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# **ANNUAL INFORMATION FORM**

For the year ended December 31, 2018

Dated: March 8, 2019

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## Glossary of Terms

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

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

**"AEI"** means Aspect Energy International, LLC.

**"AIF" or "Annual Information Form"** means this Annual Information Form prepared for the year ended December 31, 2018 and dated March 8, 2019.

**"API"** means American Petroleum Institute.

**"°API"** means API gravity, a measure of the gravity of oil as defined by the API.

**"Atrush Block"** means the Atrush Contract Area, being the area covered by the Atrush Block PSC.

**"Atrush Block Agreements"** means the Atrush Block PSC, Atrush Block First PSC Amendment, Atrush Block Second PSC Amendment, Atrush Block Third PSC Amendment, and the Atrush Block Fourth PSC Amendment.

**"Atrush Block First PSC Amendment"** means the First Amendment Agreement to the Atrush Block PSC entered between KRG and GEP dated August 1, 2010.

**"Atrush Block PSC"** means the Production Sharing Contract in respect of the Atrush Block, Kurdistan Region entered between KRG and GEP and dated November 10, 2007.

**"Atrush Block Second PSC Amendment"** means the Third-Party Participant, Novation and Second Amendment Agreement to the Atrush Block PSC entered between KRG, GEP and MOKDV dated October 20, 2010.

**"Atrush Block Third PSC Amendment"** means the Assignment, Novation and Third Amendment Agreement to the Atrush Block PSC entered between KRG, GEP, MOKDV and TAQA dated December 31, 2012.

**"Atrush Block Fourth PSC Amendment"** means the Assignment, Novation and Fourth Amendment Agreement to the Atrush Block PSC entered between KRG, GEP, MOKDV and TAQA dated November 7, 2016.

**"GEP Bond Agreements"** means the November 11, 2013 agreement between General Exploration Partners, Inc. and Nordic Trustee AS (formerly Norsk Tillitsmann AS), and as amended April 19, 2016 and retired on July 5, 2018, in its capacity as trustee for the bondholders, describing the rights and obligations associated with the senior secured bonds issued by GEP (the "Senior Bonds") and the May 2, 2016 agreement between General Exploration Partners, Inc. and Nordic Trustee AS, in its capacity as trustee for the bondholders, describing the rights and obligations associated with the super senior secured bonds issued by GEP (the "Super Senior Bonds").

**"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.

**"Commercial Discovery"** has the meaning assigned to it in the PSCs, 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.

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

**"Company"** means ShaMaran Petroleum Corp. and 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.

**“Contractor Group”** means the parties, including joint venture partners, that hold a working interest in the PSC.

**“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., an indirect subsidiary of the Company, existing under the laws of the Cayman Islands.

**“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).

**“LPBV”** means Lundin Petroleum B.V., a subsidiary of Lundin Petroleum AB.

**“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, 2018.

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

**“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.

**“OSIL”** means Oil Search (Iraq) Limited.

**“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”, “PSA”, “Production Sharing Contract”** or **“Production Sharing Agreement”** 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.

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

**“Shamaran”** means Shamaran Petroleum Corp. and its subsidiaries.

**“Shamaran Bond Agreement”** means the July 3, 2018 agreement between Shamaran Petroleum Corp and Nordic Trustee AS, and as amended February 25, 2019, 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 mature on July 5, 2023 (the “Shamaran Bonds”).

**“SVBV”** means Shamaran Ventures B.V., an indirect subsidiary of the Company, existing under the laws of the Netherlands.

**“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 total 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.

Bank of Canada Exchange Rate for CAD/USD	Year Ended December 31,		
	2016	2017	2018
	0.7448	0.7989	0.73719

## 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
Gigajoules	MMbtu	0.950
MMbtu	Gigajoules	1.0526

## Abbreviations

Oil and Natural Gas Liquids		Natural Gas	
bbls	Barrels of crude oil	NGLs	Natural gas liquids
bopd	Barrels of crude oil per day	bcf	Billion cubic feet of natural gas
boe	Barrels of oil equivalent	bfpd	Barrels of fluid per day
boe/d	Barrels of oil equivalent per day	Mcf	Thousand cubic feet of natural gas
Mboe	Thousands of barrels of oil equivalent	MMcf	Million cubic feet of natural gas
MMboe	Millions of barrels of oil equivalent	Mcfd	Thousand cubic feet of natural gas per day
Mblpd	Thousand barrels of liquid per day	McfGe	Thousand cubic feet of gas equivalent
Mbopd	Thousand barrels of crude oil per day	MMbtu	Million British Thermal Units
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 6Mcf: 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.

## Reader Advisory Regarding Forward Looking Information

Certain statements in this document and the documents incorporated by reference are forward-looking information and forward-looking statements. 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 "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 exploration 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 exploration 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
- availability of potential farm-out partners
- government or other regulatory consent for exploration, development or acquisition activities
- future production levels
- future capital expenditures and their allocation to exploration and development activities
- future earnings
- future asset acquisitions or dispositions
- future debt levels
- availability of committed credit facilities
- possible commerciality
- development plans 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 explored or 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 explore, develop, produce and transport crude oil and natural gas to markets
- ultimate effectiveness of design or design modification to facilities
- the results of exploration and development drilling and related activities
- volatility in energy trading markets

- foreign-currency exchange rates
- economic conditions in the countries and regions 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 of 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 are the Company's material change reports from January 1, 2015 to the date of this AIF. Copies 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 as of March 8, 2019 unless otherwise indicated.

## ITEM 2 - CORPORATE STRUCTURE

### Name, Address and Incorporation

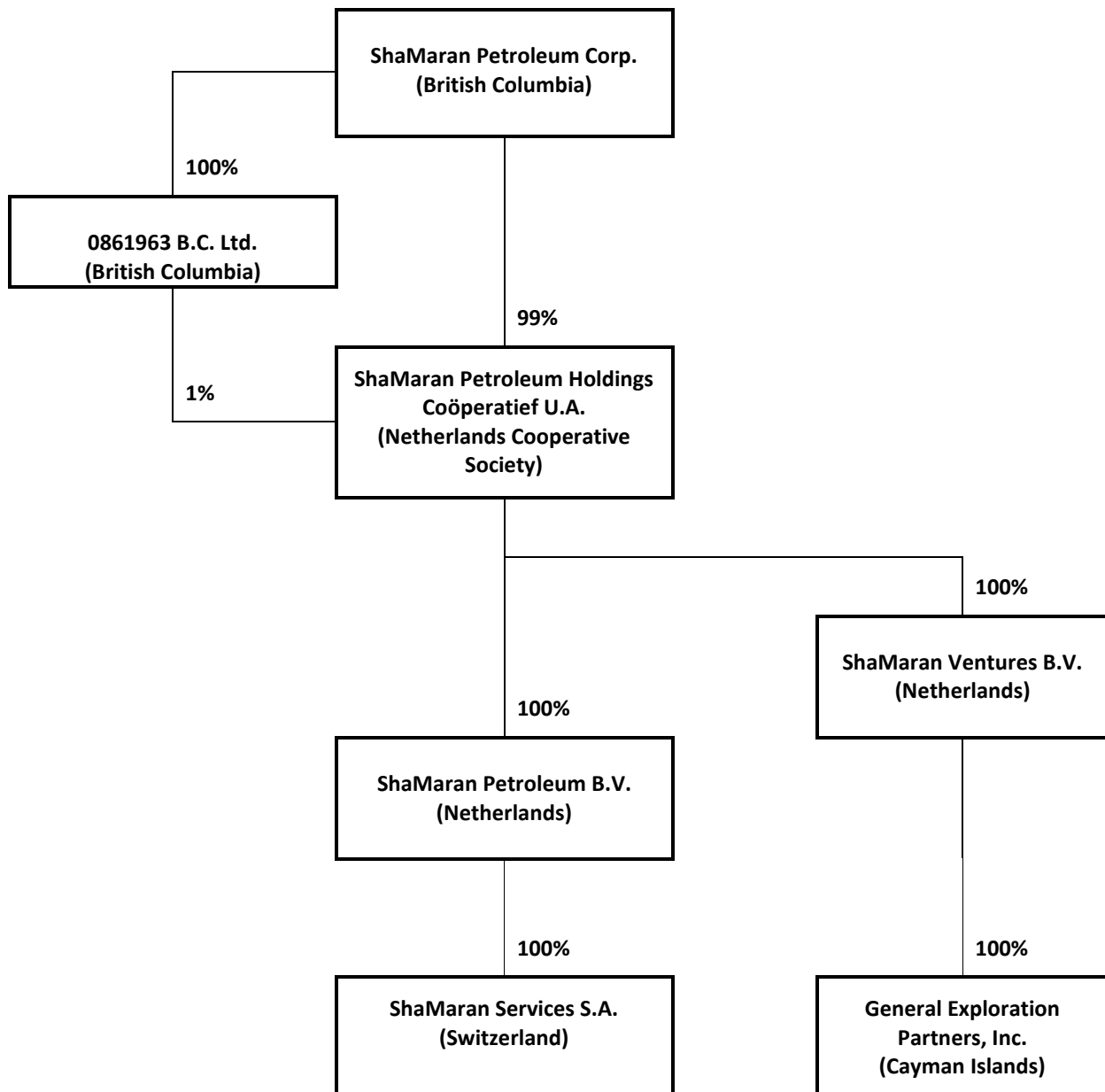
The full corporate name of the Company is ShaMaran Petroleum Corp. The address of the Company's head office is 2000, 885 West Georgia Street, Vancouver, British Columbia, V6C 3E8 and the registered address and records office is 25th Floor, 666 Burrard Street, Vancouver, BC, V6C 2X8, Canada.

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").

Effective March 6, 2000, to facilitate the business combination of Kit and Wheaton River Minerals Ltd. ("Wheaton River"), Kit was continued from the federal jurisdiction to Ontario under the *Ontario Business Corporations Act* (the "OBCA"). 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, were amalgamated under the name Kit (the "Arrangement"). After the Arrangement, Kit became a wholly-owned subsidiary of Wheaton River. 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 name was changed from Kit to Bayou Bend Petroleum Ltd. ("Bayou Bend"). On October 21, 2009, the name Bayou Bend was changed to ShaMaran Petroleum Corp.

## Intercorporate Relationships

Substantially all the Company's business is carried on through its various subsidiaries. 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 held by the Company either directly or indirectly:



### ITEM 3 - GENERAL DEVELOPMENT OF THE BUSINESS

Shamaran Petroleum Corp. is an oil development and exploration company with a 20.1% direct interest in the Atrush Block PSC relating to a property located in the Kurdistan Region of Iraq. The Atrush Block is located approximately 85 kilometers northwest of Erbil, the capital of Kurdistan, is 269 square kilometers in area and has oil proven in Jurassic fractured carbonates in the Chiya Khere structure. The structure is expressed at surface by the Chiya Khere mountain which runs east-west for approximately 25 kilometers with an approximate width of 3.5 kilometers.

Total Field Proven plus Probable ("2P") Reserves on a property gross basis for Atrush as at December 31, 2018 is 106 MMbbl. Total Field Unrisked Best Estimate Contingent Oil Resources ("2C")<sup>1</sup> on a property gross basis for Atrush is 268 MMbbl. Total discovered oil in place in the Atrush Block is a low estimate of 1.5 billion barrels, a best estimate of 2 billion barrels and a high estimate of 2.6 billion barrels.

