

28 April 2017

## Activities Report Quarter Ended 31 March 2017

### HIGHLIGHTS

#### OPERATIONS

##### Offshore Italy – Nilde Oil Field Redevelopment

- During the quarter, ADX completed the 3D geological and dynamic reservoir simulation project resulting in an update to the Nilde Field Contingent Resources as per table below (*refer ASX Announcement 14 February 2017*):

Gross Contingent <sup>1</sup> Oil Resource Volumes (MMstb)			
	1C <sup>2</sup> Estimate	2C <sup>2</sup> Estimate	3C <sup>2</sup> Estimate
<b>Nilde &amp; Nilde Bis</b>	<b>21.7</b>	<b>32.8</b>	<b>49.8</b>

- Development concept selection and economic analysis were also finalised by ADX during the quarter demonstrating a highly profitable project due to high reservoir productivity, excellent quality oil, low cost development concept, attractive lease rates and favourable concession terms.
- The economic analysis predicts an unrisks, post-tax NPV10 of approximately US\$200 – 650 million across the contingent resource range with project payback in less than 12 months and a break-even oil price below \$30/bbl in all cases.

##### Offshore Tunisia – Dougga Appraisal and Development

- During the quarter, ADX engaged TechnipFMC to undertake the development concept study for the Dougga gas condensate discovery offshore Tunisia. TechnipFMC will consider alternative conceptual designs, based on existing, proven technology that can reliably deliver reduced capital and operating costs and is expected to complete the project by the end of May 2017.

<sup>1</sup> Contingent Resources: those quantities of petroleum estimated, as of a given date, to be potentially recoverable from known accumulations but, for which the applied project(s) are not yet considered mature enough for commercial development due to one or more contingencies.

<sup>2</sup> 1C, 2C, 3C Estimates: in a probabilistic resource size distribution, these are the P90 (90% probability), P50, and P10, respectively, for individual opportunities. Totals are by arithmetic summation as recommended under PRMS guidelines. Arithmetic summation results in a conservative low case total and optimistic high case total.

ADX Energy Ltd

AUSTRALIA

Level 2,  
Suite 14, 210 Bagot Road  
Subiaco WA 6008

PO Box 63 Subiaco 6904

T +61 (08) 9381 4266

F +61 (08) 9381 4766

E [admin@adxenergy.com.au](mailto:admin@adxenergy.com.au)

ABN 50 009 058 646

[www.adxenergy.com.au](http://www.adxenergy.com.au)

- A 3D geo-mechanical and fracture network model was completed by ADX for the large and heavily faulted and fractured Dougga structure. The modeling is currently being incorporated into a detailed 3D geological model that will provide an update to the in place gas and condensate resources estimates which ADX plans to announce study results by mid-year 2017.

### Onshore Romania – Parta license

- In January 2017, ADX secured ratification of a 30-month extension to complete the seismic and drilling program as well as secured the appropriate permitting and majority of land access agreements. The Permit commitment is the acquisition of 160 km of 2D and 150 sqkm of 3D seismic as well as the drilling of two exploration wells. ADX has already acquired 100 km of 2D Seismic and approximately 50 sqkm of 3D seismic.
- The tender process for the seismic work program is underway with award expected in the third quarter, and to be executed in fourth quarter of 2017.
- Seismic interpretation work has been ongoing by ADX during the quarter completing the prospect mapping on available seismic which has already identified a number of prospects and leads. Prospective resources are expected to be generated during the second quarter.

