# CASPIAN ENERGY INC.

Evaluation of Crude Oil Reserves East Zhagabulak Field, Kazakhstan Based on Forecast Prices and Costs As of December 31, 2013



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**Prepared For:** 

Caspian Energy Inc. 410, 396 – 11<sup>th</sup> Avenue SW Calgary, Alberta T2R 0C5

Prepared By:

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May 2014



# CASPIAN ENERGY INC. EVALUATION OF THE EAST ZHAGABULAK FIELD

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May 12, 2014

#### Caspian Energy Inc.

410, 396 - 11<sup>th</sup> Avenue SW Calgary, Alberta T2R 0C5

Attention: Mr. Brian Korney, CFO

Reference: Caspian Energy Inc. Evaluation of Crude Oil Reserves East Zhagabulak Field - Kazakhstan Based on Forecast Prices and Costs

Dear Sir:

Pursuant to your request, we have prepared an updated evaluation of the crude oil reserves and the net present values of these reserves for the East Zhagabulak Field in the Republic of Kazakhstan, as of December 31, 2013.

The future net revenues and net present values presented in this report were calculated using forecast prices and costs based on McDaniel & Associates Consultants Ltd. ("McDaniel & Associates") opinion of future crude oil prices at December 31, 2013 and were presented in United States dollars. The reserves estimates and future net revenue forecasts have been prepared in accordance with standards set out in the Canadian National Instrument 51-101 (NI 51-101) and the Canadian Oil and Gas Evaluation Handbook (COGEH).

The crude oil reserves as of December 31, 2013 and the respective net present values assigned to these reserves based on "Forecast Prices and Costs" were estimated to be as follows:

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#### ESTIMATED COMPANY SHARE OF RESERVES AS OF DECEMBER 31, 2013 MBBL

	Proved Producing	Proved Developed	Proved Undeveloped	Total Proved	Probable	Total Proved & Probable	Possible	Proved, Probable & Possible
Light/Medium Oil								
Gross <sup>(1)</sup>	-	-	-	-	2,184	2,184	1,701	3,885
Net <sup>(2)</sup>	-	-	-	-	2,184	2,184	1,701	3,885

(1) Gross reserves include the working interest reserves before deductions of royalties payable to others.

(2) Net reserves include gross reserves after royalties payable to others plus royalty interest reserves.

#### ESTIMATED COMPANY SHARE OF NET PRESENT VALUES

AS OF DECEMBER 31, 2013

\$1000<sup>(1)(2)(3)</sup>

	Net Present Valu	ue Discounted A	t		
	0%	5%	10%	15%	20%
Before Income Taxes					
Proved Developed Producing Reserves	-	-	-	-	-
Proved Developed Reserves	-	-	-	-	-
Proved Undeveloped Reserves	-	-	-	-	-
Total Proved Reserves	-	-	-	-	-
Probable Reserves	17,287	8,432	2,805	(834)	(3,212)
Total Proved & Probable Reserves	17,287	8,432	2,805	(834)	(3,212)
Possible Reserves	55,460	35,993	24,599	17,548	12,977
Total Proved, Probable & Possible Reserves	72,747	44,426	27,404	16,714	9,764
After Income Taxes					
Proved Developed Producing Reserves	-	-	-	-	-
Proved Developed Reserves	-	-	-	-	-
Proved Undeveloped Reserves	-	-	-	-	-
Total Proved Reserves	-	-	-	-	-
Probable Reserves	13,302	5,418	434	(2,761)	(4,818)
Total Proved & Probable Reserves	13,302	5,418	434	(2,761)	(4,818)
Possible Reserves	41,471	26,846	18,412	13,246	9,913
Total Proved, Probable & Possible Reserves	54,773	32,264	18,846	10,485	5,095

(1) Based on forecast prices and costs at December 31, 2013 (see Price Schedules Table 10).

(2) Interest expenses, corporate overhead and certain other non-production related expense obligations of the North Block Exploration Contract were not included. Kazakhstan G&A is included

(3) The net present values may not necessarily represent the fair market value of the reserves.

The reserves estimates and net present values for the East Zhagabulak Field are summarized in Table 1. A map showing the location of the North Block in Kazakhstan and a map showing the various fields within the block are presented in Figures 1 and 2 respectively. Tables summarizing the reserves, production and revenues for each of the various reserve classes are presented in Tables 2 to 6. A graphical presentation of the historical production and future production forecasts are presented in Figures 4 to 9. An overview of the property and a discussion of the methodology for estimating the reserves and revenue forecasts are presented in the Property Discussion section of this report.



In preparing this report, we relied upon certain factual information including ownership and fiscal terms, well data, production data, historical revenues, historical operating costs, and other relevant data supplied by Caspian. The supplied information was only relied upon where in our opinion it appeared reasonable and consistent with our knowledge of the properties; however, no independent verification of the information was made. We have also relied upon written representations made by Caspian as to the completeness and accuracy of the data provided.

This report was prepared by McDaniel & Associates Consultants Ltd. for the exclusive use of Caspian Energy Inc. and is not to be reproduced, distributed or made available, in whole or in part, to any person, company or organization other than Caspian Energy Inc. without the knowledge and consent of McDaniel & Associates Consultants Ltd. We reserve the right to revise any estimates provided herein if any relevant data existing prior to preparation of this report was not made available, if any data between the effective date of the evaluation and the date of this report were to vary significantly from that forecast, or if any data provided was found to be erroneous.

Sincerely,

#### McDANIEL & ASSOCIATES CONSULTANTS LTD. APEGA PERMIT NUMBER: P3145

B. H. Emslie, P. Eng. Senior Vice President C. T. Boulton, P. Eng. Associate

M. Alexeev, P. Geol. Senior Geologist

BHE/CTB/MA:jep [14-0050]



#### **CERTIFICATE OF QUALIFICATION**

I, Bryan Howard Emslie, Petroleum Engineer of 2200, 255 - 5th Avenue S.W., Calgary, Alberta, Canada hereby certify:

- 1. That I am a Senior Vice President of McDaniel & Associates Consultants Ltd., APEGA Permit Number P3145, which Company did prepare, at the request of Caspian Energy Inc., the report entitled "Caspian Energy Inc., Evaluation of Crude Oil Reserves, East Zhagabulak Field, Kazakhstan, Based on Forecast Prices and Costs, As of December 31, 2013", dated May 12, 2014; and that I was involved in the preparation of this report.
- 2. That I attended the University of Alberta in the years 1973 to 1980 and that I graduated with a Bachelor of Science Degree in Mechanical Engineering, that I am a registered Professional Engineer with the Association of Professional Engineers and Geoscientists of Alberta and that I have in excess of thirty years of experience in oil and gas reservoir studies and evaluations.
- 3. That McDaniel & Associates Consultants Ltd., its officers or employees, have no direct or indirect interest, nor do they expect to receive any direct or indirect interest in any properties or securities of Caspian Energy Inc., any associate or affiliate thereof.
- 4. That the aforementioned report was not based on a personal field examination of the properties in question, however, such an examination was not deemed necessary in view of the extent and accuracy of the information available on the properties in question.

B. H. Emslie, P. Eng. Senior Vice President

Calgary, Alberta Dated: May 12, 2014

#### **CERTIFICATE OF QUALIFICATION**

I, Cameron Boulton, Petroleum Engineer of 2200, 255 - 5th Avenue, S.W., Calgary, Alberta, Canada hereby certify:

- 1. That I am an Associate of McDaniel & Associates Consultants Ltd., APEGA Permit Number P3145, which Company did prepare, at the request of Caspian Energy Inc., the report entitled "Caspian Energy Inc., Evaluation of Crude Oil Reserves, East Zhagabulak Field, Kazakhstan, Based on Forecast Prices and Costs, As of December 31, 2013", dated May 12, 2014; and that I was involved in the preparation of this report.
- 2. That I attended the Queen's University in the years 2002 to 2006 and that I graduated with a Bachelor of Science degree in Chemical Engineering, that I am a registered Professional Engineer with the Association of Professional Engineers and Geoscientists of Alberta and that I have in excess of seven years of experience in oil and gas reservoir studies and evaluations.
- 3. That McDaniel & Associates Consultants Ltd., its officers or employees, have no direct or indirect interest, nor do they expect to receive any direct or indirect interest in any properties or securities of Caspian Energy Inc., any associate or affiliate thereof.
- 4. That the aforementioned report was not based on a personal field examination of the properties in question, however, such an examination was not deemed necessary in view of the extent and accuracy of the information available on the properties in question.

C. T. Boulton, P. Eng.

Calgary, Alberta Dated: May 12, 2014

#### **CERTIFICATE OF QUALIFICATION**

I, Mikhail B. Alexeev, Petroleum Geologist of 2200, 255 - 5th Avenue, S.W., Calgary, Alberta, Canada hereby certify:

- 1. That I am a Geologist for McDaniel & Associates Consultants Ltd., APEGA Permit Number P3145, which Company did prepare, at the request of Caspian Energy Inc., the report entitled "Caspian Energy Inc., Evaluation of Crude Oil Reserves, East Zhagabulak Field, Kazakhstan, Based on Forecast Prices and Costs, As of December 31, 2013", dated May 12, 2014; and that I was involved in the preparation of this report.
- 2. That I attended the Moscow State University in the years 1987 to 1993, graduating with a Master of Science degree in Geology; that I am a registered Geologist with the Association of Professional Engineers and Geoscientists of Alberta and that I have in excess of twelve years of experience in oil and gas reservoir studies and evaluations.
- 3. That McDaniel & Associates Consultants Ltd., its officers or employees, have no direct or indirect interest, nor do they expect to receive any direct or indirect interest in any properties or securities of Caspian Energy Inc., any associate or affiliate thereof.
- 4. That the aforementioned report was not based on a personal field examination of the properties in question, however, such an examination was not deemed necessary in view of the extent and accuracy of the information available on the properties in question.

Mikhail B. Alexeev, P. Geol.

Calgary, Alberta Dated: May 12, 2014

#### **CASPIAN ENERGY INC.**

#### Evaluation of Crude Oil Reserves East Zhagabulak Field - Kazakhstan As of December 31, 2013

#### **Property Discussion**

#### INTRODUCTION

Crude oil reserves estimates and the associated net present values were evaluated in this report for the interests of Caspian Energy Inc. ("Caspian") in the East Zhagabulak Field of Western Kazakhstan. The reserves were estimated at December 31, 2013 and the revenue forecasts and net present value estimates were calculated using forecast prices and costs using our opinion of future crude oil prices at December 31, 2013 and were presented in United States dollars. The reserves estimates presented herein were estimated as of the effective date and based on information available to that time. The reserves estimates and future net revenue forecasts have been prepared in accordance with standards set out in the Canadian National Instrument 51-101 (NI 51-101) and the Canadian Oil and Gas Evaluation Handbook (COGEH).