Oil production from Atrush commenced in July 2017. Installed production facilities have a capacity of 30 Mbopd. Ten wells have been drilled to date, with an eleventh well currently drilling. Five wells are currently producing.

The oil discovery on the Atrush petroleum property is 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, 2016*

##### Corporate Developments

On February 15, 2016 the Company reported updates to estimated reserves and contingent resources for the Atrush block as of December 31, 2015. Total discovered oil in place is a low estimate of 1.5 billion barrels, a best estimate of 2.1 billion barrels and a high estimate of 2.8 billion barrels, with Total Field 2P Reserves on a property gross basis increasing from 61.5 MMbbls to 85.1 MMbbls, an increase of 38 percent. Total Field Unrisked 2C Resources<sup>2</sup> on a property gross basis decreased from 310 MMboe to 304 MMboe.

The Company completed a financing arrangement in early May 2016 (the "Financing Arrangement") with holders of the then \$150 million bonds (the "Senior Bonds") of GEP, a wholly owned subsidiary of Shamaran. The Financing Arrangement provided the Company with additional liquidity in 2016 of approximately \$33 million based on the issuance of \$17 million (\$16.2 million proceeds net of transaction costs) of additional super senior bonds ("Super Senior Bonds") and provided terms for the Company to pay bond coupon interest in kind by issuing additional bonds. Also under the Financing Arrangement the Company issued 218,863,000 common shares at a deemed price of CAD 0.105 per share to holders of the Senior Bonds who elected to convert Senior Bonds into Shamaran common shares which represented \$18 million of Senior Bonds at face value. PIK Bonds of \$16.7 million and \$1.0 million were issued under the Senior Bonds and Super Senior Bonds agreements, respectively, to satisfy coupon interest during the year ended December 31, 2016.

##### Atrush Contract

On November 7, 2016 the Assignment, Novation and Fourth Amendment Agreement to the PSC (the 4th PSC Amendment") and Atrush Facilitation Agreement were concluded between TAQA, GEP, MOKDV (together, the "Non-Government Contractors") and the KRG. Refer to "PSC and Related Agreements" section under Item 4 below for the principal of the 4th PSC Amendment and Atrush Facilitation Agreement.

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<sup>1</sup> This estimate of remaining recoverable resources (unrisked) includes contingent resources that have not been adjusted for risk based on the chance of development. It is not an estimate of volumes that may be recovered.

<sup>2</sup> This estimate of remaining recoverable resources (unrisked) includes contingent resources that have not been adjusted for risk based on the chance of development. It is not an estimate of volumes that may be recovered.

### Operational Developments

Construction continued on the 30,000 bopd Atrush Phase 1 Production Facility ("Production Facility").

The Atrush-2 ("AT-2") and Atrush-4 ("AT-4") wells were successfully completed in the second and third quarters of 2016. All four wells intended for production are now completed, connected to the Production Facility and ready for start-up.

Construction commenced on the pipeline between the Production Facility and the block boundary (the "Spur Pipeline") and the pump station and the intermediate pigging and pressure reduction station ("IPPR").

Following the signing of the Atrush Facilitation Agreement work commenced on the final 35km section of pipeline from the Atrush Block boundary to the tie-in point on the main export pipeline (the "Feeder Pipeline") and subject to the terms of an Engineering, Procurement and Construction contract between TAQA and KAR Company ("KAR") which became effective on November 7, 2016.

### ***Year Ended December 31, 2017***

### Corporate Developments

On January 30, 2017 the Company completed the issue of 360 million common shares of ShaMaran on a private placement basis (the "Private Placement") at a price per share of CAD 0.10 (equal to SEK 0.67) which resulted in gross proceeds to the Company of \$27.3 million (\$26.4 million net of transaction related costs). Zebra Holdings and Investments SARL, Lorito Holdings SARL and Lundin Petroleum BV, the Company's major shareholders, subscribed for 43,463,618 shares, 16,984,621 shares and 17,800,000 shares, respectively, in the Private Placement.

On February 16, 2017 the Company reported estimated reserves and contingent resources for the Atrush block as of December 31, 2016. Reserves and resource estimates have remained unchanged from those reported for the prior year. Total discovered oil in place is a low estimate of 1.5 billion barrels, a best estimate of 2.1 billion barrels and a high estimate of 2.8 billion barrels, with Total Field 2P Reserves on a property gross basis estimated at 85.1 MMbbls. Total Field Unrisked 2C Resources<sup>3</sup> on a property gross basis is estimated at 304 MMboe.

### Atrush Contract

In September 2017 an agreement was concluded between the Atrush Non-Government Contractors and the KRG for the sale of Atrush oil whereby the KRG will buy oil exported from the Atrush field by pipeline at the Atrush block boundary based upon the Dated Brent oil price minus approximately \$16 for quality discount and all local and international transportation costs. This discount is based on the same principles as other oil sales agreements in the Kurdistan Region of Iraq.

The Final Completion Certificate for the Atrush Feeder Pipeline ("FCC") was issued on October 31, 2017 completing the obligation of the Non-Government Contractors to fund the KRG's share of development costs and triggers the commencement of repayment of both the Atrush Feeder Pipeline Cost Loan and the Atrush Development Cost Loan.

### Operational Developments

Oil production on the Atrush Block commenced in July 2017. Average production in the fourth quarter of 2017 was 21.7 Mbopd. To address certain production constraints the facilities were shut down in the beginning of October. These constraints have now successfully been resolved. In winter months the Atrush Production Facilities are limited to processing approximately 27 Mbopd of the total 30 Mbopd capacity due to low ambient temperatures which reduces the amount of heat otherwise available to process the oil to export specifications.

3.4 million barrels of oil were produced and exported from Atrush for sale to the KRG during the second half of 2017 resulting in an average production of 18.1 Mbopd. The Company's entitlement share<sup>4</sup> of 2017 exports was approximately 400 thousand barrels which were sold at an average netback price<sup>5</sup> of \$44.38 per barrel of oil.

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<sup>3</sup> This estimate of remaining recoverable resources (unrisked) includes contingent resources that have not been adjusted for risk based on the chance of development. It is not an estimate of volumes that may be recovered.

<sup>4</sup> The Company's entitlement share includes an adjustment for the exploration cost sharing arrangement between TAQA and GEP.

<sup>5</sup> This includes a discount to Dated Brent for oil quality and all local and international transportation costs.

The Chiya Khere-7 ("CK-7") well, which was spudded on September 17, 2017 reached a final depth of 1,861 meters in early November 2017. The reservoir section was encountered approximately 114 meters shallower than prognosis which had a positive impact of the Company's 2P reserves reported as at December 31, 2017. The well was drilled on time and under budget.

### ***Year Ended December 31, 2018***

#### Corporate Developments

ShaMaran entered into agreements on December 26, 2018 to acquire jointly with TAQA the 15% interest in the Atrush Block ("the Marathon Acquisition") held by Marathon International Oil Company. Following close of these agreements ShaMaran's working interest in Atrush will increase from 20.1% to 27.6%. The parties to the agreements are currently in the process of obtaining the consent of the Kurdistan Regional Government.

On July 5, 2018, the Company issued new \$240 million senior unsecured bonds with 5-year term and 12% semi-annual coupon interest and bonds due to mature in November 2018 were retired. On December 31, 2018 the Company deposited cash of \$14.4 million to the bondholders' Debt Service Retention Account and, on January 5, 2019, paid the first semi-annual interest payment of \$14.4 million to ShaMaran bondholders. Refer to the discussion under "Borrowings" section below.

On February 15, 2018 the Company reported estimated reserves and contingent resources for the Atrush block as of December 31, 2017. Total discovered oil in place remained effectively unchanged from those reported for the prior year with a low estimate of 1.5 billion barrels, a best estimate of 2.1 billion barrels and a high estimate of 2.9 billion barrels. Total Field 2P Reserves on a property gross basis increasing from 85.1 MMbbls to 102.7 MMbbls, an increase of 25 percent, when including the 2017 Atrush production of 3.4 MMbbls. Total Field Unrisked 2C oil Resources<sup>6</sup> on a property gross basis remained essentially the same at 296 MMbbls.

#### Atrush Contract

An amended Atrush oil sales agreement was concluded between Atrush co-venturers and the KRG in the fourth quarter which reduced the oil price discount from the previous \$15.73 per barrel to \$15.43 per barrel with effect from October 1, 2018. The KRG purchases oil exported from the Atrush field by pipeline at the Atrush block boundary based upon the Dated Brent oil price minus an oil price discount for quality and all local and international transportation costs.

#### Operational Developments

Annual production for the year 2018 was 22.1 Mbopd, The Company's entitlement share<sup>7</sup> of 2018 exports was approximately 1.28 million barrels which were sold at an average netback price<sup>8</sup> of \$54.52 per barrel of oil and resulted in \$69.6 million of revenue from oil sales for the year 2018. 2018 production was affected by salt-related processing restrictions negatively impacting production during the second and third quarters. Processing capacity constraints associated with salt production and low ambient temperatures during the winter months have been addressed. The Atrush Production Facilities can now consistently operate at, or above, the 30.0 Mblpd design rate during normal operations.

Three wells were successfully completed in the year 2018. The CK-7 and Chiya Khere-10 ("CK-10") production wells started production near the end of July 2018. The CK-9 water disposal well was completed and tested according to schedule during November 2018 and is now online and used for disposal of Atrush produced water.

In December 2018 the Atrush 3 ("AT-3") well was re-completed as a heavy oil production well.

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<sup>6</sup> This estimate of remaining recoverable resources (unrisked) includes contingent resources that have not been adjusted for risk based on the chance of development. It is not an estimate of volumes that may be recovered.

<sup>7</sup> The Company's entitlement share includes an adjustment for the exploration cost sharing arrangement between TAQA and GEP.

<sup>8</sup> This includes a discount to Dated Brent for oil quality and all local and international transportation costs.

## ***Subsequent to Year Ended December 31, 2018***

### **Corporate Developments**

In February 2019, the Company reported estimated reserves and contingent resources for the Atrush field as at December 31, 2018. Total Field 2P Reserves on a property gross basis for Atrush increased from 102.7 MMbbls reported as at December 31, 2017 to 106 MMbbls which, when 2018 Atrush production of 8 MMbbls is included, represents an increase of 11 percent. Total Field Unrisked 2C Resources<sup>9</sup> on a property gross basis for Atrush decreased from the 2017 estimate of 296 MMbbls to 268 MMbbls. Total discovered oil in place in the Atrush Block is a low estimate of 1.5 billion barrels, a best estimate of 2 billion barrels and a high estimate of 2.6 billion barrels.

On February 1, 2019 amendments were approved to the terms of the Company's \$240 million senior bonds. On February 8, 2019 the Company repaid \$50 million of bonds plus accrued interest reducing its bonds currently outstanding to \$190 million.

### **Operational Developments**

Heavy oil extended well test ("HOEWT") facilities have been installed and heavy oil production from AT-3 is expected to commence in March 2019. This test aims to progress development planning for the significant volumes of heavy oil currently classified as Atrush contingent resources.

The procurement process for Atrush early production facilities ("EPF") is underway and it is expected that these facilities, as well as ongoing debottlenecking of the existing Production Facilities, will deliver 50.0 Mblpd processing capacity in the second half of 2019.

