross	Company Interest		Gross	Company Interest		Gross	Company Interest	
	100%	Gross <sup>(1)</sup>	Net <sup>(6)</sup>	100%	Gross <sup>(1)</sup>	Net <sup>(6)</sup>	100%	Gross <sup>(1)</sup>	Net <sup>(6)</sup>
Low Estimate (1C) (Development On Hold)	12,812	2,799	N/A	12,189	3,364	N/A			
Low Estimate (1C) (Development Not Viable)				42,149	11,633	N/A			N/A
Best Estimate (2C) (Development On Hold)	49,360	9,486	N/A	22,692	6,263	N/A			
Best Estimate (2C) (Development Not Viable)				93,453	25,793	N/A			N/A
High Estimate (3C) (Development On Hold)	201,084	36,895	N/A	75,840	20,932	N/A			
High Estimate (3C) (Development Not Viable)				120,795	33,339	N/A			N/A
Riskied Best Estimate <sup>(4)</sup>	30,242	5,864	N/A	25,230	6,963	N/A			N/A

**Notes:**

- (1) Company gross interest resources are based on a 27.6 percent working interest share of the property gross resources of Atrush, and 18.0 percent in Sarsang.
- (2) There is no certainty that it will be commercially viable to produce any portion of the contingent resources.
- (3) The Atrush Field contains crude oil of variable density. Fluid type is classified according to COGEH: Light/Medium Oil is based on a density less than 920 kg/m<sup>3</sup> and Heavy Oil is between 920 and 1000 kg/m<sup>3</sup>.
- (4) The "Riskied Best Estimate" contingent resources account for the chance of development, which is defined as the probability of a project being commercially viable. Quantifying the chance of development requires consideration of both economic contingencies and other contingencies, such as legal, regulatory, market access, political, social license, internal and external approvals and commitment to project finance and development timing. As many of these factors are extremely difficult to quantify, the chance of development is uncertain and must be used with caution. The chance of development was estimated to be 70 percent for the Light/Medium and Heavy Crude Oil Development On Hold contingent resources and 10 percent for the Heavy Oil Crude Oil Development Not Viable contingent resources.
- (5) The contingent resources are sub-classified as "development unclarified" with an "undetermined" economic status.
- (6) Company net interest resources are not available as McDaniel did not undertake a valuation of the resources.

The resources included in the table above have been sub-classified into development on hold for additional drilling beyond the current commitment and development not viable for the heavy oil resources where there are currently no plans to further appraise the extended heavy oil development and which would require a significant increase in the oil price to warrant this activity as well as for the natural gas development.

It is anticipated that the Atrush Field Development Plan addendum work, which was put on hold in early 2020 with the Covid-19 pandemic oil price uncertainty, will now be resumed due to the stabilization of oil price at +\$100/bbl levels. The addendum will aim to define all further drilling and completion requirements required to mature heavy oil contingent resource volumes.

**SCHEDULE B**

FORM 51-101 F2



February 15, 2023

**ShaMaran Petroleum Corp.**  
25<sup>th</sup> Floor, 666 Burrard Street  
Vancouver, British Columbia  
Canada V6C 2X8

Attention: The Board of Directors of ShaMaran Petroleum Corp.

Re: **Form 51-101F2**  
**Report on Reserves and Contingent Resources Data**  
**by Independent Qualified Reserves Evaluator**  
**of ShaMaran Petroleum Corp. (the “Company”)**

To the Board of Directors of ShaMaran Petroleum Corp. (the “Company”):

1. We have evaluated the Company’s reserves and contingent resources data as at December 31, 2022. The reserves data are estimates of proved reserves and probable reserves and related future net revenue as at December 31, 2022 estimated using forecast prices and costs. The contingent resources data are risked estimates of volume of contingent resources as at December 31, 2022.
2. The reserves and contingent resources data are the responsibility of the Company’s management. Our responsibility is to express an opinion on the reserves and contingent resources data based on our evaluation.
3. We carried out our evaluation in accordance with standards set out in the Canadian Oil and Gas Evaluation Handbook as amended from time to time (the “COGE Handbook”) maintained by the Society of Petroleum Evaluation Engineers (Calgary Chapter).
4. Those standards require that we plan and perform an evaluation to obtain reasonable assurance as to whether the reserves and contingent resources data are free of material misstatement. An evaluation also includes assessing whether the reserves and contingent resources data are in accordance with principles and definitions presented in the COGE Handbook.