## OPERATIONS

### Offshore Italy Pantelleria Permits & d363C.R-.AX permit (Operator, 100% equity interests)

#### The Nilde Field Redevelopment Project

##### *Nilde oil field Resources Estimation*

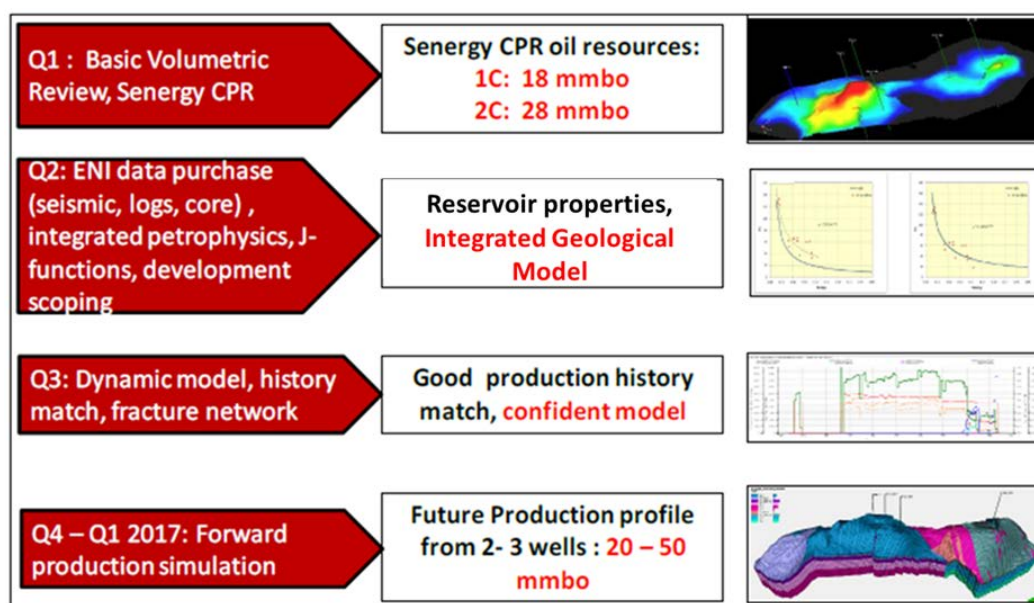
During the quarter, the lengthy and detailed static 3D geological and dynamic reservoir modeling project was concluded resulting in an update to the Contingent Resources estimates (per the below table) and a range of production forecasts which were used to update the development concept and assess the economic viability of the project.

Gross Contingent <sup>2</sup> Oil Resource Volumes (MMstb)			
	1C <sup>2</sup> Estimate	2C <sup>2</sup> Estimate	3C <sup>2</sup> Estimate
<b>Nilde &amp; Nilde Bis</b>	<b>21.7</b>	<b>32.8</b>	<b>49.8</b>

<sup>1</sup> Contingent Resources: those quantities of petroleum estimated, as of a given date, to be potentially recoverable from known accumulations but, for which the applied project(s) are not yet considered mature enough for commercial development due to one or more contingencies.

<sup>2</sup> 1C, 2C, 3C Estimates: in a probabilistic resource size distribution these are the P90 (90% probability), P50, and P10, respectively, for individual opportunities. Totals are by arithmetic summation as recommended under PRMS guidelines. This results in a conservative low case total and optimistic high case total.

The production forecasts and the contingent resources estimates, are based on detailed geological and reservoir models honoring all available geological data from the field and which have been history matched against the field's actual production performance from 1979 to 1989. This history matching process provides increased confidence in the geological model, the production forecasts and the remaining resources available at Nilde.



**Figure 1: Completed Nilde reservoir & simulation modelling work**

Reservoir simulation work has consisted of three key steps:

1. History matching of past production data against production predicted by the geological model derived by ADX for the period of field production between 1979 and 1989 ensuring that the geological model incorporating all available data generates reliable forecast results.
2. The modelling of reservoir recharging from the time the field was abandoned in 1989 to now.
3. Dynamic forward modelling of future oil, gas and water production on a well by well basis based on ADX' subsurface development scenarios.

In contrast to the relatively crude volumetric method of resource estimation used earlier (Senergy CPR Resources, announced February 2016) , the dynamic reservoir simulation forecasting method not only provides a total recoverable oil resource volume, but also a well by well production profile prediction with daily oil, gas and water production volumes. These production forecasts also provide an important tool for development design optimisation.

Following these comprehensive subsurface studies, ADX believes that an appraisal well is an important pre-investment to ensure the development plan is optimised, remaining risk is reduced and finance is more easily secured for the development capital. In addition to supplying critical information for the development, it is also intended that an appraisal well will be completed as a future producer.

### ***Nilde Development Concept & Updated Project Economics***

Following the Memorandum of Understanding (“MOU”) that ADX and COPL jointly entered into (ASX announcement 22 December 2016), development planning for the Nilde Redevelopment on the basis of leased platform, production and storage facilities was progressed. ADX believes this is an optimal technical and commercial solution pending results from the appraisal well. Key points from the technical and economic analysis undertaken during the quarter are as follows:

- The Project has the potential to be highly profitable and robust due to high reservoir productivity, light sweet crude, shallow drill depths, shallow water depth and low royalties.
- The combination of low offshore drilling costs possible from the MCP platform combined with attractive lease rates for the platform, production and storage facilities result in excellent predicted economics as summarised below at an oil price of US\$40 per barrel;
- Net post-tax cash flow averaging approximately **US\$150 million per annum** for first 3 years for the predicted base case resource (2C resources estimate of 33 million barrels);
- Low capital costs per barrel of **US\$4.80 - 3.40 per barrel** (across the predicted resource range of 22 million barrels 1C to 50 million barrels 3C);
- High post tax NPV10 per barrel of **US\$13 - 25 per barrel** (across the predicted resource range of 22 million barrels 1C to 50 million barrels 3C);

### ***Regulatory Approvals***

As announced in the last quarterly report, ADX has held several meetings with the Italian regulatory authority to facilitate the licensing process. A due diligence workshop with ADX and Italian government representatives was held in Rome (Italy) in February. ADX was also invited to present progress on the Nilde development work and future possible development scenarios.