Following the AT-3 re-completion the Chiya Khere-11 ("CK-11") production well was spudded at the start of January 2019 and the Chiya Khere 6 ("CK-6") was re-completed.

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

### **Summary**

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

The Company currently holds a 20.1% direct interest in the Atrush Block PSC relating to a property located in the Kurdistan Region of Iraq ("Kurdistan"). ShaMaran entered into agreements on December 26, 2018 to acquire jointly with TAQA the 15% interest in the Atrush Block ("the Marathon Acquisition") held by Marathon International Oil Company. Following close of these agreements ShaMaran's working interest in Atrush will increase from 20.1% to 27.6%. The parties to the agreements are currently in the process of obtaining the consent of the Kurdistan Regional Government.

Oil production from Atrush commenced in July 2017. Installed production facilities have a capacity of 30 Mbopd. Ten wells have been drilled to date, with an eleventh well currently drilling. Five wells are currently producing.

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<sup>9</sup> This estimate of remaining recoverable resources (unrisked) includes contingent resources that have not been adjusted for risk based on the chance of development. It is not an estimate of volumes that may be recovered.

A summary of the current property and partnership interests in the Atrush Block as at the date of this AIF are set out in the following table:

Country	Block	Acreage (square kilometers)	Working interest <sup>(1)</sup>	
Iraq (Kurdistan)	Atrush Block	269	TAQA <sup>(2)</sup>	39.9%
			KRG	25.0%
			Shamaran <sup>(3)</sup>	20.1%
			MOKDV	15.0%
Notes:				
<sup>(1)</sup> Working 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 exploration, development and 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, an indirect wholly-owned subsidiary of the Company.				

### ***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 explore for and, potentially, produce oil and natural gas. The Company 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. 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 exploration, appraisal and development activities obtained under agreements, including production sharing contracts ("PSCs"), joint venture agreements and farm-out agreements that it has entered for the exploration and extraction of hydrocarbons.

### ***Changes to Contracts***

On March 12, 2013 the Contractor Group entities to the Atrush Block PSC were notified by the KRG that it intended to exercise its option to acquire a 25% Government Interest in accordance with the provisions of the Atrush Block PSC. On November 7, 2016 the KRG exercised its option to acquire its 25% interest to the Atrush Block PSC effective November 7, 2012, the Company's working interest was reduced to 20.1%. Shamaran agreed on December 26, 2018 with Marathon and TAQA to acquire an additional 7.5% interest in Atrush. Once KRG consent has been obtained this acquisition will require further contract changes.

### ***Environmental Protection***

The Company's oil and gas operations are in regions 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 of December 31, 2018 and as at the date of this AIF, the Company had one employee in Canada, seven employees in Switzerland and one full time employee 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 to carry on its administrative or technical activities in Canada, Switzerland, Kurdistan and the Netherlands.

### ***Foreign Operations***

ShaMaran's assets and operations are in Kurdistan, a federally recognised 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 your 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 has been no material reorganization of the Company or any of its subsidiaries within the three most recently completed financial years or completed during for the current financial year.

### ***Social Policies***

On August 24, 2007, as amended March 8, 2016 the Company adopted a Code of Business Conduct and Ethics (the "Code"). The Code sets out basic principles that are intended to guide all employees, directors and officers of the Company. The Code is intended to deter wrongdoing by the Company's employees, directors and officers and to promote, amongst other things, honest and ethical conduct and the avoidance of conflicts of interest.

A full copy of the Code can be found under the Company's profile on SEDAR at [www.sedar.com](http://www.sedar.com).

### ***Overview of Industry Conditions in Kurdistan***

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 production sharing contracts 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.

By the end of 2018 eleven oil fields under the control of the KRG were in production, producing approximately 250 Mbopd. Main producing fields are Khurmala, the northern dome of the giant Kirkuk field and operated by Kurdistan company, KAR, the Tawke and Peshkabr fields, in northern Kurdistan and operated by DNO International ASA ("DNO"), the Taq Taq field in central Kurdistan and operated by TTOPCO, a joint venture company owned by Sinopec Corp. of China and the London listed Genel Energy plc ("Genel"), the Shaikhan field situated close to the Atrush field and operated by Gulf Keystone Petroleum Limited and the Atrush field operated by TAQA..

In December 2013, the KRG announced the successful commissioning of its independent export pipeline from Khurmala to Fiskh Khabur and commencement of oil shipments from the Tawke and Taq Taq fields. In late 2013, an energy cooperation agreement was signed between the Turkish and Kurdish governments which allows for export of Kurdish oil through Turkey to the Mediterranean port of Ceyhan, Turkey.

Khurmala, Tawke, Taq Taq, Hawler and Atrush export directly via the Kurdistan export pipeline. During 2017 and 2018 production from the Shaikhan field was mostly trucked, either to customers in Turkey or to the Tawke facilities where it was injected into the Fiskh Khabur to Ceyhan system for pipeline export. However, at the end of 2017 a connection was made with the Atrush pipeline, to facilitate delivery of part of Shaikhan production directly into the Kurdistan export pipeline.



Production from the Sarsang block, operated by HKN Energy Ltd, and the Ain Sifni block, operated by Hunt Oil Company, are trucked to the Tawke facilities for export via pipeline to Ceyhan. HKN Energy Ltd is constructing a pipeline to tie into the Kurdistan export pipeline. Other concessions like Khalakan and Garmian produce for local sales within Kurdistan.

The Khurmala to Fiskh Khabur pipeline was upgraded in 2018 and has the capacity to transport approximately 1.0 MMbopd. The International Energy Agency states that the Turkish pipeline to Ceyhan, which is currently the only available export route for oil sales from Kurdistan, has a capacity of 1.6 MM bopd

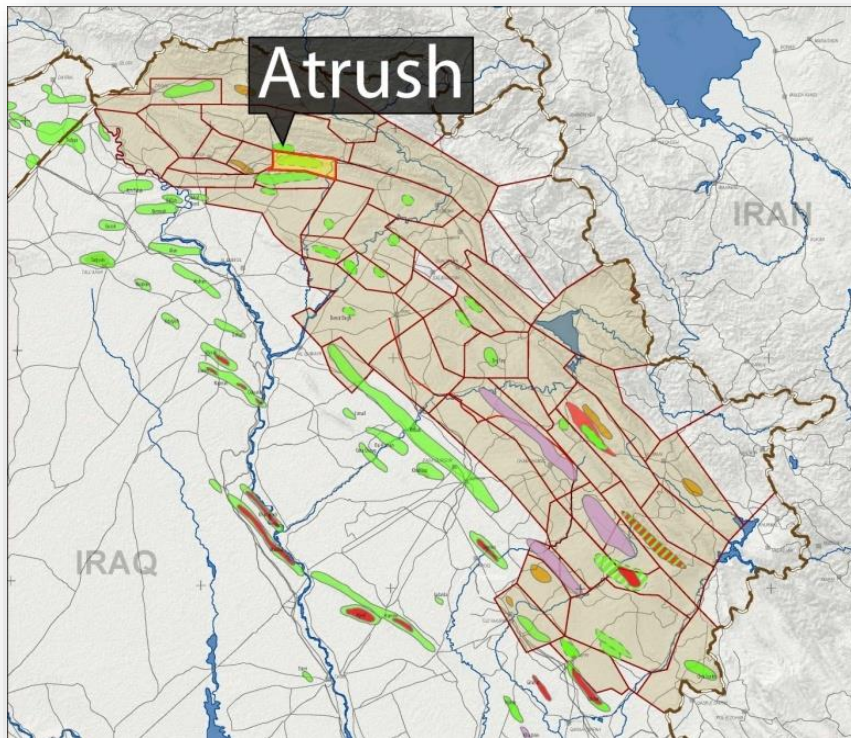
In December 2014 an agreement was reached between the KRG and the federal government in Baghdad to export 550 Mbopd during the year 2015 via the Khurmala to Fiskh Khabur pipeline of which 250 Mbopd comes from Kurdistan fields and 300 Mbopd from Federal Government fields (Kirkuk). In return the KRG would receive its share of the Iraq federal budget. Following a disagreement on budget allocation in June 2015 the KRG decided to directly sell all Kurdistan production and the production from Iraqi fields operated by the North Oil Company transported via the KRG pipeline. In August of 2016 an agreement was reached between the federal government in Baghdad and the KRG where 50% of the North Oil Company export was allocated to the KRG. Following an independence referendum in September 2017, KRG controlled production dropped significantly after the federal government of Iraq took direct control of the North Oil Company fields and halted oil exports from those via the Kurdistan export pipeline. In 2018 relations between the KRG and the federal government improved and production from the North Oil Company fields via the Kurdistan export pipeline resumed.

As from September 2015 the KRG has made regular payments to International Oil Companies ("IOC's") exporting via the KRG pipeline system. In February 2016 the KRG announced that as of January 1, 2016 IOC's were to receive payment within 10 working days of the following month according to their fiscal entitlement pursuant to the terms of the PSC's, indicating the KRG's intent to normalise the export payment situation. In practice and during 2016 and 2017 the KRG has paid IOCs on a regular basis for oil delivery entitlements according to their respective PSC terms from 60 to 90 days following the month of delivery. In summer 2017 the KRG came to arrangements with DNO and Genel for payment of oil produced before September 2015. In 2018 the KRG continued to pay the IOC's on a regular monthly basis.

## Atrush Block

### Summary

The Atrush Block is located approximately 85 kilometers northwest of Erbil, the capital of Kurdistan, and is 269 square kilometers in area. Oil has been proven in Jurassic fractured carbonates in the Chiya Khere structure and is estimated to contain between 1.5 and 2.6 billion barrels of oil in place, with a best estimate of 2 billion barrels of oil in place. The structure is expressed at surface by the Chiya Khere mountain which runs east-west for approximately 25 kilometers with an approximate width of 3.5 kilometers.



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 are the Sarmord and Garagu (Cretaceous), 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 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 acquired 143 kilometers 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 took over operatorship in December 2012 and submitted the Atrush Block Field Development Plan ("FDP") for approval to the KRG on May 6, 2013 which was subsequently approved by the Ministry of Natural Resources ("MNR") 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 completion for both the AT-4 and the AT-2 well 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 Facilities ("Production Facility"), the pipeline between the Production Facility and the block boundary (the "Spur Pipeline"), the pump station, the intermediate pigging and pressure reduction station ("IPPR") and the section of the pipeline from the block boundary to the tie-in point on the main export pipeline ("Feeder Pipeline") necessary for exporting Atrush oil was concluded in the first half of 2017.

Oil production on the Atrush Block commenced on July 3, 2017. Cumulative production exported from Atrush from July 2017 to December 31, 2018, was 11.4 million barrels of oil.

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 electric submersible pump ("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 Sargalu 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 will be conducted in the eastern part of the field in 2019. This will provide important production information on the heavier part of the oil column. Together with production data from the other producing wells, this will allow for defining the next phases of Atrush development.

As part of a heavy oil extended well test, the AT-3 well was re-completed as a heavy oil production well during December 2018. The well is expected to commence production in March 2019. The CK-6 well was re-completed as an observation well and will be brought into production later in 2019.

The CK-11 production well was spudded at the start of January 2019 and is currently drilling.