An overview of the property and a discussion of the methodology employed in arriving at the reserves and net present value estimates is presented below.

#### PROPERTY OVERVIEW

Caspian holds an indirect 40 percent interest in Aral Petroleum Capital Limited Liability Partnership ("Aral"), which holds all rights, title and interest in the North Block Exploration Contract of Western Kazakhstan. Caspian acquired a 50 percent interest from its joint venture partner, Azden Management Limited ("Azden"), in June 2004. In 2011, Asia Sixth Energy ("Asia Sixth") entered into an agreement acquiring Azden's 50 percent interest and 10 percent of Caspian's interest, effectively reducing Caspian's interest to 40 percent.

Aral signed the Exploration Contract for the North Block on December 28, 2002. The Contract had an initial three-year term with provisions for up to two, two-year extensions. In 2009, Aral was granted an extension of the Exploration Contract for the North Block, which expired in December 2009, to December 2012 with a provision to spend \$50.4 million within the three-year term. Aral was granted an additional two-year extension, which will expire in December 2014.

The North Block is located approximately 200 kilometres south of the City of Aktobe in the Aktyubinsk Oblast as shown in Figure 1. It initially covered an area of approximately 3,458 square kilometres; however, during the fourth quarter of 2010, a portion of the North Block was relinquished and consequently the new area is approximately 2,200 square kilometres. Exploration within the area covered by the block was conducted during the 1982 to 1994 period



and was successful in discovering several large oil and gas fields including Alibekmola, Zhanazhol and Kenkiyak. Aral currently owns one producing oil field, the East Zhagabulak Field, and has several oil prospects that are currently in the exploration stage. There are several producing and non-producing oil fields within the boundary of the block (see Figure 2) which are excluded from Aral's Exploration Contract. Aral drilled Well 316 in the West Zhagabulak structure located 6 kilometres to the west of East Zhagabulak; however, testing operations conducted in 2012 were largely unsuccessful yielding very low unsustainable oil rates.

Aral re-entered one of the older exploration wells in the East Zhagabulak Field, EZ-213, in February 2004 and re-perforated and tested the well in the Carboniferous KT-2 Zone. The well commenced production in 2004 and has encountered numerous technical problems since that time. An electrical submersible pump was installed in July 2011 and the well resumed production at 250 bopd. In mid-2012, the well stopped producing due to mechanical problems and a workover was subsequently attempted. During the process, several hundred metres of tubing and the pump were lost in the hole. A fishing operation was unsuccessful and it is expected that a whip-stock will be drilled. A rate versus time history and forecast plot for the EZ-213 well is presented in Figure 5.

A second well was drilled in the East Zhagabulak Field in late 2005, the EZ-301 well, which encountered the same Carboniferous KT-2 Zone as seen in EZ-213. This well commenced production in January 2006 and was producing at a rate of 235 bopd in late 2013. A rate versus time history and forecast plot for the EZ-301 well is presented in Figure 6.

Drilling in the East Zhagabulak Field resumed in 2011 with the drilling of the EZ-308 well located between EZ-213 and EZ-301. This well was put on production in 2012, however, the oil production rates have been quite variable between 25 and 100 bopd with a high water-cut. Two additional wells, EZ-306 and EZ-315, were drilled in 2012 and put on trial production in November and December 2013 respectively. The initial well rates in Well EZ-306 were approximately 300 bopd with no water and 500 bopd in Well EZ-315 with negligible water production.

The East Zhagabulak Field was granted its own geological allotment and a 25-year Production Contract (outside of the North Block Exploration Contract) in July 2010. In order to transfer the Production Contract from the pilot production stage to full development Caspian is obligated to develop a gas utilization strategy to handle the associated gas. In 2012, Caspian was working towards constructing and commissioning a gas pipeline to transfer unpurified associated gas to the Alibekmola processing plant by the end of December 2012 but was informed that the natural gas from the East Zhagabulak Field will not be accepted and other refineries nearby will also not take the gas. As such, Caspian is exploring the option of re-injecting the gas into the formation or constructing a small gas processing plant to handle the gas.

A technological scheme for field development was approved on December 13, 2013.



The field was shut-in December 31, 2013 following the expiration of the flare permit. The flare permit is expected to be issued in mid-2014, and production is expected to resume in August 2014.

Caspian is planning to drill several wells throughout the block over the next few years, which will include development wells on the East Zhagabulak Field as well as exploration and appraisal wells on other structures throughout the block. At this time, crude oil reserves have only been assigned to the East Zhagabulak Field since the data available for the other structures within the Contract is either not available or does not support a reserves assignment.

#### SOURCE AND QUALITY OF DATA

Essentially all of the basic information employed in the preparation of this report was obtained from Aral's files. McDaniel & Associates have traveled to Aral's offices in Almaty, Kazakhstan on several occasions to collect data and discuss geological interpretations with Aral staff.

The data available for the evaluation consisted of digital logs for all five wells, which reached TD in the KT-2-2 Formation. Core description, core analysis, comprehensive test data were made available for most of the East Zhagabulak wells. The three dimensional (3D) seismic data and several vintages of the interpretation for the East Zhagabulak Area were provided for review. Production data on a daily basis was provided to December 31, 2013 and financial operating statements were provided from the start of production to December 31, 2013.

The data for old well EZ-213 provided for the evaluation of the East Zhagabulak was considered to be of average Soviet quality for this type of property. The seismic data and data for the wells EZ-301, EZ-306, EZ-308, and EZ-315 are of good quality and prepared under western standards. In our opinion, the data is sufficient to provide confident estimates of the reserves and revenue forecasts.

#### GEOLOGY

#### **Regional Geology**

The East Zhagabulak Field is located in the Pre-Caspian Sedimentary Basin, which is a world-class hydrocarbon province, located on the southeastern margin of the Russian Platform. This basin covers an area of some 500,000 square kilometres and extends south into the northern most part of the Caspian Sea.

The Pre-Caspian Basin is a pericratonic depression that formed during Late Proterozoic-Early Paleozoic time. It is bounded on the east by the Mugodzhary Mountains and to the southeast and south by other orogenic belts. In the north, the basin is separated by the Voronezh Massif in the west and by the Volga-Urals Platform high in the north.



The basin is characterized by a series of down-to-the-basin sub parallel faults along the margin of the basin. This resulted in the formation of a series of grabens, half grabens and prominent ridges.

Deposition within the basin is divided into three mega sequences: sub-salt, salt-bearing and supra-salt. The sub-salt deposition is characterized by thick marine carbonates and clastic rocks of Middle and Upper Devonian, Carboniferous and Lower Permian Age. These carbonates were deposited as thick porous build-ups on the margin of the basin and central ridges, forming excellent hydrocarbon reservoirs. During this time, thick organic rich clastics and carbonates were deposited within majority of basin areas, forming excellent hydrocarbon source rocks.

In Early Permian time, the basin conditions became more restrictive resulting in the deposition of a thick layer of Permian Kungurian salt-bearing sediments over the entire basin. The salt formed a basin wide hydrocarbon seal for the Paleozoic reservoir. In addition, the low heat conductivity of the salt resulted in a faster oil generation process in the pre-salt sediments. Hydrocarbons generated in the Paleozoic source rocks migrated into the sub-salt carbonate reservoirs and above salt Mesozoic rocks along the basin margin.

The Pre-Caspian Basin is one of the richest hydrocarbon basins in the world. The basin contains several super-giant sub-salt fields, Tengiz (6 to 9 billion barrels of recoverable oil reserves), Karachaganak (47 trillion cubic feet of natural gas, 4.7 billion barrels of gas condensate and 1.4 billion barrels of oil) and Astrakhan (located in the Russian area of the basin). In addition there are a number of smaller sub-salt fields in the basin. The depth to reservoir in these fields varies from 1,800 to 5,200 metres.

The supra-salt deposition was composed primarily of terrigenous sediments of Upper Permian, Triassic, Jurassic and Cretaceous Age. The deposition and hydrocarbon trapping of the post-salt sequence was dominated by complex salt tectonics. There are a number of different types of structural and stratigraphic trap plays including sediment drape along the flanks of salt domes, crestal highs over underlying salt domes and structural and stratigraphic traps under overhanging salt pillows.

#### Geology of the East Zhagabulak Field

The East Zhagabulak Field is located in the northeastern area of the Pre-Caspian Basin within the Zhanazhol tectonic step. The depositional sequence underlying the East Zhagabulak Field consists of sub-salt Paleozoic carbonates and clastic rocks, Permian salty clastic rocks overlain by Triassic, Jurassic and Cretaceous clastic sediments, and capped by thin Paleocene and younger deposits. No basement rocks have been penetrated in the field.

The oldest sedimentary rocks penetrated in the field are of the Visean Age of the Lower Carboniferous. The Middle Carboniferous contains the proven productive zones referred to as the KT-2-1 and KT-2-2 zones which belong to Moscovian and Bashkirian stages of the Middle Carboniferous (Pennsylvanian) and consist of organic limestone, dolomite and shale.



The East Zhagabulak Field is interpreted to be a low amplitude north to south trending anticline structure located on the monocline north slope of the Zhanazhol high approximately three to five kilometres west of the Alibekmola Field. There is a system of faults and a synclinal structure separating the Alibekmola high to the east and the East Zhagabulak structural area.

The East Zhagabulak structure appears to be a small anticline limited by faults on the east and southwest sides. The displacements of the faults are in the range from 25 to 100 metres.

The East Zhagabulak Field is separated to the southeast by a gentle saddle from the elevated area, which eventually rises to the Sakramabas and Zhanazhol fields. It is likely that the trap was formed by a combination of structural and lithological elements.

The East Zhagabulak Field area was covered by several vintages of two dimensional (2D) seismic run from the 1970s to the 1990s. The quality of the data is generally poor to fair due to the older technology and difficulty in accurately imaging reservoirs below the overlying Permian salt, which has significant variations in thickness over the area.

The 3D seismic run in the East Zhagabulak Area in 2004 and 2005 is generally good quality. The structural interpretation presented in Figure 3 is based on the 3D seismic and tops for the existing wells.

#### Stratigraphy and Petrophysical Parameters

There are two oil-bearing zones in the East Zhagabulak Field identified as the Carboniferous KT-2-1 and KT-2-2. Each of the productive zones is described in more detail below.