5. The following table shows the net present value of future net revenue (before deduction of income taxes) attributed to proved + probable reserves, estimated using forecast prices and costs and calculated using a discount rate of 10 percent, included in the reserves data of the Company evaluated for the year ended December 31, 2022, and identifies the respective portions thereof that we have evaluated and reported on to the Company's Board of Directors:

Independent Qualified Reserves Evaluator	Effective Date of Evaluation Report	Location of Reserves	Net Present Value of Future Net Revenue \$M US (before income taxes, 10% discount rate)			
			Audited	Evaluated	Reviewed	Total
McDaniel	Dec 31, 2022	Iraq	-	588,469		588,469

6. The following table sets forth the risked volume of contingent resources included in the Company's statement prepared in accordance with Revised Form 51-101F1 and identifies the respective portions of the contingent resources data that we have evaluated and reported on to the Company's Board of Directors:

Classification	Independent Qualified Reserves Evaluator	Effective Date of Evaluation Report	Location of Resources Other than Reserves	Risked Volume
Contingent Resources - Development On Hold	McDaniel	Dec 31, 2022	Iraq	5,864 Mbbl Light and Medium Oil; 4,384 Mbbl Heavy Oil
Contingent Resources - Development Not Viable	McDaniel	Dec 31, 2022	Iraq	2,579 Mbbl Heavy Oil

7. In our opinion, the reserves and contingent resources data respectively evaluated by us have, in all material respects, been determined and are in accordance with the COGE Handbook, consistently applied. We express no opinion on the reserves data and contingent resources data that we reviewed but did not audit or evaluate.
8. We have no responsibility to update our report referred to in paragraphs 5 and 6 for events and circumstances occurring after the effective date of our report.
9. Because the reserves and contingent resources data are based on judgments regarding future events, actual results will vary and the variations may be material.

Executed as to our report referred to above:

**MCDANIEL & ASSOCIATES CONSULTANTS LTD.**



Cameron T. Boulton, P. Eng.  
Executive Vice President

Calgary, Alberta, Canada  
February 15, 2023

**SCHEDULE C**

FORM 51-101 F3

## Form 51-101 F3

(This is the form referred to in item 3 of section 2.1 of National Instrument 51-101 *Standards of Disclosure for Oil and Gas Activities* ("NI 51-101"). Terms to which a meaning is ascribed in NI 51-101 have the same meaning in this form.<sup>1</sup>)

### Report of Management and Directors on Reserves Data and Other Information

Management of **Shamaran Petroleum Corp.** (the "Company") is responsible for the preparation and disclosure of information with respect to the Company's oil and gas activities in accordance with securities regulatory requirements. This information includes reserves data, which are estimates of proved reserves and probable reserves and related future net revenue as at December 31, 2022, estimated using forecast prices and costs, and resources data which are estimates of contingent resources of the Company as at December 31, 2022.

An independent qualified reserves evaluator has evaluated the Company's reserves and contingent resources data. The reports of the independent qualified reserves evaluator are attached hereto as Schedule "A" (Form 51-101 F2).

The Reserves Committee of the board of directors of the Company has:

- (a) reviewed the Company's procedures for providing information to the independent qualified reserves evaluator.
- (b) met with the independent qualified reserves evaluator to determine whether any restrictions affected the ability of the independent qualified reserves evaluator to report without reservation; and
- (c) reviewed the reserves and contingent resources data with management and the independent qualified reserves evaluator.