Positive production results have shown the potential to increase Atrush production levels. It is expected that by installing an EPF and debottlenecking existing Production Facilities, the Atrush processing capacity can be increased to 50.0 Mblpd. The procurement process for an Atrush EPF is underway and increased processing capacity is expected to be available in the second half of 2019.

### ***Regional Geology***

The Atrush Block is located within an intensively folded and thrust zone 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 square kilometers. 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 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.

The following table indicates the regional stratigraphy 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.

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

### **Summary**

On August 27, 2010 ShaMaran Ventures B.V. (“SVBV”), an indirect subsidiary of the Company, entered a Subscription Agreement and a Shareholders Agreement (collectively the “GEP Agreements”) 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% working interest in the Atrush Block PSC. In October 2010 the KRG nominated MOKDV as the KRG’s Third Party Participant to hold the maximum 20% working interest. Accordingly, the Company held an indirect interest in Atrush Block PSC of 26.8% at December 31, 2010 and 2011.

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 working interest in the Atrush Block PSC, its principal asset, and TAQA assumed operatorship of the Atrush Block.

On March 12, 2013 the Contractor Group entities to the Atrush Block PSC were notified by the KRG that it intended to exercise its option to acquire a 25% Government Interest in accordance with the provisions of the Atrush Block PSC.

On November 7, 2016 the KRG exercised its option to acquire its 25% interest effective November 7, 2012 in the Atrush Block PSC. At the date of this AIF the Atrush Block PSC is held 39.9% by TAQA, 25% by KRG, 20.1% by GEP, and 15% by MOKDV.

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 will buy oil exported from the Atrush field by pipeline at the Atrush block boundary based upon the Dated Brent oil price minus \$16.04 per barrel for quality discount and all local and international transportation costs and is based on the same principles as other oil sales agreements in Kurdistan. The agreement was 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 date, to reflect the better oil quality from Atrush.

### **Atrush Block PSC**

#### **1. Basic Terms**

The effective date (the “Effective Date”) of the Atrush Block PSC is November 10, 2007. The Atrush Block PSC contract term is comprised of an Exploration Period and a Development Period. The Exploration Period is for an initial exploration term of five years (comprised of a First Sub-Period, being the initial three years from the Effective Date, and a Second Sub-Period, being years four and five from the Effective Date), which under certain circumstances, is extendable on a yearly basis up to a maximum period of seven years from the Effective Date.

In the event of a commercial discovery and subsequent delineation of the relevant field, the term for development and production is extended to 20 years with an automatic right to a five-year extension, and upon satisfying certain conditions, to an additional five-year extension. Acreage included in the contract area and not converted into a producing field is to be relinquished at the rate of 25% at the end of each of the initial exploration terms and the first one-year renewal period and the balance of acreage is to be relinquished at the end of the second one-year renewal term.

## 2. Minimum Work Obligations

During the First Sub-Period, the Contractor Group was obligated to incur:

- (a) the lesser of:
  - (i) the costs to acquire, process, and interpret 100-line kilometers of two-dimensional seismic data within the concession area, or
  - (ii) \$2.0 million of such seismic operations, and
- (b) the lesser of:
  - (i) the costs to drill and complete one well with a minimum depth of 3,000 meters, or
  - (ii) \$7.5 million of such drilling operations

During the Second Sub-Period, unless prior drilled wells demonstrate that there is not a reasonable technical case for additional drilling, the Contractor Group was required to:

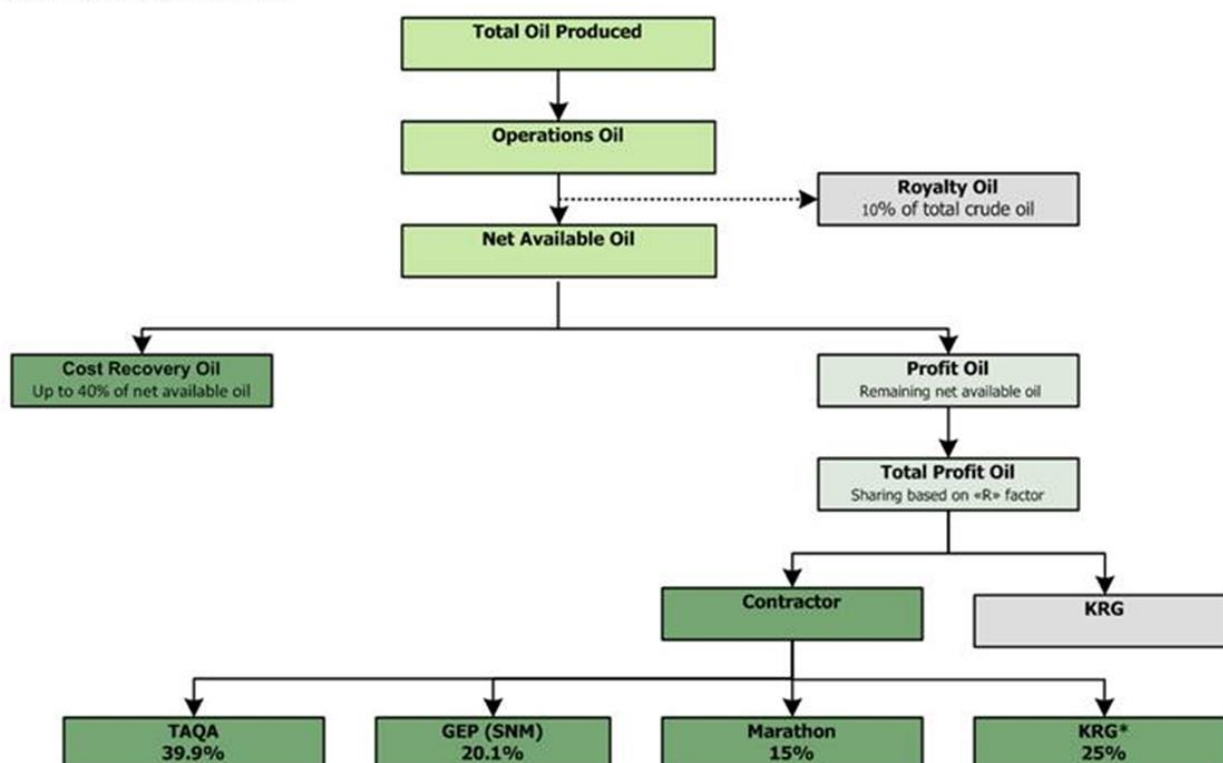
- (a) acquire, process and interpret further seismic data (either 2D or 3D), if required, and
- (b) drill one exploration or appraisal well (commitment for this purpose is a minimum financial amount of \$7.5 million)

## 3. Fiscal Terms under Original PSC

Fiscal terms under the PSC include a 10% royalty and a variable profit split based on a percentage share 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 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 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. When the ratio is below one, the Contractor Group is entitled to 32% of profit oil, with a reducing scale to 16% when the ratio is greater than 2.75. In respect of gas, the sliding scale is from 40% to 22%.

## OIL REVENUE FLOW



\*On November 7, 2016 the KRG exercised its option to participate as a contracting entity with a 25% interest effective November 7, 2012 in the Atrush Block. Under the terms of the Atrush Block PSC the KRG has a 25% undivided interest in the petroleum operations and all the other rights, duties, obligations and liabilities of the Contractor in the PSC and is liable for its participating interest share of the petroleum costs incurred on or after the first commercial declaration date. For more information on the KRG's interest refer to discussion under the Fourth Amendment section below.

### 4. First Amendment

On August 1, 2010 GEP and the KRG executed the first amendment agreement relating to the Atrush Block PSC (the "Atrush Block First PSC Amendment"). The Atrush Block First PSC Amendment:

- extended the First Sub-Period to February 10, 2011
- extended the KRG's right to nominate a Third-Party Participant to hold up to a 20% working interest until 180 days after completion of GEP's second exploratory well in the Atrush Block, at which time GEP was to receive reimbursement of petroleum costs, excluding bonuses
- required GEP, as holder of the "Charged Interest", to make monthly capacity building payments to the KRG equal to 30% of profit oil (produced oil, less royalty and cost oil), and
- required GEP, as holder of the "Charged Interest", to pay an additional \$5.0 million capacity building bonus to the KRG within 30 days of the KRG's approval of a development plan.

## 5. Second Amendment

On October 20, 2010 GEP, MOKDV and the KRG executed the Third-Party Participant, Novation and Second Amendment Agreement to the PSC (the "Atrush Block Second PSC Amendment"). The Atrush Block Second PSC Amendment nominated MOKDV as the KRG's Third-Party Participant to hold the maximum 20% working interest. MOKDV reimbursed GEP approximately \$5.77 million which represents the 20% carried interest of the petroleum costs incurred since the Effective Date of the Atrush Block PSC, through the effective date of the Atrush Block Second PSC Amendment. These amounts were distributed to AEI and the Company, as shareholders of GEP, during the year ended December 31, 2010. Upon closing of the Atrush Block Second PSC Amendment, GEP and MOKDV had an 80% and 20% working interests, respectively, in the Atrush Block property defined in the Atrush Block PSC.

On November 30, 2011 GEP and MOKDV entered a Joint Operating Agreement approved in accordance with the terms of the Atrush Block Second PSC Second Amendment and collectively with the Atrush PSC and the Atrush Block First PSC Amendment.

## 6. Third Amendment

On December 31, 2012 GEP, TAQA, MOKDV, and the KRG executed the Atrush Block Third PSC Amendment to the PSC. The Atrush Block Third PSC Amendment assigned from GEP to TAQA a 53.2% working interest in the rights and obligations under the Atrush Block PSC and previous Atrush Block PSC amendments. In addition, GEP's "Charged Interest" requirements, which were previously 100% obligations of GEP (refer to description included in points (c) and (d) under *First Amendment*, above), were split 66.5% to TAQA and 33.5% to GEP.

Pursuant to the Atrush Block Third PSC Amendment the parties approved the resignation of GEP and appointment of TAQA as Operator to be effective on and as of December 31, 2012.

The First Amendment to the Joint Operating Agreement in respect of the Atrush Block ("the Amended Atrush JOA") was entered on December 31, 2012 among TAQA, GEP and MOKDV ("the Parties") and approved in accordance with the terms of the Atrush Block Third PSC Amendment. Among other rights and obligations the Amended Atrush JOA provides that the recovery of Exploration Costs (as such term is defined in the Atrush Block PSC) incurred prior to December 31, 2012 ("Shared Costs") shall be shared by the Parties as follows: (i) MOKDV shall be entitled to receive 20% of the Shared Costs in accordance with its 20% working interest in the PSC; (ii) TAQA will be entitled to receive the first \$10.8 million of the remaining 80% of the Shared Costs; (iii) TAQA will not be entitled to receive any portion of the next \$39.1 million of the remaining 80% Shared Costs; and (iv) all credits of Shared Costs in excess of \$62.375 million shall be shared by the Parties in accordance with their working interests in the Atrush Block PSC.

## 7. Fourth Amendment

On November 7, 2016 the Assignment, Novation and Fourth Amendment Agreement to the PSC (the 4th PSC Amendment") and Atrush Facilitation Agreement were concluded between TAQA, GEP, MOKDV (together, the "Non-Government Contractors") and the KRG.