#### Carboniferous KT-2-2 Zone

The KT-2-2 Zone is part of the Cheremshanski Formation (Bashkirian stage) of Late Carboniferous Age. The EZ-213, EZ-301, EZ-306, EZ-308, and EZ-315 wells were interpreted to have oil pay in this zone. The correlation between wells is very clear. The EZ-211 well penetrated only top of the zone and was abandoned due to unstable well bore conditions during drilling. Well 214 in the Alibek South Field to the southeast penetrated only tight rocks in the KT-2-2 interval.

The KT-2-2 Formation consists of algal, foraminiferal and biomorphous limestone deposited as a massive carbonate bank in a shallow marine or restricted lagoon environment. The oil-bearing interval contains clean limestone interbedded with shale and rarely dolomite intervals. The net to gross ratio above the oil-water contact is approximately 37 percent. The zone consists of a large number of permeable intervals, 1 to 11 metres thick, which are separated by tight carbonate stringers.

The trapping mechanism is interpreted to be a combination of a structural dome closure, plus facies changes (tight zones). The oil water contact was estimated to be at a depth of 4,468 metres subsea based on test data and log interpretation of the well EZ-213. The lowest tested oil in the well EZ-301 is at a depth of 4,452 metres subsea.



The net oil pay thickness was estimated to range from 61 to 85 metres. The average porosity of the KT-2-2 Zone was estimated to be 7.6 percent and the average water saturation 33 percent. The net pay and average porosity were based on a 5.5 percent effective porosity cutoff.

#### Carboniferous KT-2-1 Zone

The KT-2-1 Zone (KT-1 in Caspian Energy's classification) comprises the Kashirski and Vereyski formations of Carboniferous Age. The KT-2-1 Zone consists of a clean limestone with minor dolomite and shale layers and the reservoir rocks consist of algal, foraminiferal and biomorphous limestone with primary and secondary porosity. The EZ-211 well encountered 58 metres of net pay but tested only 25 m<sup>3</sup>/day during production testing. This well was reported to be abandoned and not suitable for re-entry due to the poor condition of the casing. The KT-2-1 Zone was tested open hole in the EZ-213 well and cased hole in the EZ-301 well but neither tests were successful. The KT-2-1 Zone was interpreted to be predominantly tight in the EZ-301, EZ306, EZ-308, and EZ-315 wells. No oil reserves for the KT-2-1 Zone were assigned in this report.

#### CRUDE OIL RESERVES ESTIMATES

Crude oil reserves estimates for the Carboniferous KT-2-2 Zone in the East Zhagabulak Field were based on a study of the volumetric data and performance characteristics of the three existing wells and are summarized in Table 7. A summary of the reservoir and fluid characteristics for the pool is presented in Table 8.

Volumetric estimates of the oil in-place were based on the average net pay of the wells. The pool area was estimated to be 1,002 acres and was limited to the area shown in Figure 3.

There are several other nearby fields with producing Carboniferous KT-2-2 Zone oil pools including the Alibekmola, South Alibek and Zhanazhol fields. The KT-2-2 pools in these fields contain an undersaturated crude oil with no active aquifer. Most of these fields are therefore developed with water injection projects and are projected to achieve recoveries in the range of 20 to 40 percent of the original oil in-place.

No proved reserves were assigned because it was determined to be uneconomic to produce the current wells with only 40 to 50 percent on-time, high operating costs and relatively low price received. A production rate versus time production history plot is presented for the five existing wells in Figures 5 to 9.

The 2P reserves case assumed that a small gas processing plant would be constructed which would allow production to continue past 2014. It was also assumed that five additional production wells would be drilled and put on production over the next few years. The 3P reserves case included an allowance for two additional production wells.



A summary of the production forecast for each of the reserves cases is presented in Tables 2 to 6 as well as graphically in Figure 4.

#### **RESERVES CLASSIFICATION**

The crude oil and natural gas reserves estimates presented in this report were based on the Canadian reserves definitions and guidelines prepared by the Standing Committee on Reserves Definitions of the CIM (Petroleum Society) as presented in the COGE Handbook. A summary of those definitions is presented below.

#### Reserves Categories

Reserves are estimated remaining quantities of oil and natural gas and related substances anticipated to be recoverable from known accumulations, from a given date forward, based on

- analysis of drilling, geological, geophysical and engineering data;
- the use of established technology; and
- specified economic conditions, which are generally accepted as being reasonable, and shall be disclosed.

Reserves are classified according to the degree of certainty associated with the estimates

- **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.
- **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.
- **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.

Other criteria that must also be met for the categorization of reserves are provided in the COGE Handbook.

#### **Development and Production Status**

Each of the reserves categories (proved, probable and possible) may be divided into developed and undeveloped categories:

• **Developed reserves** are those reserves that are expected to be recovered from existing wells and installed facilities or, if facilities have not been installed, that would involve a low expenditure (for example, when compared to the cost of drilling



a well) to put the reserves on production. The developed category may be subdivided into producing and non-producing.

- **Developed producing reserves** are those reserves that are expected to be recovered from completion intervals open at the time of the estimate. These reserves may be currently producing or, if shut-in, they must have previously been on production, and the date of resumption of production must be known with reasonable certainty.
- **Developed non-producing reserves** are those reserves that either have not been on production, or have previously been on production, but are shut-in, and the date of resumption of production is unknown.
- Undeveloped reserves are those reserves expected to be recovered from known accumulations where a significant expenditure (for example, when compared to the cost of drilling a well) is required to render them capable of production. They must fully meet the requirements of the reserves classification (proved, probable, possible) to which they are assigned.

In multi-well pools it may be appropriate to allocate total pool reserves between the developed and undeveloped categories or to subdivide the developed reserves for the pool between developed producing and developed non-producing. This allocation should be based on the estimator's assessment as to the reserves that will be recovered from specific wells, facilities and completion intervals in the pool and their respective development and production status.

#### Levels of Certainty for Reported Reserves

The qualitative certainty levels referred to in the definitions above are applicable to individual reserves entities (which refers to the lowest level at which reserves calculations are performed) and to reported reserves (which refers to the highest-level sum of individual entity estimates for which reserves estimates are presented). Reported reserves should target the following levels of certainty under a specific set of economic conditions:

- at least a 90 percent probability that the quantities actually recovered will equal or exceed the estimated proved reserves;
- at least a 50 percent probability that the quantities actually recovered will equal or exceed the sum of the estimated proved plus probable reserves; and
- at least a 10 percent probability that the quantities actually recovered will equal or exceed the sum of the estimated proved plus probable plus possible reserves.

Additional clarification of certainty levels associated with reserves estimates and the effect of aggregation is provided in the COGE Handbook.



#### **REVENUE FORECASTS**

The net present values of the crude oil reserves were based on future production and revenue analyses. All of the revenues and costs presented in this report were presented in US dollars and include an allowance for Kazakhstan taxes. A summary of the economic parameters and fiscal terms are presented in Table 9.

The future crude oil revenue was derived by employing the future production forecast for each reserves category and the McDaniel & Associates December 31, 2013 forecast of future crude oil prices. Crude oil production is currently sold entirely to the domestic market and is expected to remain this way for the foreseeable future. The future domestic crude oil price was based on the average price received in 2013 of \$60/bbl less \$16/bbl in transportation costs. A summary of the resulting field price forecasts is presented in Table 10.

Crude oil production is subject to a mineral extraction tax and a rent tax as detailed in Table 9. The operating and capital costs were based on Caspian's 2013 accounting statements and 2014 capital budget as described in Table 9 and 11. The field net revenues are subject to a variety of taxes. A summary of the applicable taxes and tax pools are presented in Table 9. Well abandonment costs were included at the end of the production forecast based on \$100,000 per well.

A summary of the reserve and net present value estimates were presented in Table 1 on a before and after tax basis and detailed revenue forecasts for the PP, PD, TP, 2P and the 3P reserves in Tables 2, 3, 4, 5 and 6 respectively.



#### Caspian Energy Inc. East Zhagabulak Field - Kazakhstan Summary of Reserves and Net Present Values Forecast Price Case as of December 31, 2013

#### Summary of Reserves (1)

	Crude	Oil Reserves	- bbls	Crude Oil Reserves - T			
	Property	Caspian	Caspian	Property	Caspian	Caspian	
	Gross	Gross	Net	Gross	Gross	Net	
Reserve Category	Mbbl	Mbbl	Mbbl	MT	MT	MT	
Proved Producing Reserves	-	-	-	-	-	-	
Proved Developed Reserves	-	-	-	-	-	-	
Proved Undeveloped Reserves	-	-	-	-	-	-	
Total Proved Reserves	-	-	-	-	-	-	
Probable Reserves	5,461	2,184	2,184	715	286	286	
Proved + Probable Reserves	5,461	2,184	2,184	715	286	286	
Possible Reserves	4,251	1,701	1,701	557	223	223	
Proved + Probable + Possible Reserves	9,712	3,885	3,885	1,272	509	509	

#### Summary of Caspian Net Present Values Before Income Taxes

		<u>\$</u>	<u>M US Dollars</u>		
Reserve Category	0.0%	5.0%	10.0%	15.0%	20.0%
Proved Producing Reserves	-	-	-	-	-
Proved Developed Reserves	-	-	-	-	-
Proved Undeveloped Reserves	-	-	-	-	-
Total Proved Reserves	-	-	-	-	-
Probable Reserves	17,287	8,432	2,805	(834)	(3,212)
Proved Plus Probable Reserves	17,287	8,432	2,805	(834)	(3,212)
Possible Reserves	55,460	35,993	24,599	17,548	12,977
Proved + Probable + Possible Reserves	72,747	44,426	27,404	16,714	9,764

#### Summary of Caspian Net Present Values After Income Taxes

		<u>\$</u>	M US Dollars		
Reserve Category	0.0%	5.0%	10.0%	15.0%	20.0%
Proved Producing Reserves	-	-	-	-	-
Proved Developed Reserves	-	-	-	-	-
Proved Undeveloped Reserves	-	-	-	-	-
Total Proved Reserves	-	-	-	-	-
Probable Reserves	13,302	5,418	434	(2,761)	(4,818)
Proved Plus Probable Reserves	13,302	5,418	434	(2,761)	(4,818)
Possible Reserves	41,471	26,846	18,412	13,246	9,913
Proved + Probable + Possible Reserves	54,773	32,264	18,846	10,485	5,095

(1) Company Gross reserves are based on Company working interest share of the reserves for each property. Company Net reserves are the working interest reserves after deducting royalties payable to others. In the case of this property, there are no royalties payable to others.