The Reserves Committee of the board of directors has reviewed the Company's procedures for assembling and reporting other information associated with oil and gas activities and has reviewed that information with management of the Company. The Board of Directors has, on the recommendation of the Reserves Committee, approved:

- (a) the content and filing with securities regulatory authorities of Form 51-101 F1;
- (b) the filing of Form 51-101 F2 which is the report of the independent qualified reserves evaluator on the reserves data, and is included as Schedule "A" to this Form 51-101F3; and
- (c) the content and filing of this report.

Because the reserves and contingent resources data are based on judgments regarding future events, actual results will vary and the variations may be material. However, any variations should be consistent with the fact that reserves and contingent resources are categorized according to the probability of their recovery.

**Date: February 15<sup>th</sup>, 2023**

/s/Adel Chaouch  
Adel Chaouch, President and Chief Executive Officer

/s/ Chris Bruijnzeels  
Chris Bruijnzeels, Director

/s/Alex Lengyel  
Alex Lengyel, Chief Commercial Officer & Corporate Secretary

/s/William Lundin  
William Lundin, Director

<sup>1</sup> For the convenience of readers, CSA Staff Notice 51-324 *Glossary to NI 51-101 Standards of Disclosure for Oil and Gas Activities* sets out the meanings of terms that are printed in italics in sections 1 and 2 of this Form or in NI 51-101, Form 51-101F1, Form 51-101F2 or Companion Policy 51-101CP.

**SCHEDULE A**

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**SCHEDULE D**

FORM 51-101 F4

**Revised Form 51-101 F4**

**Notice of  
Filing of 51-101 F1 Information**

On February 15<sup>th</sup>, 2023 ShaMaran Petroleum Corp. (the “Company”) filed its reports under section 2.1 of National Instrument 51-101, which can be found under the Company’s profile on SEDAR at [www.sedar.com](http://www.sedar.com).

## SCHEDULE E

### AUDIT COMMITTEE CHARTER

(As adopted by the Board of Directors on April 20, 2010, amended on March 9, 2017 and reviewed on March 7, 2019 and on March 3, 2020 and further amended on May 5, 2021)

#### I. MANDATE

The Audit Committee (the “**Committee**”) of the Board of Directors (the “**Board**”) of ShaMaran Petroleum Corp. (the “**Corporation**”) shall assist the Board in fulfilling its financial oversight responsibilities. The Committee’s primary duties and responsibilities under this mandate are to serve as an independent and objective party to monitor:

1. The quality and integrity of the Corporation’s financial statements and other financial information;
2. The compliance of such financial statements and financial information with legal and regulatory requirements;
3. The qualifications and independence of the Corporation’s independent external auditor (the “**Auditor**”); and
4. The performance of the Corporation’s internal accounting procedures and Auditor.

#### II. STRUCTURE AND OPERATIONS

##### A. Composition

The Committee will be comprised of a minimum of three members.

##### B. Qualifications

Each member of the Committee must be a member of the Board.

A majority of the members of the Committee must, with the exception of certain qualifying exemptions, be “independent” (as defined in Sec. 1.4 of National Instrument 52-110 (Audit Committees)) (“NI 52-110”).

Each member of the Committee must be “financially literate” (as defined in NI 52-110) or must become financially literate within a reasonable period of time after his or her appointment to the Committee.

Each member of the Committee must not be executive officers, employees or control persons of the Corporation or of an affiliate of the Corporation (as defined in NI-52-110).

##### C. Appointment and Removal

In accordance with the By-laws of the Corporation, the members of the Committee shall be appointed by the Board and shall serve until such member’s successor is duly elected and qualified or until such member’s earlier resignation or removal. Any member of the Committee may be removed, with or without cause, by a majority vote of the Board.

##### D. Chair

Unless the Board shall select a Chair, the members of the Committee shall designate a Chair by the majority vote of all of the members of the Committee. The Chair shall call, set the agendas for and chair all meetings of the Committee.

##### E. Sub-Committees

The Committee may form and delegate authority to subcommittees consisting of one or more members when appropriate, including the authority to grant pre-approvals of audit and permitted non-audit services, provided that a decision of such subcommittee to grant a pre- approval shall be presented to the full Committee at its next scheduled meeting.