The 4th PSC Amendment and Atrush Facilitation Agreement include the following principal terms:

- The KRG acquires a 25% interest in the PSC effective November 7, 2012, the date of declaration of commerciality ("DOC date"). Consequently, the respective participating interests in the Atrush PSC are TAQA at 39.9%, the KRG at 25%, GEP at 20.1% and MOKDV at 15%;
- The Non-Government Contractors will fund the cost of constructing the Feeder Pipeline which will be novated to the KRG following the commencement of oil exports from Atrush;
- All Atrush petroleum costs from the DOC date up to the commencement of oil exports from Atrush, which is defined as when the Final Completion Certificate for the Atrush Feeder Pipeline ("FCC") for the Feeder Pipeline is issued, are to be paid by the Non-Government Contractors and a defined portion of the KRG's share of these costs will be repaid through an accelerated petroleum cost recovery arrangement from the sale of future oil production from Atrush; and
- Feeder Pipeline costs and the balance of the Atrush petroleum costs incurred by the Non-Government Contractors on behalf of the KRG that are not covered by the accelerated petroleum cost recovery arrangement will be repaid by the KRG within 2 years from issuance of the FCC for the Feeder Pipeline. The FCC was subsequently issued on October 31, 2017.



## 8. Termination Provisions

Under the terms of the Atrush Block PSC the KRG shall have the right to terminate the contract on not less than 90 days' prior notice in the event that the Contractor Group fails to meet any material financial obligations, does not carry out the required drilling and seismic acquisition program during the First Sub-Period or the Second Sub-Period, interrupts production for more than 90 consecutive days with no cause or acceptable justification, and provided such default is not cured with the 90 day notice period. In certain circumstances, the rights and interests of an individual member of the Contractor Group will be terminated if such individual member is subject to a change of control.

Any time prior to the Development Period the Contractor Group has the right to terminate the Atrush Block PSC upon 30 days' prior notice to the KRG. During the Development Period, the Contractor Group has the right to terminate the Atrush Block PSC at any time by surrendering all production areas provided its current obligations have been satisfied in accordance with the terms of the Atrush Block PSC.

### **Risk Factors**

Shamaran Petroleum Corp. is engaged in the exploration, development and production of crude oil and natural gas 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 materialise 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 business 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, nationalisation, 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 materialise 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 recognised 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 a constitution which was ratified in October 2005 and came in effect in 2006. The Iraq constitution 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 Iraq constitution to the laws of the region.

The delineation of powers under the Iraq constitution has been subject to different interpretations which has resulted in a number of outstanding political issues and differences between the Iraq federal government and the KRG including, but not limited to, the validity of production sharing contracts issued by the Kurdistan Regional Government of Iraq 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 assets and business 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 assets 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 Iraq federal government. Changes to the incumbent 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."

International boundary disputes: Although the Kurdistan Region of Iraq is recognised by the Iraq constitution as a semi-autonomous region, its geographical extent is neither defined in the Iraq constitution nor agreed in practice between the Federal Government and the Kurdistan Regional Government. There are ongoing 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 is not within the "disputed territories".

### ***Industry and Market Risks***

Exploration, development and production risks: ShaMaran's business is subject to all the risks and hazards inherent in businesses involved in the exploration, development, production and marketing of oil and natural gas, 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 and natural gas 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 and gas resources and reserves. Future oil and gas exploration 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 maximising 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 near future due to global supply and demand balances, actions taken by the Organization of the Petroleum Exporting Countries ("OPEC"), and ongoing global credit and liquidity concerns. This volatility may affect the Company's ability to obtain 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 Iraq constitution 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 parliament to govern the future organisation and management of Iraq's petroleum industry 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 of the Kurdistan Region - Iraq (the "Oil and Gas Law") to be consistent with the role granted to the regions in the Iraq constitution 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.

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. The Kurdistan National Assembly passed the Oil and Gas Law which is declared to be supported by the Iraq constitution and provides the foundation for economic development of the largely untapped resources of Kurdistan. Under the Oil and Gas Law domestic and international investors in oil and gas can come to Kurdistan, generate revenue and provide employment and training opportunities for citizens in the region. Consistent with the Iraq constitution the Oil and Gas Law requires Kurdistan to share revenue with the Iraq federal government and other regions of Iraq, just as other areas of Iraq will share oil revenues with Kurdistan. The KRG has signed a number of PSCs with international oil companies based on the oil and gas law passed in August 2007. The Company currently has an interest in the Atrush Block PSC which is within the jurisdiction of the Oil and Gas Law.

The Iraq oil ministry has historically disputed the validity of the KRG's production sharing contracts and, as a result indirectly, the Company's right and title to its oil and gas assets. The KRG is disputing the claims and has stated that the contracts are compliant with the Iraq constitution. Currently there is no assurance that the PSCs agreed with the KRG are enforceable or binding in accordance with ShaMaran's interpretation of their terms or that, if breached, the Company would have remedies.

Although the Company conducts title reviews prior to acquiring an interest in a PSC, such reviews do not guarantee or certify that an unforeseen defect in the chain of title will not arise that may call into question ShaMaran's interest in the Atrush Block PSC.

The Company believes that it has valid title to its oil and gas assets and the right to explore for and produce oil and gas from such assets under the Atrush Block PSC. However, should the Iraq federal government pursue and be successful in a claim that the production sharing contracts agreed with the KRG are invalid, or should any unfavourable changes develop which impact on the economic and operating terms of the Atrush Block PSC, it could result in adverse effects to the Company's business including, but not limited to, impairing the Company's claim and title to assets held, and or increasing the obligations required, under the Atrush Block PSC.

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 exploration and development in Kurdistan specifically.

ShaMaran conducts its operations pursuant to the rights granted under the Atrush Block PSC and related licenses, permits and other authorisations. 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 its PSCs. However, it is possible that the arrangements under the PSCs may be overridden or negatively affected by the enactment of any future oil and gas or tax law in Iraq or 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.

Marketing, markets and transportation:

The export of oil and gas and payments relating to such exports from Kurdistan remains subject to uncertainties which could negatively impact on ShaMaran's ability to export oil and gas and receive payments relating to such exports. 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 export and sell oil and gas and receive full payment for all sales of oil and gas.

Payments for oil exports: Companies who have exported oil from Kurdistan since the year 2009 have reported significant amounts outstanding for past oil exports. Cash payments to oil companies for oil exported from Kurdistan has been under control of the KRG since the beginning of exports in 2009. Since February 1, 2016, when the KRG announced interim measures whereby monthly payments to oil companies would be made based on an agreed mechanism, the KRG has established a relatively consistent record of delivering regular monthly payments to oil companies for their entitlement revenues in respect of monthly petroleum production, with producers' most recent reports indicating having received in February 2019 full payments for November 2018 oil exported. Nevertheless, there remains a risk that the Company may face significant delays in the receipt of cash for its entitlement share of future oil exports.

Paying interest: On November 7, 2016 the KRG exercised its back-in right under the terms of the Atrush PSC and acquired a 25% participating interest. Upon the commencement of oil production exports from Atrush the KRG is required to pay its share of project development costs. There is a risk that the Contractors may be exposed to fund the KRG share of future project development costs.

Default under the Atrush Block PSC and Atrush JOA: The Atrush Block PSC and Atrush JOA 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 Atrush JOA definition of default includes payment default and failure to provide security as required under the Atrush JOA. 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 the Atrush Block PSC and or Atrush 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 of Iraq 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 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 PSC: The Atrush Block PSC definition of "change of control" in a Contractor includes a change of voting majority in the Contractor, or in a parent company, provided the value of the interest in the Atrush field represents more than 50% of the market value of assets in the Company. Due to the limited amount of other assets held by the Company this will apply to a change of control in GEP or any of its parent companies. Change of control requires the consent of KRG or it will trigger a default under the PSC.

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

Shared ownership and dependency on partners: ShaMaran's operations are to a significant degree conducted together with one or more partners through contractual arrangements with the execution of the operations being undertaken by the operator in accordance with the terms of the Atrush JOA. 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 a number of 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, along with the Company's other partners, may have different opinions 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 and the terms of the Atrush 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 / labour 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 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 Atrush Block PSC to recover through cash payments from future petroleum production. No such audit has yet taken place. 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 partners in the Atrush Block PSC. If such parties were to breach the terms of the Atrush Block PSC or any other documents relating to the Company's interest in the Atrush Block PSC, it could cause the KRG to revoke, terminate or adversely amend the Atrush Block PSC.

The Atrush JOA and the Atrush 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 exploration and development activities are dependent on the availability of third party services, drilling and related equipment and qualified staff in the areas 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 exploration and development activities.

Early stage of production: ShaMaran has conducted oil and gas exploration and development activities in Kurdistan for approximately nine years. The current operations are in an early production stage and there can be no assurance that ShaMaran's operations 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 realise 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 operating and development costs and its commitments under the bond agreement 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.

Substantial capital requirements: ShaMaran anticipates making substantial capital expenditures in the future for the acquisition, exploration, development and production of oil and gas. 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 exploration and development activities and may not be able to take advantage of acquisition opportunities. If ShaMaran or any of its partners in the oil asset are unable to complete minimum work obligations on the Atrush Block PSC, this PSC could be relinquished under applicable contract terms.

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: The Company has entities incorporated and resident for tax purposes in Canada, the Cayman Islands, the Kurdistan Region of Iraq, the Netherlands, Switzerland and the United States of America. Changes in the tax legislation or tax practices in these jurisdictions may increase the Company's expected future tax obligations associated with its activities in such jurisdictions.

Commodity price risk: The prices that the Company receives for its oil and gas production may have a significant impact on the Company's revenues and cash flows provided by operations. World prices for oil and gas are characterised 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 and gas 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 and gas production could adversely affect the amount of funds available for capital reinvestment purposes as well as impair the value of the Company's oil and gas assets.

Foreign currency risk: The substantial portion of the Company's operations 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: Where counterparty defaults on its contractual obligations the Company could incur 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 recognised 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 oil and gas exploration companies the Company raises financing for its exploration and development activities in discrete tranches to finance its activities for limited periods. The Company seeks to raise additional funding as and when required. The Company anticipates making substantial capital expenditures in the future for the acquisition, exploration, development and production of oil and gas and as the Company's project moves further into the development stage, 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 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 a number of 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 PSC / bond agreements in event of default scenario: Should ShaMaran default its obligations under the bond agreement ShaMaran may also not be able to fulfil its obligations under the Atrush PSC and or Atrush JOA, with the effect that these contracts may be terminated or limited. In addition, should ShaMaran default its obligations under the Atrush PSC and or Atrush JOA, with the effect that these contracts may be terminated or limited, ShaMaran may also default in respect of its obligations under the bond agreement. 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: ShaMaran's ability to make scheduled payments on or to refinance its obligations under the bond agreement 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 which could, among other things, result in an event of default under the bond agreement.

Significant operating and financial restrictions: The terms and conditions of the bond agreement contains restrictions on ShaMaran's and the Guarantors' activities which restrictions may prevent ShaMaran and the 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 under the bond agreement.

Mandatory prepayment events: Under the terms of the bond agreements the 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 20.10% or (ii) an event of default occurs under the bond agreement. 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 bonds which could, among other things, result in an event of default under the bond agreement.

## **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, 2018. The information is presented on a consolidated basis for ShaMaran.

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

On February 13, 2019 the Company received from McDaniel a detailed property report as of December 31, 2018. Total discovered oil in place is 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, with Atrush Block gross 2P reserves estimated at 106 MMbbls and Atrush Block gross 2C contingent resource estimated at 268 MMbbls.