Conversion from Tonnes to Barrels

7.637





NPV A.T. at

10.0%

US\$M

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### Caspian Energy Inc. East Zhagabulak Field - Kazakhstan Forecast of Production and Revenues Proved Producing Reserves Forecast Price Case as of December 31, 2013

					Crude	Oil		Total		
			Producing	Daily	Annual	Annual	Crude	Sales		
			Well	Rate	Volume	Volume	Oil Price	Revenue		
		Year	Count	bopd	Mbbl	MT	US\$/bbl	US\$M	-	
		2014	_	_	_	-	_	_		
		2015	-	-	-	-	-	-		
		2016	-	-	-	-	-	-		
		2017	-	-	-	-	-	-		
		2018	-	-	-	-	-	-		
		2019	-	-	-	-	-	-		
		2020	-	-	-	-	-	-		
		2021	-	-	-	-	-	-		
		2022	-	-	-	-	-	-		
		2023	-	-	-	-	-	-		
		2024	-	-	-	-	-	-		
		2025	-	-	-	-	-	-		
		2026 2027	-	-	-	-	-	-		
		2027	-	-	-	-	-	-		
		Rem.	-	-	-	-	-	-		
		ixem.			_	_	_	-		
		Total			-	-		-		
		Property (	Gross Sha	re of Roya	alties, Expe	nses and	Net Reven	ues Before	e Income T	ax
								A.L	0 11 1	
				Export	Commerc.	Operating	Operating	Aband.	Capital	Net Cash
		M.E.T.	M.E.T.	Export Rent Tax	Commerc. Disc. Bon.	Operating Costs	Operating Costs	Aband. Costs	Capital Costs	Net Cash Flow B. Tax
	Year	M.E.T. US\$M	M.E.T. %	•		•				
				Rent Tax	Disc. Bon.	Costs	Costs	Costs	Costs	Flow B. Tax
	2014			Rent Tax	Disc. Bon.	Costs	Costs	Costs	Costs	Flow B. Tax
	2014 2015			Rent Tax	Disc. Bon.	Costs	Costs	Costs	Costs	Flow B. Tax
	2014 2015 2016			Rent Tax	Disc. Bon.	Costs	Costs	Costs	Costs	Flow B. Tax
	2014 2015 2016 2017			Rent Tax	Disc. Bon.	Costs	Costs	Costs	Costs	Flow B. Tax
	2014 2015 2016 2017 2018			Rent Tax	Disc. Bon.	Costs	Costs	Costs	Costs	Flow B. Tax
	2014 2015 2016 2017 2018 2019			Rent Tax	Disc. Bon.	Costs	Costs	Costs	Costs	Flow B. Tax
	2014 2015 2016 2017 2018 2019 2020			Rent Tax	Disc. Bon.	Costs	Costs	Costs	Costs	Flow B. Tax
	2014 2015 2016 2017 2018 2019 2020 2021			Rent Tax	Disc. Bon.	Costs	Costs	Costs	Costs	Flow B. Tax
	2014 2015 2016 2017 2018 2019 2020 2021 2022			Rent Tax	Disc. Bon.	Costs	Costs	Costs	Costs	Flow B. Tax
	2014 2015 2016 2017 2018 2019 2020 2021 2022 2023			Rent Tax	Disc. Bon.	Costs	Costs	Costs	Costs	Flow B. Tax
	2014 2015 2016 2017 2018 2019 2020 2021 2022 2023 2023 2024			Rent Tax	Disc. Bon.	Costs	Costs	Costs	Costs	Flow B. Tax
	2014 2015 2016 2017 2018 2019 2020 2021 2022 2023 2023 2024 2025			Rent Tax	Disc. Bon.	Costs	Costs	Costs	Costs	Flow B. Tax
	2014 2015 2016 2017 2018 2019 2020 2021 2022 2023 2024 2025 2026			Rent Tax	Disc. Bon.	Costs	Costs	Costs	Costs	Flow B. Tax
	2014 2015 2016 2017 2018 2019 2020 2021 2022 2023 2023 2024 2025			Rent Tax	Disc. Bon.	Costs	Costs	Costs	Costs	Flow B. Tax
	2014 2015 2016 2017 2018 2019 2020 2021 2022 2023 2024 2025 2026 2027			Rent Tax	Disc. Bon.	Costs	Costs	Costs	Costs	Flow B. Tax
	2014 2015 2016 2017 2018 2019 2020 2021 2022 2023 2024 2025 2026 2027 2028 Rem.			Rent Tax	Disc. Bon.	Costs	Costs	Costs	Costs	Flow B. Tax
	2014 2015 2016 2017 2018 2019 2020 2021 2022 2023 2024 2025 2026 2027 2028	US\$M - - - - - - - - - - - - - - - - - - -	% - - - - - - - - - - - - - - - - - - -	Rent Tax US\$M - - - - - - - - - - - - - - - - - - -	Disc. Bon. US\$M - - - - - - - - - - - - - - - - - - -	Costs US\$M - - - - - - - - - - - - - - - - - - -	Costs US\$/bbl - - - - - - - - - - - - - - - - - -	Costs US\$M - - - - - - - - - - - - - - - - - - -	Costs US\$M - - - - - - - - - - - - - - - - - - -	Flow B. Tax
	2014 2015 2016 2017 2018 2019 2020 2021 2022 2023 2024 2025 2026 2027 2028 Rem. Total	US\$M - - - - - - - - - - - - - - - - - - -	% - - - - - - - - - - - - - - - - - - -	Rent Tax US\$M - - - - - - - - - - - - - - - - - - -	Disc. Bon. US\$M - - - - - - - - - - - - - - - - - - -	Costs US\$M - - - - - - - - - - - - - - - - - - -	Costs US\$/bbl - - - - - - - - - - - - - - - - - -	Costs US\$M - - - - - - - - - - - - - - - - - - -	Costs US\$M - - - - - - - - - - - - - - - - - - -	Flow B. Tax
Gross	2014 2015 2016 2017 2018 2019 2020 2021 2022 2023 2024 2025 2026 2027 2028 Rem. Total Net	US\$M - - - - - - - - - - - - - - - - - - -	%	Rent Tax US\$M - - - - - - - - - - - - - - - - - - -	Disc. Bon. US\$M - - - - - - - - - - - - - - - - - - -	Costs US\$M - - - - - - - - - - - - - - - - - - -	Costs US\$/bbl - - - - - - - - - - - - - - - - - -	Costs US\$M - - - - - - - - - - - - - - - - - - -	Costs US\$M - - - - - - - - - - - - - - - - - - -	Flow B. Tax US\$M - - - - - - - - - - - - - - - - - - -
Annual Oi	2014 2015 2016 2017 2018 2019 2020 2021 2022 2023 2024 2025 2026 2027 2028 Rem. Total	US\$M - - - - - - - - - - - - - - - - - - -	% - - - - - - - - - - - - - - - - - - -	Rent Tax US\$M - - - - - - - - - - - - - - - - - - -	Disc. Bon. US\$M - - - - - - - - - - - - - - - - - - -	Costs US\$M - - - - - - - - - - - - - - - - - - -	Costs US\$/bbl - - - - - - - - - - - - - - - - - -	Costs US\$M - - - - - - - - - - - - - - - - - - -	Costs US\$M - - - - - - - - - - - - - - - - - - -	Flow B. Tax

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	2018	-	-	-	-	-	-	-	-	-	-	-	-	
	2019	-	-	-	-	-	-	-	-	-	-	-	-	
	2020	-	-	-	-	-	-	-	-	-	-	-	-	
	2021	-	-	-	-	-	-	-	-	-	-	-	-	
	2022	-	-	-	-	-	-	-	-	-	-	-	-	
	2023	-	-	-	-	-	-	-	-	-	-	-	-	
	2024	-	-	-	-	-	-	-	-	-	-	-	-	
	2025	-	-	-	-	-	-	-	-	-	-	-	-	
	2026	-	-	-	-	-	-	-	-	-	-	-	-	
	2027	-	-	-	-	-	-	-	-	-	-	-	-	
	2028	-	-	-	-	-	-	-	-	-	-	-	-	
	Rem.	-	-	-	-	-	-	-	-	-	-	-	-	
	Total	-	-	-		-	-	-	-	-	-		-	
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# Caspian Energy Inc. East Zhagabulak Field - Kazakhstan Forecast of Production and Revenues Proved Developed Reserves

Forecast Price Case as of December 31, 2013

				Property	Gross SI	nare of Pro		d Gross R	<u>evenues</u>			
						Crude			Total			
				Producing	Daily	Annual	Annual	Crude	Sales			
				Well	Rate	Volume	Volume	Oil Price	Revenue			
			Year	Count	bopd	Mbbl	MT	US\$/bbl	US\$M	-		
			2014	_	_	_	_	-	_			
			2015	-	-	-	-	-	-			
			2016	_	-	-	-	-	-			
			2017	-	-	-	-	-	-			
			2018	-	-	-	-	-	-			
			2019	-	-	-	-	-	-			
			2020	-	-	-	-	-	-			
			2021	-	-	-	-	-	-			
			2022	-	-	-	-	-	-			
			2023	-	-	-	-	-	-			
			2024	-	-	-	-	-	-			
			2025	-	-	-	-	-	-			
			2026	-	-	-	-	-	-			
			2027	-	-	-	-	-	-			
			2028	-	-	-	-	-	-			
			Rem.			-	-	-	-			
			Total			_	_		_			
				Crees Cha		ltice Even	-					
			Property C	<u>51088 5118</u>		Ities, Expe						
			M.E.T.	M.E.T.	Export Rent Tax	Commerc.		Operating	Aband.	Capital	Net Cash	
		Year	US\$M	wi.⊏. i . %	US\$M	Disc. Bon. US\$M	Costs US\$M	Costs US\$/bbl	Costs US\$M	Costs US\$M	Flow B. Tax US\$M	
		Teal	030101	/0	030101	03910	030101	039/001	03910	0300	03910	
		2014	-	-	-	-	-	-	-	-	-	
		2015	_	_	-	-	-	_	-	-	-	
		2016	-	-	-	-	-	-	-	-	-	
		2017	-	-	-	-	-	-	-	-	-	
		2018	-	-	-	-	-	-	-	-	-	
		2019	-	-	-	-	-	-	-	-	-	
		2020	-	-	-	-	-	-	-	-	-	
		2021	-	-	-	-	-	-	-	-	-	
		2022	-	-	-	-	-	-	-	-	-	
		2023	-	-	-	-	-	-	-	-	-	
		2024	-	-	-	-	-	-	-	-	-	
		2025	-	-	-	-	-	-	-	-	-	
		2026	-	-	-	-	-	-	-	-	-	
		2027	-	-	-	-	-	-	-	-	-	
		2028 Rem.	-	-	-	-	-	-	-	-	-	
		Rem.	-	-	-	-	-	-	-	-	-	
		Total	-	-	-	-	-	-	-	-	-	
			Caspia	an Enerav	Inc. Share	of Produc	tion and R	evenues B	efore and	After Tax		
	Gross	Net			NPV	Property &	Excess		NPV			NPV
		Annual Oil	Net Cash	Cum	B.T. at	Corporate	Profits	Net Cash	B.T. at	Net Cash	Cum	A.T. at
			Flow B. Tax		10.0%	Tax	Tax	Flow B.T.	10.0%	Flow A.T.	Rev. A.T.	10.0%
Year	Mbbl	Mbbl	US\$M	US\$M	US\$M	US\$M	US\$M	US\$M	US\$M	US\$M	US\$M	US\$M
							_					_
2014	-	-	-	-	-	-	-	-	-	-	-	-
2015 2016	-	-	-	-	-	-	-	-	-	-	-	-
2010	-	-	-	-	-	-	-	-	-	-	-	-