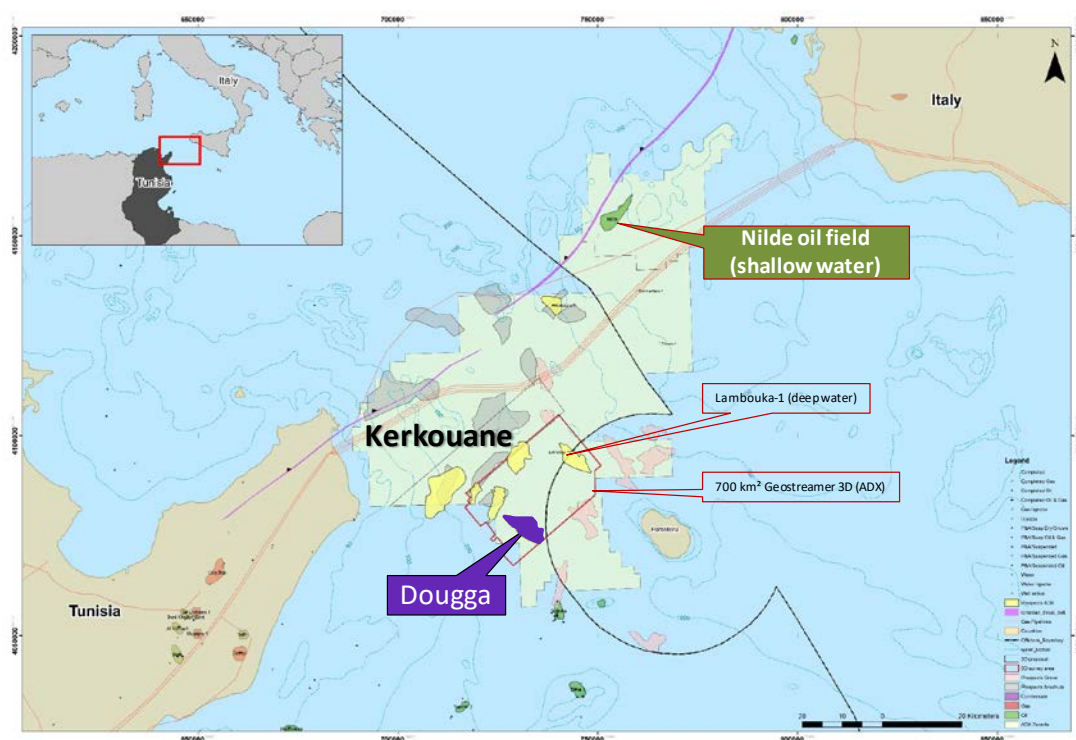
### ***Farmout Status***

ADX has had early engagement with a number of potential farminees and/or purchasers of a partial interest in the license. To date, management has not actively pursued these opportunities since the project was not appropriately technically and commercially defined. The completion of the subsurface work, progression of development concept selection and subsequent economic

analysis will now allow ADX to aggressively pursue investment in the Nilde project via farmout or partial sale and the farmout process will shortly begin in earnest with those parties who have already expressed an interest and others. ADX will continue to advise shareholders of material progress with these discussions.

### **Offshore Tunisia Kerkouane permit (*Operator, 100% equity interest*)**

The 3,080km<sup>2</sup> Kerkouane license contains a number of large sized exploration prospects and the Dougga gas condensate discovery. The license is contiguous with the ADX' Sicily channel licenses as per the map below.