F. Meetings

The Committee shall meet at least four times in each fiscal year, or more frequently as circumstances dictate. The Auditor shall be given reasonable notice of, and be entitled to attend and speak at, each meeting of the Committee concerning the Corporation's annual and interim financial statements and, if the Committee feels it is necessary or appropriate, at every other meeting. On request by the Auditor, the Chair shall call a meeting of the Committee to consider any matter that the Auditor believes should be brought to the attention of the Committee, the Board or the shareholders of the Corporation.

At each meeting, a quorum shall consist of a majority of members that are not executive officers, employees or control persons of the Corporation or of an affiliate of the Corporation.

As part of its goal to foster open communication, the Committee may periodically meet separately with each of management and the Auditor to discuss any matters that the Committee or any of these groups believes would be appropriate to discuss privately. In addition, the Committee should meet with the Auditor and management annually to review the Corporation's financial statements in a manner consistent with Section III of this Charter.

The Committee may invite to its meetings any director, any manager of the Corporation, and any other person whom it deems appropriate to consult in order to carry out its responsibilities. The Committee may also exclude from its meetings any person it deems appropriate to exclude in order to carry out its responsibilities.

**III. DUTIES**

A. Introduction

The following functions shall be the common recurring duties of the Committee in carrying out its purposes outlined in Section I of this Charter. These duties should serve as a guide with the understanding that the Committee may fulfill additional duties and adopt additional policies and procedures as may be appropriate in light of changing business, legislative, regulatory or other conditions. The Committee shall also carry out any other responsibilities and duties delegated to it by the Board from time to time related to the purposes of the Committee outlined in Section I of this Charter.

The Committee, in discharging its oversight role, is empowered to study or investigate any matter of interest or concern which the Committee in its sole discretion deems appropriate for study or investigation by the Committee.

The Committee shall be given full access to the Corporation's internal accounting staff, managers, other staff and Auditor as necessary to carry out these duties. While acting within the scope of its stated purpose, the Committee shall have all the authority of, but shall remain subject to, the Board.

B. Powers and Responsibilities

The Committee will have the following responsibilities and, in order to perform and discharge these responsibilities, will be vested with the powers and authorities set forth below, namely, the Committee will:

*Independence of Auditor*

1. Review and discuss with the Auditor any disclosed relationships or services that may impact the objectivity and independence of the Auditor and, if necessary, obtain a formal written statement from the Auditor setting forth all relationships between the Auditor and the Corporation, consistent with Independence Standards Board Standard 1.
2. Take, or recommend that the Board take, appropriate action to oversee the independence of the Auditor.
3. Require the Auditor to report directly to the Committee.
4. Review and approve the Corporation's hiring policies regarding partners, employees and former partners and employees of the Auditor and former independent external auditor of the Corporation.

*Performance & Completion by Auditor of its Work*

5. Be directly responsible for the oversight of the work by the Auditor (including resolution of

disagreements between management and the Auditor regarding financial reporting) for the purpose of preparing or issuing an audit report or related work.

6. Review annually the performance of the Auditor and recommend the appointment by the Board of a new, or re-election by the Corporation's shareholders of the existing, Auditor.
7. Pre-approve all auditing services and permitted non-audit services, including the fees and terms thereof, to be performed for the Corporation by the Auditor unless such non-audit services:
  - (a) which are not pre-approved, are reasonably expected not to constitute, in the aggregate, more than 5% of the total amount of revenues paid by the Corporation to the Auditor during the fiscal year in which the non-audit services are provided;
  - (b) were not recognized by the Corporation at the time of the engagement to be non-audit services; and
  - (c) are promptly brought to the attention of the Committee by the Corporation and approved prior to the completion of the audit by the Committee or by one or more members of the Committee who are members of the Board to whom authority to grant such approvals has been delegated by the Committee.