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	2018	-	-	-	-	-	-	-	-	-	-	-	-	
	2019	-	-	-	-	-	-	-	-	-	-	-	-	
	2020	-	-	-	-	-	-	-	-	-	-	-	-	
	2021	-	-	-	-	-	-	-	-	-	-	-	-	
	2022	-	-	-	-	-	-	-	-	-	-	-	-	
	2023	-	-	-	-	-	-	-	-	-	-	-	-	
	2024	-	-	-	-	-	-	-	-	-	-	-	-	
	2025	-	-	-	-	-	-	-	-	-	-	-	-	
	2026	-	-	-	-	-	-	-	-	-	-	-	-	
	2027	-	-	-	-	-	-	-	-	-	-	-	-	
	2028	-	-	-	-	-	-	-	-	-	-	-	-	
	Rem.	-	-	-	-	-	-	-	-	-	-	-	-	
	Total	-	-	-		-	-	-		-	-		-	
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2017

# Caspian Energy Inc. East Zhagabulak Field - Kazakhstan Forecast of Production and Revenues **Total Proved Reserves**

Forecast Price Case as of December 31, 2013

						hare of Proc			Total			
				Producing	Daily	Annual	Annual	Crude	Sales			
				Well	Rate	Volume	Volume	Oil Price	Revenue			
			Year	Count	bopd	Mbbl	MT	US\$/bbl	US\$M	-		
			2014	_	-	-	-	-	-			
			2015	-	-	-	-	-	-			
			2016	-	-	-	-	-	-			
			2017	-	-	-	-	-	-			
			2018	-	-	-	-	-	-			
			2019	-	-	-	-	-	-			
			2020	-	-	-	-	-	-			
			2021	-	-	-	-	-	-			
			2022	-	-	-	-	-	-			
			2023	-	-	-	-	-	-			
			2024	-	-	-	-	-	-			
			2025	-	-	-	-	-	-			
			2026	-	-	-	-	-	-			
			2027	-	-	-	-	-	-			
			2028	-	-	-	-	-	-			
			Rem.			-	-	-	-			
			Total			-	-		-			
				Gross Sha	re of Rova	alties, Expe	nses and	Net Reven	ues Before	e Income T	ах	
					Export	Commerc.			Aband.	Capital	Net Cash	
			M.E.T.	M.E.T.	Rent Tax		Costs	Costs	Costs	Costs	Flow B. Tax	
		Year	US\$M	%	US\$M	US\$M	US\$M	US\$/bbl	US\$M	US\$M	US\$M	
						-	· · ·				· · · · ·	
		2014	-	-	-	-	-	-	-	-	-	
		2015	-	-	-	-	-	-	-	-	-	
		2016	-	-	-	-	-	-	-	-	-	
		2017	-	-	-	-	-	-	-	-	-	
		2018	-	-	-	-	-	-	-	-	-	
		2019	-	-	-	-	-	-	-	-	-	
		2020	-	-	-	-	-	-	-	-	-	
		2021	-	-	-	-	-	-	-	-	-	
		2022	-	-	-	-	-	-	-	-	-	
		2023	-	-	-	-	-	-	-	-	-	
		2024	-	-	-	-	-	-	-	-	-	
		2025	-	-	-	-	-	-	-	-	-	
		2026	-	-	-	-	-	-	-	-	-	
		2027	-	-	-	-	-	-	-	-	-	
		2028	-	-	-	-	-	-	-	-	-	
		Rem.	-	-	-	-	-	-	-	-	-	
		Total	_	_	_	_	_	_	_	_	_	
			Coorte		Ing Share					After Tar		
	0	Nat	Caspla	in ⊏nergy		e of Product		Levenues E		Aller Tax		<b>N</b> 1
	Gross	Net	Not Cook	C	NPV B.T. of	Property &	Excess	Not Cook	NPV B.T. of	Not Cash	Cum	N
		Annual Oil			B.T. at	Corporate	Profits	Net Cash	B.T. at	Net Cash		A.
			Flow B. Tax		10.0%	Tax	Tax	Flow B.T.	10.0%	Flow A.T.	Rev. A.T.	10
ear	Mbbl	Mbbl	US\$M	US\$M	US\$M	US\$M	US\$M	US\$M	US\$M	US\$M	US\$M	US
)14	-	-	-	-	-	-	-	-	-	-	-	
)15	-	-	-	-	-	-	-	-	-	-	-	
	-	-	-	-	-	-	-	-	-	-	-	
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	2018	-	-	-	-	-	-	-	-	-	-	-	-	
	2019	-	-	-	-	-	-	-	-	-	-	-	-	
	2020	-	-	-	-	-	-	-	-	-	-	-	-	
	2021	-	-	-	-	-	-	-	-	-	-	-	-	
	2022	-	-	-	-	-	-	-	-	-	-	-	-	
	2023	-	-	-	-	-	-	-	-	-	-	-	-	
	2024	-	-	-	-	-	-	-	-	-	-	-	-	
	2025	-	-	-	-	-	-	-	-	-	-	-	-	
	2026	-	-	-	-	-	-	-	-	-	-	-	-	
	2027	-	-	-	-	-	-	-	-	-	-	-	-	
	2028	-	-	-	-	-	-	-	-	-	-	-	-	
	Rem.	-	-	-	-	-	-	-	-	-	-	-	-	
	Total	-	-	-		-	-	-	-	-	-		-	
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# Caspian Energy Inc. East Zhagabulak Field - Kazakhstan **Forecast of Production and Revenues Total Proved + Probable Reserves**

Forecast Price Case as of December 31, 2013

				_		Crude	Oil		Total			
				Producing	Daily	Annual	Annual	Crude	Sales			
				Well	Rate	Volume	Volume	Oil Price	Revenue			
			Year	Count	bopd	Mbbl	MT	US\$/bbl	US\$M			
			2014	3	443	162	21	44.00	7,109			
			2015	5	1,142	417	55	44.88	18,715			
			2016	7	1,617	590	77	45.78	27,010			
			2017	9	2,079	759	99	46.69	35,426			
			2018	9	1,946	710	93	47.63	33,834			
			2019	9	1,523	556	73	48.58	27,011			
			2020	9	1,226	447	59	49.55	22,171			
			2021	9	1,008	368	48	50.54	18,602			
			2022	9	844	308	40	51.55	15,889			
			2023	9	718	262	34	52.58	13,774			
			2024	9	618 527	225	30	53.64	12,090			
			2025 2026	9 9	537 472	196 172	26 23	54.71 55.80	10,726 9,604			
			2020 2027	9 9	472	172	23 20	55.80 56.92	9,004 8,669			
			2028	9	372	136	18	58.06	7,881			
			Rem.	Ũ	5,2	-	-	-	-			
			Total			5,461	715		268,510			
				Swaaa Shaw						lucomo T		
			<u>Property C</u>	<u> 31055 311ai</u>	Export		Operating		ues Before Aband.	Capital	AX Net Cash	
			M.E.T.	M.E.T.		Disc. Bon.	Costs	Costs	Costs	Costs	Flow B. Tax	
		Year	US\$M	%	US\$M	US\$M	US\$M	US\$/bbl	US\$M	US\$M	US\$M	
		2014	178	2.5	-	-	4,850	30.02	-	9,165	(7,084)	
		2015	468	2.5	-	-	6,018	14.43	-	34,657	(22,428)	
		2016	675	2.5	-	-	6,346	10.76	-	42,633	(22,645)	
		2017	886	2.5	-	-	6,686	8.81	-	27,061	794	
		2018	846	2.5	-	-	6,819	9.60	-	1,082	25,086	
		2019	675	2.5	-	-	6,956	12.51	-	-	19,380	
		2020	554	2.5	-	-	7,095	15.86	-	-	14,522	
		2021	465	2.5	-	-	7,237	19.66	-	-	10,901	
		2022 2023	397 344	2.5 2.5	-	-	7,381 7,529	23.95 28.74	-	-	8,110 5,900	
		2023 2024	344 302	2.5 2.5	-	-	7,529 7,680	28.74 34.07	-	-	5,900 4,108	
		2024	268	2.5	_	-	7,833	39.95	-	-	2,624	
		2026	240	2.5	-	-	7,305	42.45	-	-	2,059	
		2027	217	2.5	-	-	6,753	44.34	-	-	1,700	
		2028	197	2.5	-	-	6,175	45.49	1,319	-	189	
		Rem.	-	-	-	-	-	-	-	-	-	
		Total	6,713	2.5	-	-	102,663	18.80	1,319	114,598	43,217	
			<u>Caspia</u>	n Energy I				evenues B	sefore and	After Tax		•
	Gross	Net		6	NPV	Property &	Excess		NPV		<u> </u>	NPV
		Annual Oil		Cum Boy B T	B.T. at	Corporate	Profits	Net Cash	B.T. at	Net Cash		A.T. at
Year	Production Mbbl	Production Mbbl	Flow B. Tax US\$M	US\$M	10.0% US\$M	Tax US\$M	Tax US\$M	Flow B.T. US\$M	10.0% US\$M	Flow A.T. US\$M	Rev. A.T. US\$M	10.0% US\$M
							+					
2014	65	65	(2,834)	(2,834)	(2,702)	215	-	(2,834)	(2,702)	(3,048)	(3,048)	(2,906)
2015 2016	167 236	167 236	(8,971)	(11,805)	(7,776)	275 396	-	(8,971)	(7,776)	(9,246) (9,454)	(12,294)	(8,014)
2016	236	230	(9,058) 318	(20,863) (20,545)	(7,138) 228	396 483	-	(9,058) 318	(7,138) 228	(9,454) (165)	(21,748) (21,912)	(7,449) (118)
2017	284	284	10 034	(20, 543)	6 535	405	-	10 034	6 535	9 565	(21, 912) (12 347)	6 220