For further information please refer to the Company's Form 51-101F1 *Statement of Reserves Data and Other Oil and Gas Information*, Form 51-101F2 *Report on Reserves Data by Independent Qualified Reserves Evaluator or Auditor* and Form 51-101F3 *Report of Management* filed under the Company's profile on SEDAR at [www.sedar.com](http://www.sedar.com) posted on February 19, 2019 and attached hereto as Schedules A, B and C.

## **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 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).

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 Directors, officers, employees and consultants. As of the date of this AIF, the Company has outstanding options to purchase 25,000,000 Common Shares at exercise price of \$0.115 per share with a term expiring January 19, 2020.

At December 31, 2018 the Company had an aggregate of 2,158,631,534 common shares issued and outstanding. As at the date of this AIF, there were an aggregate of 2,160,631,534 common shares issued and outstanding.

### **Dividends**

To date the Company has not paid dividends on its common shares and has no plans to pay dividends in the near future. In accordance with the Bond Agreement the Company is prohibited from distributing dividends. Any decision to pay dividends in the future will be based on 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 in Sweden under the trading symbol "SNM".

The following table sets out, for the calendar periods indicated, the high and low closing prices and trading volumes for the common shares as reported on the TSX.V.

Month	TSX.V (Toronto)			OMX (Stockholm)		
	High(CAD)	Low(CAD)	Volume	High(SEK)	Low(SEK)	Volume
December 2018	0.095	0.065	1,329,840	0.649	0.57	40,619,252
November 2018	0.115	0.065	1,503,200	0.869	0.567	100,900,000
October 2018	0.14	0.10	656,713	0.94	0.657	106,310,000
September 2018	0.145	0.11	1,869,084	1.048	0.86	85,712,160
August 2018	0.145	0.12	1,746,226	1.014	0.81	12,661,000
July 2018	0.13	0.10	4,646,670	0.855	0.721	75,248,144
June 2018	0.125	0.085	2,000,529	0.839	0.52	338,550,000
May 2018	0.09	0.07	1,608,928	0.595	0.471	66,457,252
April 2018	0.085	0.07	1,270,225	0.57	0.435	51,488,032
March 2018	0.085	0.065	5,192,950	0.495	0.427	39,202,984
February 2018	0.08	0.06	7,599,465	0.497	0.399	39,397,512
January 2018	0.08	0.065	1,661,263	0.555	0.427	54,319,232

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

The Company has no securities currently held in escrow.

## ITEM 8 - DIRECTORS AND OFFICERS

### Name, Address and Occupation

The Board of Directors of the Company is currently comprised of five directors who are elected annually and whose term of office will expire at the Company's annual meeting. Each director holds office 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 and countries of residence of each of the directors and executive 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, 2018 are set forth in the following table:

<b>Name, province or state and country of residence</b>	<b>Current position(s) held in the Company</b>	<b>Principal Occupation during the Past Five Years</b>
Keith C. Hill Florida, USA	Chairman and Director since February 19, 2007; Chairman of Compensation Committee; Member of Corporate Governance Committee; Member of Reserves Committee	President, CEO and director of Africa Oil Corp.; Director of Eco (Atlantic) Oil & Gas Ltd., Africa Energy Corp. and TAG Oil Corp. Prior to his appointment as CEO of Africa Oil Corp., Mr. Hill was President and CEO of BlackPearl Resources Inc. and of Valkyries Petroleum Corp.
Chris Bruijnzeels Geneva, Switzerland	President, Chief Executive Officer and Director since January 19, 2015	Mr. Bruijnzeels is a qualified Professional Engineer with over 31 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 to the time of his appointment as a Member of the Board of ShaMaran on January 19, 2015.
C. Ashley Heppenstall* Hong Kong	Director from January 19, 2015 until December 31, 2018; Chairman of the Audit Committee; Member of Compensation Committee; and Member of Reserves Committee	Mr. Heppenstall is a graduate of Durham University where he obtained a degree in Mathematics. From 2002 until his retirement in 2015, Mr. Heppenstall was President and Chief Executive Officer of Lundin Petroleum AB. Mr. Heppenstall is a director of Lundin Petroleum AB, Lundin Gold Inc. (lead director), Africa Energy Corp., Etrion Corporation, Filo Mining Corp. and International Petroleum Corporation and was, from May 2010 until May 2013, a director of Vostok Nafta Investment Ltd., a corporation traded on the Nasdaq OMX Nordic Exchange in Stockholm
Brian D. Edgar British Columbia, Canada	Director since March 27, 2007; Chairman of the Corporate Governance and Nominating Committee; Member of the Audit Committee; Member of the Compensation Committee	Chairman of Silver Bull Resources, Inc.; Director of a number of other publicly traded companies.
Terry L. Allen	Director since June 25, 2018	President of Pivotal Capital Advisory Group. Ms. Allen has worked in corporate and investment banking for over 30 years. She has served on several corporate and not-for-profit boards for more than 20 years and she has just completed her term on the Alberta Securities Commission. Ms. Allen holds a B. Admin degree from the University of Regina, a Chartered Financial Analyst (CFA) designation and the ICD.D designation from the Institute of Corporate Directors.
Brenden Johnstone Geneva, Switzerland	Chief Financial Officer since December 14, 2009	Mr. Johnstone is a Chartered Professional Accountant of Canada and was previously the Chief Financial Officer of Avante Petroleum S.A.

\*Mr. Ashley Heppenstall resigned from the Board with effect from December 31, 2018 to conform with industry corporate governance recommendations regarding the maximum number of non-executive director appointments per individual and was replaced by Michael S. Ebsary effective January 1, 2019. Mr Ebsary's principal occupations within the preceding five years, as at the date of this AIF 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
Michael S. Ebsary	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.

Notes:

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, 2018:

Audit Committee	Compensation Committee	Corporate Governance and Nominating Committee	Reserves Committee
Ashley Heppenstall* Brian D. Edgar Terry L. Allen	Keith C. Hill* Brian D. Edgar Ashley Heppenstall	Brian D. Edgar* Keith C. Hill Terry L. Allen	Keith Hill* Terry L. Allen Ashley Heppenstall

*\*Chairman of the committee.*

Following the resignation on December 31, 2018 of Mr. Heppenstall and the appointment of Mr. Ebsary thereafter the four standing committees of the Board were re-constituted with effect from January 1, 2019, and remain up to the date of this AIF, as follows:

Audit Committee	Compensation Committee	Corporate Governance and Nominating Committee	Reserves Committee
Terry L. Allen* Brian D. Edgar Michael S. Ebsary	Keith C. Hill* Brian D. Edgar Michael S. Ebsary	Brian D. Edgar* Keith C. Hill Terry L. Allen	Keith Hill* Terry L. Allen Michael S. Ebsary

*\*Chairman of the committee.*

### ***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 4,333,940 Common Shares, representing approximately 0.20% 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, may participate in the acquisition, exploration and development of natural resource properties, thereby allowing for 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**

### **Audit Committee Charter**

The Audit Committee 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, 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 D to this AIF.

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

The current members of the Audit Committee are Terry L. Allen (Chair), Brian D. Edgar and Michael S. Ebsary. All current members are considered independent. 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**

Ms. Allen is President of Pivotal Capital Advisory Group and has worked in corporate and investment banking for over 30 years. She has served on several corporate and not-for-profit boards for more than 20 years, is currently completing her term on the Alberta Securities Commission (Audit Committee Chair) and is a member of the Calgary Airport Authority Board (Audit Committee Chair), the B3 Canada Advisory Board, the Levene Graduate School of Business Advisory Board (University of Regina), and the Salvation Army Advisory Board in Calgary. Ms. Allen holds a B. Admin degree from the University of Regina, a Chartered Financial Analyst designation and the ICD.D designation from the Institute of Corporate Directors.

Mr. Edgar is a retired corporate and securities lawyer and mining executive with a Law Degree from the University of British Columbia with approximately 40 years of public company experience. Mr. Edgar practiced in corporate/securities law in private practice for 16 years and is co-owner of a private investment and venture capital firm and as such, has been involved in the financial analysis of many projects and companies. Mr. Edgar has served as an executive officer, director and audit committee chair of several other public resource-based companies. Through his education and experience, Mr. Edgar has experience overseeing and assessing the performance of companies and public accountants with respect to the preparation, auditing and evaluation of financial statements.

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.

### 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 National Instrument 52-110 - Audit Committees ("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, 2018 and December 31, 2017.

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>
2018	90,372	12,725	Nil	Nil
2017	74,821	12,911	Nil	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.

On January 30, 2017 the Company sold on a private placement basis an aggregate of 360,000,000 of its common shares at a price of CAD 0.10 (SEK 0.67). Two insiders of the Company, Lorito Holdings S.à.r.l. and Zebra Holdings & Investments S.à.r.l., companies owned by the Lundin Family Trust, directly or indirectly purchased a total of 60,448,239 common shares under the private placement, constituting a "related party transaction" as defined under Multilateral Instrument 61-101 ("MI 61-101").

In connection with the Company's \$240 million senior bond issue completed in July 2018, Nemesia S.a.r.l. ("Nemesia"), a private company controlled by a trust settled by the estate of the late Adolf H. Lundin, agreed to guarantee the Company's obligations under the ShaMaran Bonds up to an equivalent of one year of bond interest (the "Liquidity Guarantee"). In exchange for the Liquidity Guarantee the Company agreed to issue an initial 2,000,000 common shares to Nemesia for providing the Liquidity Guarantee and a further 50,000 shares of the Company for each US\$500,000 drawdown per month until the drawn amount is repaid. As at the date of this AIF, the Company has issued a total of 2,000,000 common shares on January 23, 2019 to Nemesia pursuant to the Liquidity Guarantee.

## **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, 2018 (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, 2018 and remain in effect during 2018, 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:

- A share purchase agreement dated December 26, 2018 and made with effect from January 1, 2018 between the Company and Marathon International Oil Company, whereby the Company will acquire 100% of the shares of MOKDV. MOKDV owns a 15% participating interest in the Atrush Block. Certain conditions to closing remained outstanding at the date of this AIF.
- A sale and purchase agreement between the Company and TAQA dated December 26, 2018 and made with effect from January 1, 2018 (the "APA"), whereby the Company will sell 7.5% of MOVKD's 15% participating interest in the Atrush Block to TAQA, subject to final closing adjustments. TAQA has agreed to contribute to the purchase price under the APA concurrently with the closing of the Company's acquisition of MOKDV's share capital under the SPA. Pending closing of the APA, TAQA shall participate economically in respect of its share of the participating interest. Certain conditions to closing remained outstanding at the date of this AIF.
- The ShaMaran Bond Agreement, being the July 3, 2018 agreement between ShaMaran Petroleum Corp and Nordic Trustee AS, and as amended February 25, 2019, in its capacity as trustee for the bondholders, describing the rights and obligations associated with the senior bonds issued by ShaMaran on July 5, 2019 and which mature on July 5, 2023.

## **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.

Mr. Kevin Hisko, the Corporate Secretary of the Company was, during fiscal 2018, a partner at McCullough O'Connor Irwin LLP, a law firm that provides legal services to the Company. On June 1, 2018, McCullough O'Connor Irwin LLP merged with Bennett-Jones LLP. As of the date hereof, the associates and partners of Bennett-Jones LLP, as a group, beneficially own, directly or indirectly, less than 1% of the outstanding Common Shares, if any. Mr. Hisko subsequently retired from practice with Bennett-Jones in February 2019.