#### *Internal Financial Controls & Operations of the Corporation*

8. Establish procedures for:
  - (a) the receipt, retention and treatment of complaints received by the Corporation regarding accounting, internal accounting controls, or auditing matters; and
  - (b) the confidential, anonymous submission by employees of the Corporation of concerns regarding questionable accounting or auditing matters.

#### *Preparation of Financial Statements*

9. Discuss with management and the Auditor significant financial reporting issues and judgments made in connection with the preparation of the Corporation's financial statements, including any significant changes in the Corporation's selection or application of accounting principles, any major issues as to the adequacy of the Corporation's internal controls and any special steps adopted in light of material control deficiencies.
10. Discuss with management and the Auditor any correspondence with regulators or governmental agencies and any employee complaints or published reports which raise material issues regarding the Corporation's financial statements or accounting policies.
11. Discuss with management and the Auditor the effect of regulatory and accounting initiatives as well as off-balance sheet structures on the Corporation's financial statements.
12. Discuss with management the Corporation's major financial risk exposures and the steps management has taken to monitor and control such exposures, including the Corporation's risk assessment and risk management policies.
13. Discuss with the Auditor the matters required to be discussed relating to the conduct of any audit, in particular:
  - (a) The adoption of, or changes to, the Corporation's significant auditing and accounting principles and practices as suggested by the Auditor, internal auditor or management.
  - (b) The management inquiry letter provided by the Auditor and the Corporation's response to that letter.
  - (c) Any difficulties encountered in the course of the audit work, including any restrictions on the

scope of activities or access to requested information, and any significant disagreements with management.

*Public Disclosure by the Corporation*

14. Review the Corporation's annual and interim financial statements, management discussion and analysis (MD&A) and earnings press releases and provide a recommendation to the Board with respect to the approval of the financial statements, MD&A and earnings press release prior to their release to the public.
15. Where reasonably possible, review the Corporation's financial reporting procedures and internal controls to be satisfied that adequate procedures are in place for the review of the Corporation's public disclosures containing financial information, including news releases, prior to release to the public. The Committee must be satisfied that adequate procedures are in place for the review of the Corporation's public disclosures of financial information extracted or derived from the Corporation's financial statements, other than disclosure described in the previous paragraph, and periodically assess the adequacy of those procedures.
16. Review disclosures made to the Committee by the Corporation's Chief Executive Officer and Chief Financial Officer during their certification process of the Corporation's financial statements about any significant deficiencies in the design or operation of internal controls or material weaknesses therein and any fraud involving management or other employees who have a significant role in the Corporation's internal controls.

*Other Responsibilities*

17. Review the findings of any examinations by securities regulatory authorities and stock exchanges.
18. Review with the Corporation's counsel, any legal matters that could have a significant impact on the Corporation's financial statements.
19. Consult with the Auditor, without the presence of management, about the quality of the Corporation's accounting principles, internal controls and the completeness and accuracy of the Corporation's financial statements.
20. Request any officer or employee of the Corporation or the Corporation's outside counsel or Auditor to attend a meeting of the Committee or to meet with any members of, or consultants to, the Committee.
21. Meet with management, any internal auditor and the Auditor in separate executive sessions at least quarterly.
22. Have the authority, to the extent it deems necessary or appropriate, to retain special independent legal, accounting or other consultants to advise the Committee advisors.
23. Make regular reports to the Board about the Committee's activities and make appropriate recommendations.
24. Review and reassess the adequacy of this Charter annually and recommend any proposed changes to the Board for approval.
25. Annually review the Committee's own performance.
26. Provide an open avenue of communication among the Auditor, the Corporation's financial and senior management and the Board.
27. Not delegate these responsibilities other than to one or more independent members of the Committee the authority to pre-approve, which the Committee must ratify at its next meeting, non-audit services to be provided by the Auditor.

C. Limitation of Audit Committee's Role

28. While the Committee has the responsibilities and powers set forth in this Charter, it is not the duty of the Committee to plan or conduct audits or to determine that the Corporation's financial statements and disclosures are complete and accurate and are in accordance with generally accepted accounting principles and applicable rules and regulations. These are the responsibilities of management and the Auditor.