2018	284	284	10,034	(10,510)	6,535	469	-	10,034	6,535	9,565	(12,347)	6,229	
2019	222	222	7,752	(2,758)	4,589	401	-	7,752	4,589	7,351	(4,997)	4,352	
2020	179	179	5,809	3,050	3,126	341	-	5,809	3,126	5,468	471	2,943	
2021	147	147	4,360	7,411	2,133	290	-	4,360	2,133	4,070	4,542	1,992	
2022	123	123	3,244	10,655	1,443	246	-	3,244	1,443	2,998	7,539	1,333	
2023	105	105	2,360	13,015	954	209	-	2,360	954	2,151	9,690	870	
2024	90	90	1,643	14,658	604	178	-	1,643	604	1,465	11,155	539	
2025	78	78	1,050	15,708	351	151	-	1,050	351	898	12,054	300	
2026	69	69	823	16,531	250	129	-	823	250	695	12,748	211	
2027	61	61	680	17,211	188	109	-	680	188	570	13,319	158	
2028	54	54	76	17,287	19	93	-	76	19	(17)	13,302	(4)	
Rem.	-	-	-	17,287	-	-	-	-	-	-	13,302	-	
Total	2,184	2,184	17,287		2,805	3,985 Mc	Dan	17,287	2,805	13,302		434	
Caspian Energy -	East Zhagabul	ak - Dec 31 20	013 - Finala.xls	m	- <u>-</u> <u>v</u>	للالم الم	tes Consult	ants Ltd.					5/8/2014

(16,307)

2,753

1,972

# Caspian Energy Inc. East Zhagabulak Field - Kazakhstan **Forecast of Production and Revenues** Total Proved + Probable + Possible Reserves

Forecast Price Case as of December 31, 2013

						Crude		nd Gross R	Total			
				Producing Well	Daily Rate	Annual Volume	Annual Volume	Crude Oil Price	Sales Revenue			
			Year		bopd			US\$/bbl	US\$M			
			2014	3	459	168	22	44.00	7,373			
			2015	5	1,264	461	60	44.88	20,704			
			2016 2017	7 9	1,894 2,518	691 919	91 120	45.78 46.69	31,648 42,908			
			2018	11	3,021	1,103	144	47.63	52,521			
			2019	11	2,837	1,035	136	48.58	50,299			
			2020 2021	11 11	2,285 1,882	834 687	109 90	49.55 50.54	41,331 34,719			
			2021	11	1,578	576	75	51.55	29,690			
			2023	11	1,342	490	64	52.58	25,766			
			2024	11	1,156	422	55	53.64	22,641			
			2025 2026	11 11	1,007 885	368 323	48 42	54.71 55.80	20,106 18,020			
			2020 2027	11	784	286	42 37	55.80 56.92	16,020			
			2028	11	699	255	33	58.06	14,813			
			Rem.			1,094	143	61.93	67,771			
			Total			9,712	1,272		496,591			
			Property (	Gross Sha	re of Roya	lties, Expe	nses and	Net Reven	ues Before	Income T	ax	
					Export	Commerc.			Aband.	Capital	Net Cash	
		Year	M.E.T. US\$M	M.E.T. %	Rent Tax US\$M	Disc. Bon. US\$M	Costs US\$M	Costs US\$/bbl	Costs US\$M	Costs US\$M	Flow B. Tax US\$M	
		2014	104	2.5			4 950	29.04		0 165	(6.926)	
		2014 2015	184 518	2.5 2.5	-	-	4,850 6,018	28.94 13.05	-	9,165 34,657	(6,826) (20,489)	
		2016	791	2.5	-	-	6,346	9.18	-	42,633	(18,123)	
		2017	1,073	2.5	-	-	6,686	7.28	-	27,061	8,089	
		2018 2019	1,313 1,257	2.5 2.5	-	-	7,036 7,177	6.38 6.93	-	27,061 -	17,112 41,865	
		2019	1,237	2.5 2.5	-	-	7,177	8.78	-	-	32,978	
		2021	868	2.5	-	-	7,466	10.87	-	-	26,385	
		2022	742	2.5	-	-	7,616	13.22	-	-	21,332	
		2023 2024	644 566	2.5 2.5	-	-	7,768 7,923	15.85 18.77	-	-	17,354 14,151	
		2024	500 503	2.5 2.5	-	-	8,082	21.99	-	-	14,151	
		2026	451	2.5	-	-	8,244	25.53	-	-	9,326	
		2027	407	2.5	-	-	8,408	29.40	-	-	7,465	
		2028 Rem.	370 1,694	2.5 2.5	-	-	8,577 50,433	33.62 46.08	- 1,783	-	5,866 13,862	
		Total	12,415	2.5	_	_	159,949	16.47	1,783	140,577	181,867	
		Total			Inc. Share	of Produc		Revenues B			101,007	
	Gross	Net			NPV	Property &	Excess		NPV			NPV
		Annual Oil		Cum	B.T. at	Corporate	Profits	Net Cash	B.T. at	Net Cash	Cum	A.T. at
Year	Production Mbbl	Production Mbbl	Flow B. Tax US\$M	Rev. B.T. US\$M	10.0% US\$M	Tax US\$M	Tax US\$M	Flow B.T. US\$M	10.0% US\$M	Flow A.T. US\$M	Rev. A.T. US\$M	10.0% US\$M
2014	67	67	(2,731)	(2,731)	(2,604)	215	_	(2,731)	(2,604)	(2,945)		(2,808)
2014	185	185	(8,196)	(10,926)	(2,004)	275	_	(8,196)	(7,104)	(8,470)		(2,000) (7,342)
2016	277	277	(7,249)	(18,175)	(5,712)	396	-	(7,249)	(5,712)	(7,645)	· · /	(6,024)

2018	441	441	6,845	(8,095)	4,457	524	-	6,845	4,457	6,321	(9,986)	4,116	
2019	414	414	16,746	8,651	9,914	502	-	16,746	9,914	16,244	6,257	9,617	
2020	334	334	13,191	21,842	7,099	1,972	2,293	13,191	7,099	8,927	15,184	4,804	
2021	275	275	10,554	32,396	5,164	1,605	1,616	10,554	5,164	7,333	22,517	3,588	
2022	230	230	8,533	40,929	3,795	1,285	1,008	8,533	3,795	6,239	28,756	2,775	
2023	196	196	6,942	47,870	2,807	1,036	617	6,942	2,807	5,289	34,045	2,139	
2024	169	169	5,661	53,531	2,081	838	362	5,661	2,081	4,460	38,505	1,640	
2025	147	147	4,609	58,139	1,540	675	195	4,609	1,540	3,739	42,244	1,249	
2026	129	129	3,730	61,870	1,133	539	86	3,730	1,133	3,106	45,349	944	
2027	114	114	2,986	64,856	825	423	16	2,986	825	2,547	47,896	703	
2028	102	102	2,346	67,202	589	323	-	2,346	589	2,023	49,919	508	
Rem.	438	438	5,545	72,747	1,101	691	-	5,545	1,101	4,854	54,773	965	
Total	3,885	3,885	72,747		27,404	11,781	6,193	72,747	27,404	54,773		18,846	
					- + 1	VY IVIC	Jall	IEI –					
Caspian Energy -	East Zhagabul	ak - Dec 31 20	013 - Finala.xls	m		& Associ	ates Consulta	nts Ltd.					5/8/2014

483

-

3,236

2,318

2017

368

368

3,236

(14,939)

2,318

## Caspian Energy Inc. East Zhagabulak Field - Kazakhstan **Crude Oil Reserves Summary** Effective December 31, 2013

#### **Reservoir Parameters**

Porosity, %	7.6
Oil Saturation, %	66.5
Formation Volume Factor, frac.	1.680
Oil Shrinkage, frac	0.595
Original Oil-In Place, bbl/ac-ft	233
Average Net Pay, ft.	242
Mapped Pool Area, acres	1,002

#### **Proved Developed Producing Reserves**

Original Oil in Place, Mbbl	56,686
Recovery Factor, %	2.9
Original Recoverable, Mbbl	1,625
Cumulative Recovery, Mbbl	1,625
Cumulative Recovery, %	2.9
Remaining Recoverable, Mbbl	-
Proved Developed Reserves	
Original Oil in Place, Mbbl	56,686
Recovery Factor, %	2.9
Original Recoverable, Mbbl	1,625
Cumulative Recovery, Mbbl	1,625
Remaining Recoverable, Mbbl	-
Proved Undeveloped Reserves, Mbbl	-
Total Proved Reserves	
Original Oil in Place, Mbbl	56,686
Recovery Factor, %	2.9
Original Recoverable, Mbbl	1,625
Cumulative Recovery, Mbbl	1,625
Remaining Recoverable, Mbbl	-

#### Probable Reserves, Mbbl

Proved + Probable Reserves	
Original Oil in Place, Mbbl	56,686
Recovery Factor, %	12.5
Original Recoverable, Mbbl	7,086
Cumulative Recovery, Mbbl	1,625
Remaining Recoverable, Mbbl	5,461

# Possible Reserves, Mbbl

#### **Proved + Probable + Possible Reserves**

Original Oil in Place, Mbbl	56,686
Recovery Factor, %	20.0
Original Recoverable, Mbbl	11,337
Cumulative Recovery, Mbbl	1,625
Remaining Recoverable, Mbbl	9,712

The above reserves estimates are prior to field economic limit adjustments

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5,461

4,251

# Caspian Energy Inc. East Zhagabulak Field - Kazakhstan Reservoir and Fluid Properties Effective December 31, 2013

	KT-II
Imperial Units	
Lithology	Carbonate
Gross Oil Pay Thickness, ft	622
Net Oil Pay Thickness, ft	236
Net to Gross Pay Ratio, %	38
Oil Water Contact Depth, ft md.	15,338
Average Oil Permeability From Core, md	?
Range of Permeability, md	?
Initial Reservoir Pressure, atm	455
Initial Reservoir Pressure, psia	6,702
Bubble Point Pressure, atm	260
Bubble Point Pressure, psia	3,830
Reservoir Temperature, F	189
Stock Tank Oil Density, g/cc	0.824
Stock Tank Oil Gravity, degrees API	40.2
Oil Viscosity, cp	0.28
Solution GOR, scf/bbl (from PVT)	1,387
Oil Sulphur Content, %	0.77
Oil Paraffin Content, %	3.46
Oil Resin Content, %	10.00
Ashphaltenes	1.70
Solution Gas Sulfur Content, %	0.64
Mercaptains	Present