#### **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, 2018.

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, 2018**

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**Part 1                      Date of Statement**

**Item 1.1                      Relevant Dates**

1.        Date of Statement:        February 13, 2019
2.        Effective Date:        December 31, 2018
3.        Preparation Date:        February 15, 2019

**Part 2                      Disclosure of Reserves Data**

ShaMaran Petroleum Corp., herein after referred to as “ShaMaran” or the “Company”, has as of December 31, 2018 reserves relating entirely to the Company’s interest in the Atrush Block, its sole oil and gas property, located in the Kurdistan Region of Iraq (“Kurdistan”). ShaMaran currently has a 20.1 percent working interest in the Block and is continuing to fund expenditure on that basis. 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, 2018.

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, 2018 (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.....	4,839	2,695	—	—	—	—	—	—
Proved developed non— producing .....	—	—	—	—	—	—	—	—
Proved undeveloped .....	3,402	1,940	484	272	—	—	—	—
<b>Total proved reserves .....</b>	<b>8,241</b>	<b>4,635</b>	<b>484</b>	<b>272</b>	—	—	—	—
Probable .....	11,603	5,761	740	369	—	—	—	—
<b>Total Proved Plus Probable Reserves .....</b>	<b>19,844</b>	<b>10,397</b>	<b>1,224</b>	<b>641</b>	—	—	—	—
Possible .....	10,227	3,256	776	267	—	—	—	—
<b>Total Proved Plus Probable Plus Possible Reserves .....</b>	<b>30,071</b>	<b>13,653</b>	<b>2,000</b>	<b>908</b>	—	—	—	—
<u>Total</u>								
Proved developed producing.....	4,839	2,695	—	—	—	—	—	—
Proved developed non— producing .....	—	—	—	—	—	—	—	—
Proved undeveloped .....	3,402	1,940	484	272	—	—	—	—
<b>Total proved reserves .....</b>	<b>8,241</b>	<b>4,635</b>	<b>484</b>	<b>272</b>	—	—	—	—
Probable .....	11,603	5,761	740	369	—	—	—	—
<b>Total Proved Plus Probable Reserves .....</b>	<b>19,844</b>	<b>10,397</b>	<b>1,224</b>	<b>641</b>	—	—	—	—
Possible .....	10,227	3,256	776	267	—	—	—	—
<b>Total Proved Plus Probable Plus Possible Reserves .....</b>	<b>30,071</b>	<b>13,653</b>	<b>2,000</b>	<b>908</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/m3 and Heavy Oil is between 920 and 1000 kg/,3.
- (4) "Gross" reserves refer to ShaMaran's working interest share before deducting royalties and are based on a 20.1 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, 2018 (Forecast Prices & Costs)

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
Reserves Category	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	
<u>Irag</u>											
Proved developed producing .	63,551	60,517	57,776	55,296	53,049	63,551	60,517	57,776	55,296	53,049	21.44
Proved developed non- producing.....	-	-	-	-	-	-	-	-	-	-	-
Proved undeveloped .....	65,926	57,043	49,748	43,683	38,586	65,926	57,043	49,748	43,683	38,586	22.49
<b>Total proved reserves .....</b>	<b>129,476</b>	<b>117,560</b>	<b>107,523</b>	<b>98,979</b>	<b>91,635</b>	<b>129,476</b>	<b>117,560</b>	<b>107,523</b>	<b>98,979</b>	<b>91,635</b>	<b>21.91</b>
Probable .....	216,696	173,314	141,408	117,354	98,830	216,696	173,314	141,408	117,354	98,830	23.07
<b>Total Proved Plus Probable</b>											
<b>Reserves.....</b>	<b>346,173</b>	<b>290,875</b>	<b>248,931</b>	<b>216,333</b>	<b>190,465</b>	<b>346,173</b>	<b>290,875</b>	<b>248,931</b>	<b>216,333</b>	<b>190,465</b>	<b>2.55</b>
Possible.....	92,349	64,642	47,807	36,980	29,656	92,349	64,642	47,807	36,980	29,656	13.57
<b>Total Proved Plus Probable</b>											
<b>Plus Possible Reserves ....</b>	<b>438,521</b>	<b>355,516</b>	<b>296,739</b>	<b>253,312</b>	<b>220,120</b>	<b>438,521</b>	<b>355,516</b>	<b>296,739</b>	<b>253,312</b>	<b>220,120</b>	<b>20.38</b>
<u>Total</u>											
Proved developed producing	63,551	60,517	57,776	55,296	53,049	63,551	60,517	57,776	55,296	53,049	21.44
Proved developed non- producing.....	-	-	-	-	-	-	-	-	-	-	-
Proved undeveloped .....	65,926	57,043	49,748	43,683	38,586	65,926	57,043	49,748	43,683	38,586	22.49
<b>Total proved reserves .....</b>	<b>129,476</b>	<b>117,560</b>	<b>107,523</b>	<b>98,979</b>	<b>91,635</b>	<b>129,476</b>	<b>117,560</b>	<b>107,523</b>	<b>98,979</b>	<b>91,635</b>	<b>21.91</b>
Probable .....	216,696	173,314	141,408	117,354	98,830	216,696	173,314	141,408	117,354	98,830	23.07
<b>Total Proved Plus Probable</b>											
<b>Reserves.....</b>	<b>346,173</b>	<b>290,875</b>	<b>248,931</b>	<b>216,333</b>	<b>190,465</b>	<b>346,173</b>	<b>290,875</b>	<b>248,931</b>	<b>216,333</b>	<b>190,465</b>	<b>2.55</b>
Possible.....	92,349	64,642	47,807	36,980	29,656	92,349	64,642	47,807	36,980	29,656	13.57
<b>Total Proved Plus Probable</b>											
<b>Plus Possible Reserves ....</b>	<b>438,521</b>	<b>355,516</b>	<b>296,739</b>	<b>253,312</b>	<b>220,120</b>	<b>438,521</b>	<b>355,516</b>	<b>296,739</b>	<b>253,312</b>	<b>220,120</b>	<b>20.38</b>

#### Notes:

- (1) Based on a 20.1 percent Company working interest.
- (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, 2019.
- (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.
- (9) The net present values in the table above are exclusive of the following recoverable assets due to ShaMaran as of December 31, 2018:
  - Atrush Development Cost Loan (due from KRG) of \$7.136 million
  - Atrush Feeder Pipeline Cost Loan of \$4.718 million
  - Accounts receivable on Atrush deliveries of \$14.531 million

## 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 ..	285,947	-	121,455	33,948	1,067	129,476	-	129,476
Total Proved Plus Probable Reserves ...	638,728	-	251,047	39,990	1,518	346,173	-	346,173
Total Proved Plus Probable Plus Possible Reserves.....	854,625	-	374,438	39,990	1,676	438,521	-	438,521
<u>Total</u>								
Total proved reserves ..	285,947	-	121,455	33,948	1,067	129,476	-	129,476
Total Proved Plus Probable Reserves ...	638,728	-	251,047	39,990	1,518	346,173	-	346,173
Total Proved Plus Probable Plus Possible Reserves.....	854,625	-	374,438	39,990	1,676	438,521	-	438,521

#### Notes:

- (1) Revenue comprises cost oil and profit oil revenue.
- (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	101,558	21.91
	Heavy Oil	5,966	21.91
	Conventional Natural Gas	—	—
	Natural Gas Liquids	—	—
	<b>Total</b>	<b>107,523</b>	<b>21.91</b>
Proved Plus Probable Reserves.....	Light and Medium Crude Oil	234,469	22.55
	Heavy Oil	14,462	22.55
	Conventional Natural Gas	—	—
	Natural Gas Liquids	—	—
	<b>Total</b>	<b>248,931</b>	<b>22.55</b>
Proved Plus Probable Plus Possible Reserves ..	Light and Medium Crude Oil	278,234	20.38
	Heavy Oil	18,505	20.38
	Conventional Natural Gas	—	—
	Natural Gas Liquids	—	—
	<b>Total</b>	<b>296,739</b>	<b>20.38</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, 2018 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, 2018, 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)	Inflation Rates (%/Year)
2018 achieved price sales price	70.24	15.72	54.52	N/A
2019 .....	64.50	15.43	49.07	2.00
2020 .....	67.90	15.43	52.47	2.00
2021 .....	70.70	15.43	55.27	2.00
2022 .....	73.70	15.43	59.87	2.00
2023 .....	75.30	15.43	59.87	2.00
2024 .....	76.70	15.43	61.27	2.00
2025 .....	78.30	15.43	62.87	2.00
2026 .....	79.80	15.43	64.37	2.00
2027 .....	81.40	15.43	65.97	2.00
Inflation after 2027 .....				2.00

## Notes:

(1) Brent price forecast based on the McDaniel January 1, 2019 price forecast.

(2) Atrush field price is adjusted for quality differential, transportation tariffs and marketing fees and is based on ShaMaran's current marketing agreement of \$15.43/bbl.

## 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, 2017 to December 31, 2018 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, 2017	7,237	12,385	19,622	282	745	1,026	-	-	-
Plus:	-	-	-	-	-	-	-	-	-
Extensions	576	678	1,254	-	-	-	-	-	-
Improved recovery	-	-	-	-	-	-	-	-	-
Technical revisions	2,044	(1,460)	583	202	(5)	198	-	-	-
Discoveries	-	-	-	-	-	-	-	-	-
Acquisitions	-	-	-	-	-	-	-	-	-
Less:									
Dispositions	-	-	-	-	-	-	-	-	-
Economic factors	-	-	-	-	-	-	-	-	-
Production	(1,616)	-	(1,616)	-	-	-	-	-	-
Ending balance – December 31, 2018	8,241	11,603	19,844	484	740	1,224	-	-	-

Notes:

(1) Gross reserves are based on a 20.1 percent Company working interest.

(2) Reserves reconciliation for year ended December 31, 2018 was based on forecast prices and costs.

## Part 5 Additional Information Relating to Reserves Data

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.

The current target of the Atrush development is producing medium gravity oil reserves. Due to residual uncertainties regarding the development of the heavy oil resources, final development planning and the associated investment decision for these resources is pending.

The Extended Well Testing of the heavy oil resources using a temporary dedicated Production Facility is currently underway at the AT-3 well. Only a very small percentage of Heavy oil resources, associated with the AT-3 production are reported as reserves. Successful conclusion of heavy oil extended well test will enable development planning to be finalized and associated heavy oil resources transferred to "reserve" status.