	IX I -11
SI Units	
Lithology	Carbonate
Gross Oil Pay Thickness, m	190
Net Oil Pay Thickness, m	72
Net to Gross Pay Ratio, %	38
Oil Water Contact Depth, m md.	4,675
Average Oil Permeability From Core, md	?
Range of Permeability, md	?
Initial Reservoir Pressure, atm	455
Initial Reservoir Pressure, kpa	46,103
Bubble Point Pressure, atm	260
Bubble Point Pressure, kpa	26,345
Reservoir Temperature, C	87
Stock Tank Oil Density, g/cc	0.824
Stock Tank Oil Gravity, degrees API	40.2
Oil Viscosity, cp	0.28
Solution GOR, m3/m3	248
Oil Sulphur Content, %	0.77
Oil Paraffin Content, %	3.46
Oil Resin Content, %	10.00
Ashphaltenes	1.70

KT-II

Table 8

Solution Gas Sulfur Content, % Mercaptains

0.64 Present



# Caspian Energy Inc. East Zhagabulak Field - Kazakhstan Summary of Economic Parameters and Fiscal Terms

Effective December 31, 2013

#### **Price Schedule**

Brent price forecast based on the McDaniel & Associates December 31, 2013 price forecast

#### **Product Price Adjustments**

Product	Price Adjustment
Domestic Price	\$44.00/bbl in 2014 increased at inflation therafter

See Table 10

The domestic price includes \$16/bbl in selling expenses The percentage of production sold to domestic markets was forecast to be 100%

#### **Operating Costs (2014\$ - US)**

Description	2014	2015+	Source of Data
Operating Costs			
Fixed, \$/year	\$1,750,000	\$2,600,000	2013 Accounting / 2014 Budget
Variable, \$/well-year	\$100,000	\$100,000	2013 Accounting / 2014 Budget
General & Administrative Costs	\$2,800,000	\$2,800,000	2013 Accounting / 2014 Budget

The fixed operating costs include all Kazakh G&A costs and were reduced by 10 % per year in each of the last 3 years

#### Capital Costs (2014\$ - US)

	Gross Amount	Description
Proved + Probable		
2014	\$1,240,000	Workovers
2014	\$4,950,000	CPF Construction
2014	\$2,975,000	Equipment and Environmental Pa
2015	\$5,000,000	Whipstock of Well 213
2015	\$12,000,000	Drill 1 New Production Well
2015	\$9,477,500	CPF Construction
2015	\$7,500,000	Gas Processing Plant & Pipeline
2016	\$24,000,000	Drill 2 New Production Wells
2016	\$7,500,000	Gas Processing Plant & Pipeline
2016	\$9,477,500	CPF Construction
2017	\$24,000,000	Drill 2 New Production Wells
2017	\$1,500,000	Miscellaneous Facility Capital
2018	\$1,000,000	Miscellaneous Facility Capital
Proved + Probable + Possible		
2014	\$1,240,000	Workovers
2014	\$4,950,000	CPF Construction
2014	\$2,975,000	Equipment and Environmental Pa
2015	\$5,000,000	Whipstock of Well 213
2015	\$12,000,000	Drill 1 New Production Well
2015	\$9,477,500	CPF Construction
2015	\$7,500,000	Gas Processing Plant & Pipeline
2016	\$24,000,000	Drill 2 New Production Wells
2016	\$7,500,000	Gas Processing Plant & Pipeline
2016	\$9,477,500	CPF Construction
2017	\$24,000,000	Drill 2 New Production Wells
2017	\$1,500,000	Miscellaneous Facility Capital
2018	\$24,000,000	Drill 2 New Production Wells
	\$1,000,000	Miscellaneous Facility Capital

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5/8/2014

Table 9

Page 1

#### Caspian Energy Inc. Table 9 East Zhagabulak Field - Kazakhstan Page 2 Summary of Economic Parameters and Fiscal Terms Effective December 31, 2013 Abandonment Costs (2014\$ - US) Well Abandonments Assumed \$100,000 per well at the end of the life of property Interests and Fiscal Terms Caspian Energy Working Interest 40 Percent Mineral Extraction Tax (Incremental Tiers) Export Domestic Volumes less than 250 MT 5.0% 2.5% From 250 to 500 MT 7.0% 3.5% From 500 to 1,000 MT 8.0% 4.0% From 1,000 to 2,000 MT 9.0% 4.5% From 2,000 to 3,000 MT 5.0% 10.0% From 3,000 to 4,000 MT 11.0% 5.5% From 4,000 to 5,000 MT 12.0% 6.0% From 5,000 to 7,000 MT 13.0% 6.5% From 7,000 to 10,000 MT 15.0% 7.5% Volumes exceeding 10,000 MT 18.0% 9.0% Rent Tax on Exported Crude Oil - Based on World Price which was assumed to be Brent World Price, \$/bbl Tax Rate 20 0% 30 0% 40 0% 50 7% 60 11% 70 14% 80 16% 90 17% 100 19% 110 21%

170 29% 180 30% 200 32% Capital Depreciation Rate – Exploration Costs 25 Percent Declining Balance Exploration Capital Cost Balance at December 31, 2013 \$31.479 million Capital Depreciation Rate - Development Costs 15 Percent Declining Balance \$35.215 million Development Capital Cost Balance at December 31, 2013 Tax Loss Carryforward Balance at December 31, 2013 \$38.172 million Profit Tax 20.0 percent Excess Profits Tax (Incremental Tiers) - Based on Ratio of Accumulated Income to Accumulated Expenses: Up to 1.25 0 percent From 1.25 to 1.3 10 percent From 1.3 to 1.4 20 percent From 1.4 to 1.5 30 percent 40 percent From 1.5 to 1.6 50 percent From 1.6 to 1.7 Above 1.7 60 percent 1.5 Percent Property Tax Not Included VAT License Expiry July 27, 2035

Caspian Energy - East Zhagabulak - Dec 31 2013 - Finala.xlsm

120

130

140

150

160





22%

23%

25%

26%

27%

# McDaniel & Associates Consultants Ltd. Summary of Price Forecasts

Effective December 31, 2013

	WTI	Brent	Domestic	
	Crude	Crude	Field	Inflation
	Oil Price	Oil Price	Price	Forecast
Year	\$US/bbl	\$US/bbl	\$US/bbl	%
2014	95.00	105.00	44.00	2.0
2015	95.00	102.50	44.88	2.0
2016	95.00	100.20	45.78	2.0
2017	95.00	97.70	46.69	2.0
2018	95.30	98.00	47.63	2.0
2019	96.60	99.40	48.58	2.0
2020	98.50	101.30	49.55	2.0
2021	100.50	103.40	50.54	2.0
2022	102.50	105.40	51.55	2.0
2023	104.60	107.60	52.58	2.0
2024	106.70	109.70	53.64	2.0
2025	108.80	111.90	54.71	2.0
2026	111.00	114.20	55.80	2.0
2027	113.20	116.40	56.92	2.0
2028	115.50	118.80	58.06	2.0
2029	117.81	121.18	59.22	2.0
2030	120.17	123.60	60.40	2.0
2031	122.57	126.07	61.61	2.0
2032	125.02	128.59	62.84	2.0
2033	127.52	131.16	64.10	2.0

Pricing Assumptions :

Brent price forecast based on the McDaniel & Associates December 31, 2013 price forecast Domestic price includes selling expenses

Table 10



# Caspian Energy Inc. East Zhagabulak Field - Kazakhstan Forecast of Capital Costs - 2014\$ Effective December 31, 2013

**Proved Producing Reserves** 

		la la alla a	Tatal	Developethere	had a set a se				
	Production		Total	Production			Equipment &		Tatal
	Wells	Wells	Wells	Wells	Wells	Workovers	Facilities	Total	Total
Year	#	#	#	2014 US\$M	2014 US\$M	2014 US\$M	2014 US\$M	2014 US\$M	Future US\$M
2014									
2014	-	-	-	-	-	-	-	-	-
2015	-	-	-	-	-	-	-	-	-
2016	-	-	-	-	-	-	-	-	-
2017	-	-	-	-	-	-	-	-	-
2018	-	-	-	-	-	-	-	-	-
2019	-	-	-	-	-	-	-	-	-
2020	-	-	-	-	-	-	-	-	-
2021	-	-	-	-	-	-	-	-	-
2022	-	-	-	-	-	-	-	-	-
2023	-	-	-	-	-	-	-	-	-
2024	-	-	-	-	-	-	-	-	-
2025	-	-	-	-	-	-	-	-	-
2026	-	-	-	-	-	-	-	-	-
2027	-	-	-	-	-	-	-	-	-
2028	-	-	-	-	-	-	-	-	-
2029	-	-	-	-	-	-	-	-	-
2030	-	-	-	-	-	-	-	-	-
2031	-	-	-	-	-	-	-	-	-
Total	-	-	-	-	-	-	-	-	-

#### **Proved Developed Reserves**

Year	Production Wells #	Injection Wells #	Total Wells #	Production Wells 2014 US\$M	Injection Wells 2014 US\$M	Workovers 2014 US\$M	Equipment & Facilities 2014 US\$M	Total 2014 US\$M	Total Future US\$M
2014	-	-	-	-	-	-	-	-	-
2015	-	-	-	-	-	-	-	-	-
2016	-	-	-	-	-	-	-	-	-
2017	-	-	-	-	-	-	-	-	-
2018	-	-	-	-	-	-	-	-	-
2019	-	-	-	-	-	-	-	-	-
2020	-	-	-	-	-	-	-	-	-
2021	-	-	-	-	-	-	-	-	-
2022	-	-	-	-	-	-	-	-	-
2023	-	-	-	-	-	-	-	-	-
2024	-	-	-	-	-	-	-	-	-
2025	-	-	-	-	-	-	-	-	-
2026	-	-	-	-	-	-	-	-	-
2027	-	-	-	-	-	-	-	-	-
2028	-	-	-	-	-	-	-	-	-
2029	-	-	-	-	-	-	-	-	-
2030	-	-	-	-	-	-	-	-	-
2031	-	-	-	-	-	-	-	-	-
Total	-	-	-	-	-	-	-	-	-

Individual Cost \$M

Table 11



# Caspian Energy Inc. East Zhagabulak Field - Kazakhstan Forecast of Capital Costs - 2014\$ Effective December 31, 2013

**Total Proved Reserves** 

Total Floved Reserve	70								
	Production	Injection	Total	Production	Injection		Equipment &		
	Wells	Wells	Wells	Wells	Wells	Workovers	Facilities	Total	Total
Year	#	#	#	2014 US\$M	2014 US\$M	2014 US\$M	2014 US\$M	2014 US\$M	Future US\$M
2014	-	-	-	-	-	-	-	-	-
2015	-	-	-	-	-	-	-	-	-
2016	-	-	-	-	-	-	-	-	-
2017	-	-	-	-	-	-	-	-	-
2018	-	-	-	-	-	-	-	-	-
2019	-	-	-	-	-	-	-	-	-
2020	-	-	-	-	-	-	-	-	-
2021	-	-	-	-	-	-	-	-	-
2022	-	-	-	-	-	-	-	-	-
2023	-	-	-	-	-	-	-	-	-
2024	-	-	-	-	-	-	-	-	-
2025	-	-	-	-	-	-	-	-	-
2026	-	-	-	-	-	-	-	-	-
2027	-	-	-	-	-	-	-	-	-
2028	-	-	-	-	-	-	-	-	-
2029	-	-	-	-	-	-	-	-	-
2030	-	-	-	-	-	-	-	-	-
2031	-	-	-	-	-	-	-	-	-
Total	-	-	-	-	-	-	-	-	-
Individual Cost \$M				12,000	12,000				

#### **Total Proved + Probable Reserves**

		Production Wells	Injection Wells	Total Wells	Production Wells	Injection Wells	Workovers	Equipment & Facilities	Total	Total
	Year	#	#	#	2014 US\$M	2014 US\$M	2014 US\$M	2014 US\$M	2014 US\$M	Future US\$M
	2014					_	1,240	7,925	9,165	9,165
	2014	- 1	-	- 1	- 12,000		5,000	16,978	33,978	
		1	-	1		-	5,000			34,657
	2016	2	-	2	24,000	-	-	16,978	40,978	42,633
	2017	2	-	2	24,000	-	-	1,500	25,500	27,061
	2018	-	-	-	-	-	-	1,000	1,000	1,082
	2019	-	-	-	-	-	-	-	-	-
	2020	-	-	-	-	-	-	-	-	-
	2021	-	-	-	-	-	-	-	-	-
	2022	-	-	-	-	-	-	-	-	-
	2023	-	-	-	-	-	-	-	-	-
	2024	-	-	-	-	-	-	-	-	-
	2025	-	-	-	-	-	-	-	-	-
	2026	-	-	-	-	-	-	-	-	-
	2027	-	-	-	-	-	-	-	-	-
	2028	-	-	-	-	-	-	-	-	-
	2029	-	-	-	-	-	-	-	-	-
	2030	-	-	-	-	-	-	-	-	-
	2031	-	-	-	-	-	-	-	-	-
	Total	5	-	5	60,000	-	6,240	44,380	110,620	114,598
Individual Cost \$M	1				12,000	12,000				

Table 11 Page 2



# Caspian Energy Inc. East Zhagabulak Field - Kazakhstan Forecast of Capital Costs - 2014\$ Effective December 31, 2013

Total Proved + Probable + Possible Reserves

	Production	Injection	Total	Production	Injection		Equipment &	Tatal	Tatal
	Wells	Wells	Wells	Wells	Wells	Workovers	Facilities	Total	Total
Year	#	#	#	2014 US\$M	2014 US\$M	2014 US\$M	2014 US\$M	2014 US\$M	Future US\$M
2014	-	-	-	-	-	1,240	7,925	9,165	9,165
2015	1	-	1	12,000	-	5,000	16,978	33,978	34,657
2016	2	-	2	24,000	-	-	16,978	40,978	42,633
2017	2	-	2	24,000	-	-	1,500	25,500	27,061
2018	2	-	2	24,000	-	-	1,000	25,000	27,061
2019		-	-	-	-	-	-	-	-
2020	-	-	-	-	-	-	-	-	-
2021	-	-	-	-	-	-	-	-	-
2022	-	-	-	-	-	-	-	-	-
2023	-	-	-	-	-	-	-	-	-
2024	-	-	-	-	-	-	-	-	-
2025	-	-	-	-	-	-	-	-	-
2026	-	-	-	-	-	-	-	-	-
2027	-	-	-	-	-	-	-	-	-
2028	-	-	-	-	-	-	-	-	-
2029	-	-	-	-	-	-	-	-	-
2030	-	-	-	-	-	-	-	-	-
2031	-	-	-	-	-	-	-	-	-
Total	7	-	7	84,000	-	6,240	44,380	134,620	140,577
M				12,000	12,000				

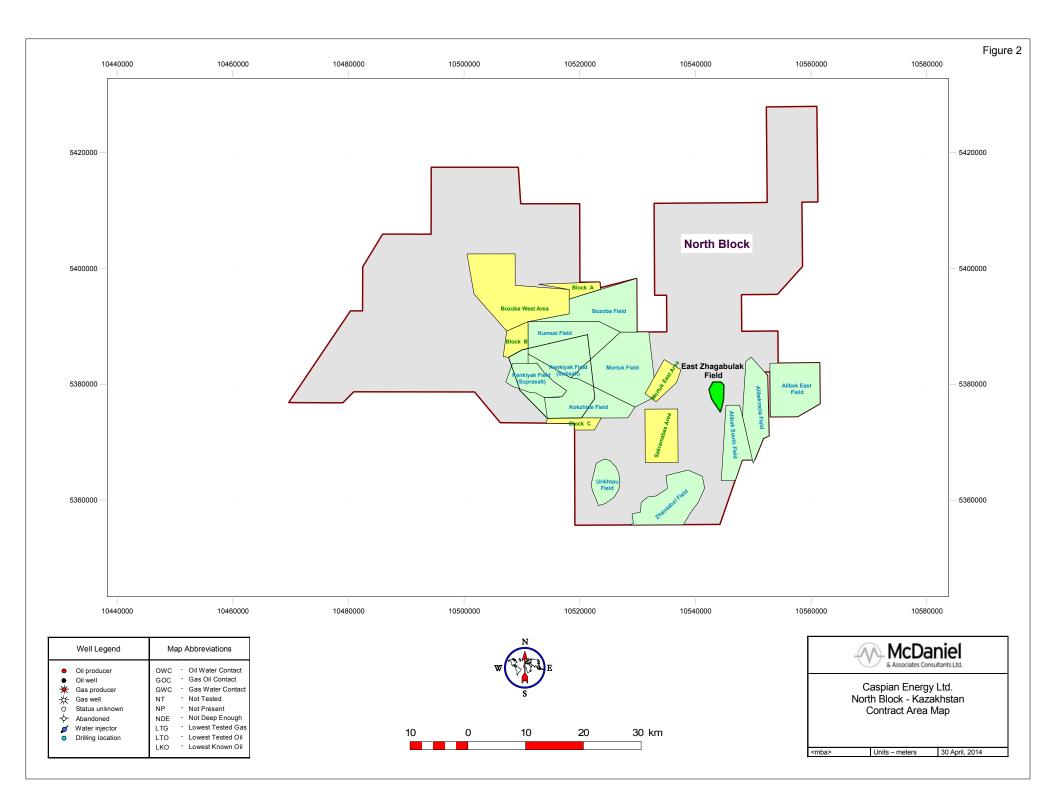
Individual Cost \$M

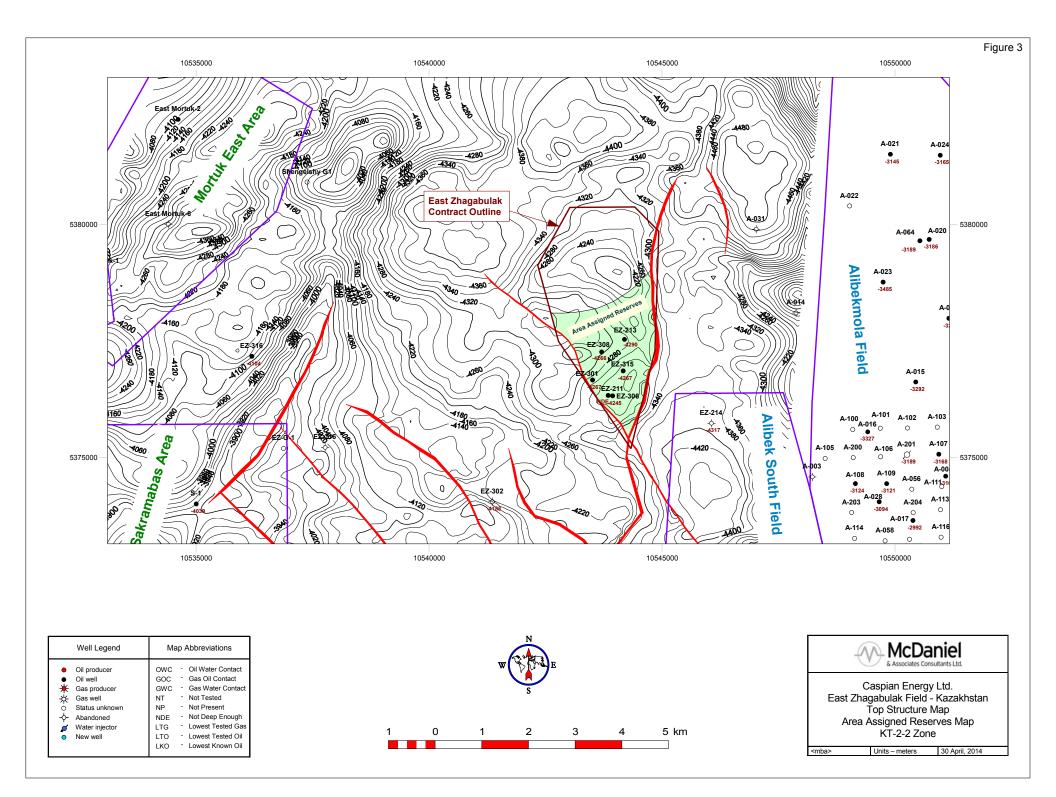
Table 11

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# East Zhagabulak Field Production History / Forecast Plot 3,500 3,000 2,500 Production Rate - bopd 2,000 1,500 1,000 500 0 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017 2018 2019 2020 2021 2022 2023 2024 2025 2026 2027 2028 2029 2030 2031 2032 Year \_\_\_\_2P \_\_\_\_3P

Figure 4