### 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 and December 31, 2018 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	—	—

Probable Undeveloped	First		First		First	
	Attributed	Booked	Attributed	Booked	Attributed	Booked
	(Mbbl)	(Mbbl)	(Mbbl)	(Mbbl)	(MMcf)	(MMcf)
Prior to 2015 .....	—	7,779	—	—	—	—
2016 .....	—	7,779	—	2,394	—	—
2017 .....	3,684	9,779	—	745	—	—
2018 .....	1,254	9,654	—	740	—	—

## **Item 5.2            Significant Factors or Uncertainties**

McDaniel conducted its independent reserves evaluation on ShaMaran's reserves as at December 31, 2018. 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	Proved Plus Probable Reserves	Proved Plus Probable Plus Possible Reserves
	\$ millions	\$ millions	\$ millions
<u>Iraq (and Total)</u>			
2019 .....	21.8	22.1	22.1
2020 .....	7.5	13.2	13.2
2021 .....	4.7	4.7	4.7
Thereafter .....	-	-	-
<b>Total Future Development Costs .....</b>	<b>33.9</b>	<b>40.0</b>	<b>40.0</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> .....	5.0	—	—	5.0
Non-producing <sup>(4)</sup> .....	3.0	—	—	3.0
<b>Total Gross Wells .....</b>	<b>8.0</b>	<b>—</b>	<b>—</b>	<b>8.0</b>
<b>Net Wells<sup>(2)</sup></b>				
Producing <sup>(3)</sup> .....	1.0	—	—	1.0
Non-producing <sup>(4)</sup> .....	0.6	—	—	0.6
<b>Total Net Wells .....</b>	<b>1.6</b>	<b>—</b>	<b>—</b>	<b>1.6</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.
- (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.

The Company currently holds a 20.1% direct interest in the Atrush Block PSC. As announced in ShaMaran's December 27, 2018 news release, the Company has signed agreements with Marathon Oil KDV B.V. and TAQA Atrush B.V to increase the Company's interest in the Atrush Block to 27.6%. At the Preparation Date of this Form 51-101 F1 certain conditions to close remained outstanding. Details of the Atrush Block are provided below.

**Atrush Block**

***Production Facility and Pipeline***

The 30,000 bopd Atrush Phase 1 Production Facilities ("Production Facility"), was fully functional and running in 2018 achieving in excess of nameplate capacity on several occasions. In 2019 it is planned to run an extended well test with temporary facilities, which will increase the processing capacity temporarily to 35,000 BPD. In addition to that, the installation of an early production facility ("EPF") with a capacity of 20,000 BPD is budgeted. The PSAT export system and the spur pipeline to the tie-in point on the main export pipeline are capable to handle such increased volumes.

***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 Butmah 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.

Plans for 2019 include:

- drilling and completion of two more upper Jurassic production wells targeting medium gravity oil
- drilling and completion of one new lower Jurassic Mus producer also in the medium gravity oil leg.
- Recompletion of CK-6 as a medium oil production well which will initially be left offline to monitor the AT-3 Extended Well Testing and then produced from Q2 2019.

### **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 the 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. The facility required to undertake the Heavy Oil Extended Well Testing (HOEWT) has been installed and heavy oil extended well testing is expected to start during February 2019.

## **Item 6.2 Properties With No Attributed Reserves**

The Company held no properties through the year ended December 31, 2018 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
Kurdistan Region of Iraq (including seven wells and production facilities)	12,986	3,420

The table above shows the Company's 20.1% participating interests at December 31, 2018 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.

The Company is not expecting any abandonment costs in the next three years.

**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, 2018			
	Acquisition Costs \$ millions	Exploration Costs \$ millions	Development Costs \$ millions	Other Costs \$ millions
Atrush Block	0.0	0.8	17.1	0.0
TOTAL	0.0	0.8	17.1	0.0

**Item 6.7 Exploration and Development Activities**

**Summary of Exploration and Development wells drilled in 2018**

Iraq (and Total)	Exploration wells (wells)	Stratigraphic Test wells (wells)	Production wells (wells)	Service wells (wells)	Total (wells)
<b>Gross Wells<sup>(1)</sup></b>					
<b>Total Gross Wells .....</b>	—	—	1.0	1.0	2.0
<b>Net Wells<sup>(2)</sup></b>					
<b>Total Net Wells.....</b>	—	—	0.2	0.2	0.4

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***

The 30,000 bopd Atrush Phase 1 Production Facilities ("Production Facility"), was fully functional and running in 2018 achieving in excess of nameplate capacity on several occasions. In 2019 it is planned to run an extended well test with temporary facilities, which would increase the processing capacity temporarily to 35,000 BPD. In addition to that the installation of an early production facility ("EPF") with a capacity of 20,000 BPD is budgeted. The PSAT export system and the spur pipeline to the tie-in point on the main export pipeline are capable to handle such increased volumes.

***Development Wells***

In 2017, the CK-7 well was drilled and cased with testing and completion taking place in early 2018. During 2018 the water disposal well CK-9 WDW and the producer CK-10 were drilled, tested and completed. CK-7 and CK-10 were tied into the facilities and started producing late in July 2018.

**Item 6.8 Production Estimates**

First oil was produced on July 3<sup>rd</sup> 2017. The operator reported a total exported field production of 8.083 MMbbl for the year 2018 or a company share of 1.625 MMbbl. The forecast for 2019 is:

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

Iraq (and Total)	Light and Medium Oil (Mbbbl) Year 2019	Heavy Oil (Mbbbl) Year 2019	Conventional Natural Gas (MMcf) Year 2019
<b>Proved</b>			
Atrush	2,082.8	122.4	-
Total	<b>2,082.8</b>	<b>122.4</b>	-
<b>Probable</b>			
Atrush	75.1	-	-
Total	<b>75.1</b>	-	-
<b>Possible</b>			
Atrush	60.0	-	-
Total	<b>60.0</b>	-	-

Notes:

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

(2) Represents estimated production from January 1, 2019 to December 31, 2019

**Item 6.9 Production History**

Between July 3<sup>rd</sup> and December 31<sup>st</sup> 2017 the Atrush field operator TAQA reported an exported production of 3,336,632 bbl of medium gravity oil from the Atrush field. For the full year 2018 the exported production from the Atrush field reported by TAQA was 8,083,008 bbl of medium gravity oil.

## Appendix

### SUMMARY OF CONTINGENT RESOURCES AS OF DECEMBER 31, 2018

McDaniel has prepared for ShaMaran an assessment of the crude oil and conventional natural gas contingent resources as of December 31, 2018.

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 Block (see description on pages 12 and 13) crude oil and conventional natural gas contingent resources as of December 31, 2018 were estimated to be as follows:

Contingent Resources <sup>(2)(4)(5)</sup>	<u>Light &amp; Medium Oil (Mbbbl)<sup>(3)</sup></u>			<u>Heavy Oil (Mbbbl)<sup>(3)</sup></u>			<u>Conventional Natural Gas (MMcf)</u>		
	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)	53,187	10,691	N/A	104,673	21,039	N/A	25,018	5,029	N/A
Best Estimate (2C)	53,409	10,735	N/A	214,692	43,153	N/A	45,064	9,058	N/A
High Estimate (3C)	54,748	11,004	N/A	352,775	70,908	N/A	68,471	13,763	N/A
Riskd Best Estimate <sup>(4)</sup>	42,728	8,588	N/A	171,754	34,523	N/A	2,253	453	N/A

Notes:

- (1) Company gross interest resources are based on a 20.1 percent working interest share of the property gross resources.
- (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 GOGH: 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 80 percent for both Crude Oil types and 5 percent for the Conventional Natural Gas.
- (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 are classified as contingent with development unclarified and economic status undetermined as the associated project(s) are dependent upon the results of the Atrush Phase 1 development; this first phase of development should, together with further appraisal drilling, narrow the uncertainty in the contingent resources estimates and help determine, if their development is economic.



The reservoir in the Atrush field consists of fractured carbonates, which require production data for an optimized development plan. As such it was decided to develop the asset under a phased approach whereby information is collected during the first phase of development. This will aid in determining the best approach to the development of the remaining volume of discovered resources (contingent resources). As some of the parameters of development are not clear yet, these contingent resources have been classified as “development unclarified”. A larger development could have been implemented from early on, but without the proper assessment of production performance and narrowing of the uncertainty, the results would not have been optimized. As such it is our view that there is a high likelihood of future development phases proceeding to development and commercialization. Given the nature of the reservoir (containing both types of oil in developed reservoirs) the same chance of development has been applied.

The specific contingencies which prevent the classification of Atrush resources as reserves are largely the lack of information to understand both the drive mechanism, the contribution of the oil stored in the matrix of the reservoir rocks and the production characteristics of heavy oil production.. Long-term production from the Jurassic reservoirs, as well as the heavy oil extended well test in 2019 will aid narrowing the uncertainty significantly. The information collected from those activities will assist to decide on a concept for the next phase of development (“Phase 2”). Commercial decisions to select the best concept and implement Phase 2 will most likely be taken early 2020. Variation between the possible technical concepts is too large to provide a meaningful timeline for implementation of Phase 2. Even though the development of the contingent resources in the Atrush field is unclarified as yet, management estimates the cost of developing all of the full field contingent resources based on a conceptual development plan at \$1.1 billion resulting in a cost factor of approximately 4 USD per barrel of oil. The Company forecasts the development period for the full field contingent resources over a period of 4 years beginning with commercial production in the year 2020 and building up to full production capacity by the year 2022. The assumed recovery technology is vertical wells under natural water drive.

The Atrush Block prospective resources estimates have not been re-evaluated since December 31, 2013.

**SCHEDULE B**

FORM 51-101 F2

February 13, 2019

**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: **Revised 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, 2018. The reserves data are estimates of proved reserves and probable reserves and related future net revenue as at December 31, 2018 estimated using forecast prices and costs. The contingent resources data are risked estimates of volume of contingent resources as at December 31, 2018.
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 plus 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, 2018, 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 & Associates	Dec 31, 2018	Iraq	-	248,931		248,931

6. The following table sets forth the risk 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	Risk Volume
Contingent Resources - Development Unclassified	McDaniel & Associates	Dec 31, 2018	Iraq	8,588 Mbbl Light and Medium Oil; 34,522 Mbbl Heavy Oil; 452.9 MMcf Conventional Natural Gas

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.**



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

Calgary, Alberta, Canada  
February 13, 2019

**SCHEDULE C**

FORM 51-101 F3

## Form 51-101F3

(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, 2018, estimated using forecast prices and costs, and resources data which are estimates of contingent resources of the Company as at December 31, 2018.

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 51-101F1;
- (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, 2019**

/s/Chris Bruijnzeels  
Chris Bruijnzeels, President and Chief Executive Officer

/s/Michael Ebsary  
Michael Ebsary, Director

/s/Brenden Johnstone  
Brenden Johnstone, Chief Financial Officer

/s/Keith Hill  
Keith Hill, Director

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<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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February 13, 2019

**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: **Revised 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, 2018. The reserves data are estimates of proved reserves and probable reserves and related future net revenue as at December 31, 2018 estimated using forecast prices and costs. The contingent resources data are risked estimates of volume of contingent resources as at December 31, 2018.
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 plus 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, 2018, 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 & Associates	Dec 31, 2018	Iraq	-	248,931		248,931

6. The following table sets forth the risk 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	Risk Volume
Contingent Resources - Development Unclassified	McDaniel & Associates	Dec 31, 2018	Iraq	8,588 Mbbl Light and Medium Oil; 34,522 Mbbl Heavy Oil; 452.9 MMcf Conventional Natural Gas

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.**



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

Calgary, Alberta, Canada  
February 13, 2019

**SCHEDULE D**

**AUDIT COMMITTEE CHARTER**



## AUDIT COMMITTEE CHARTER

(Adopted by the Board of Directors on April 20, 2010, amended on March 9, 2017, and reviewed on March 7, 2019)

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### 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.

Each member 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

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.