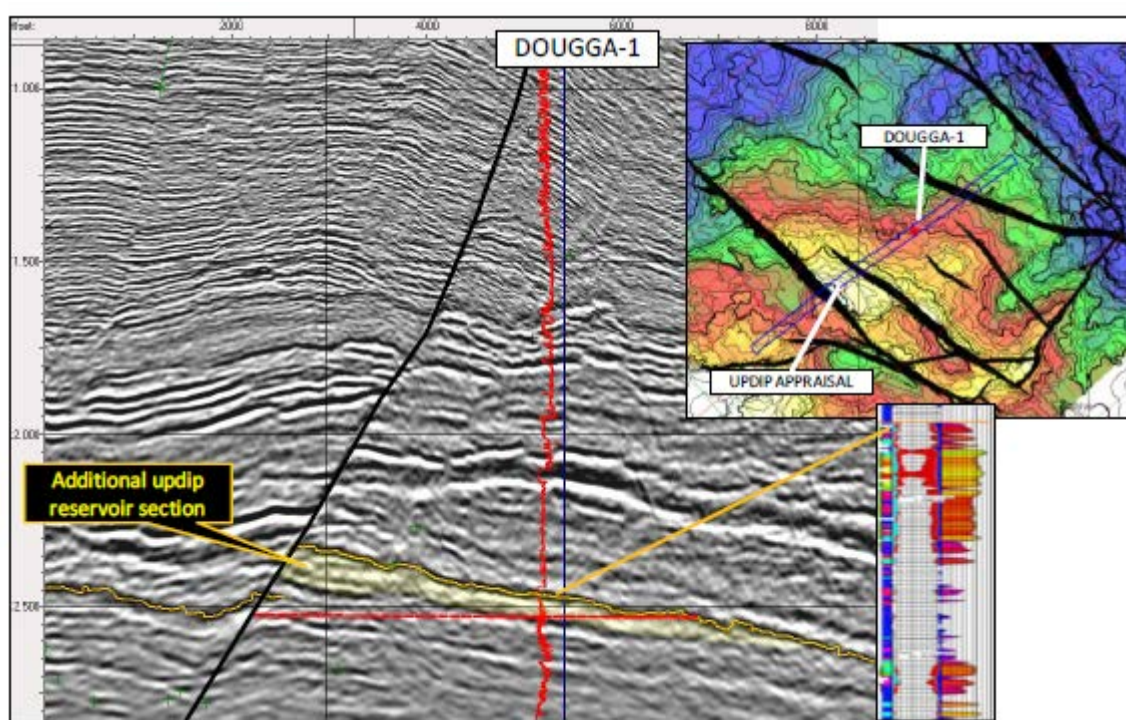


### ***Dougga Subsurface Work***

During the quarter, ADX commenced subsurface studies to further investigate the potential productivity in future Dougga Field wells. While the large in place gas condensate resource is very well defined by the discovery well Dougga-1 and a high resolution 3D seismic dataset (ASX release 14 October 2016), only basic work had been carried out to date on expected production well flow rates.



The information gathered from the Dougga-1 well test in the Aboid gas condensate reservoir combined with data +from the analogous nearby Upper Cretaceous oil and gas fields (Tazerka - Shell, Mamoura - ENI and Miskar - BG, now Shell) suggest highly commercial flow rates are achievable from the reservoir matrix. A different, more extensive fracture network (such as in the Nilde Field) may be present updip from the discovery well. The appraisal well is planned 300m updip from Dougga-1 (Figure 2) and additional well productivity is possible due to contribution from the fracture network.



**Figure 2 Map and 3D seismic cross section showing Dougga discovery and up dip potential.**

A 3D discrete fracture network (DFN) model was completed by structural geology experts, GE-Plan, in Ferrara. The DFN model is now being incorporated into the existing reservoir model as part of a resources update. ADX plans to complete the work in second quarter 2017 and will advise shareholders of the updated resources at that time.

### ***Development Concept Studies***

ADX engaged TechnipFMC to undertake the development concept study for the Dougga gas condensate discovery offshore Tunisia. TechnipFMC will consider alternative conceptual designs, based on existing, proven technology that can reliably deliver reduced capital and operating costs.

Previous commerciality studies and resulting farmout discussions were based on a concept incorporating an offshore facility for condensate separation, storage and offloading as well as onshore plant for gas conditioning. This concept does not take advantage of substantial advances in subsea technologies, and corresponding cost reductions, that can be realised and as such ADX believe that this concept is sub-optimal from a capital cost and operating cost perspective. An initial focus for TechnipFMC will be the development concept of a subsea tie-back to an onshore processing plant.

By leveraging the extensive capability and vendor based pricing accuracy of TechnipFMC in subsea developments at this early stage, their work will provide the opportunity to reduce overall development cost for Dougga. The relationship with TechnipFMC is expected to strengthen ADX Energy's case to service and supply companies thereby saving time, resources and cost.

### ***Farm-out Process***

ADX has received unsolicited interest in Dougga but intends to only commence actively pursuing farmout discussions upon completion of the development concept studies, geological studies and appraisal well planning during June 2017.

ADX believes that by demonstrating a more compelling technical and commercial case for the development of Dougga, funding can be secured for an appraisal well. A Dougga appraisal well is intended to prove the viability of a development through the demonstration of commercial flow rates and potentially add to the gas and liquids resources based on the substantial up dip potential defined on 3D seismic.

### ***Onshore Western Romania, Parta Concession (Operator, 50% equity interest)***

The work program extension for the Parta Exploration permit in Western Romania has been ratified by the Romanian authorities which formally provides a further 30 months to complete the phase 1 exploration work program for the permit.

During the quarter, 3D seismic permitting and land access agreements were (with minor exceptions) completed and ADX accordingly started the seismic tender process with the tender award expected within the second quarter 2017.

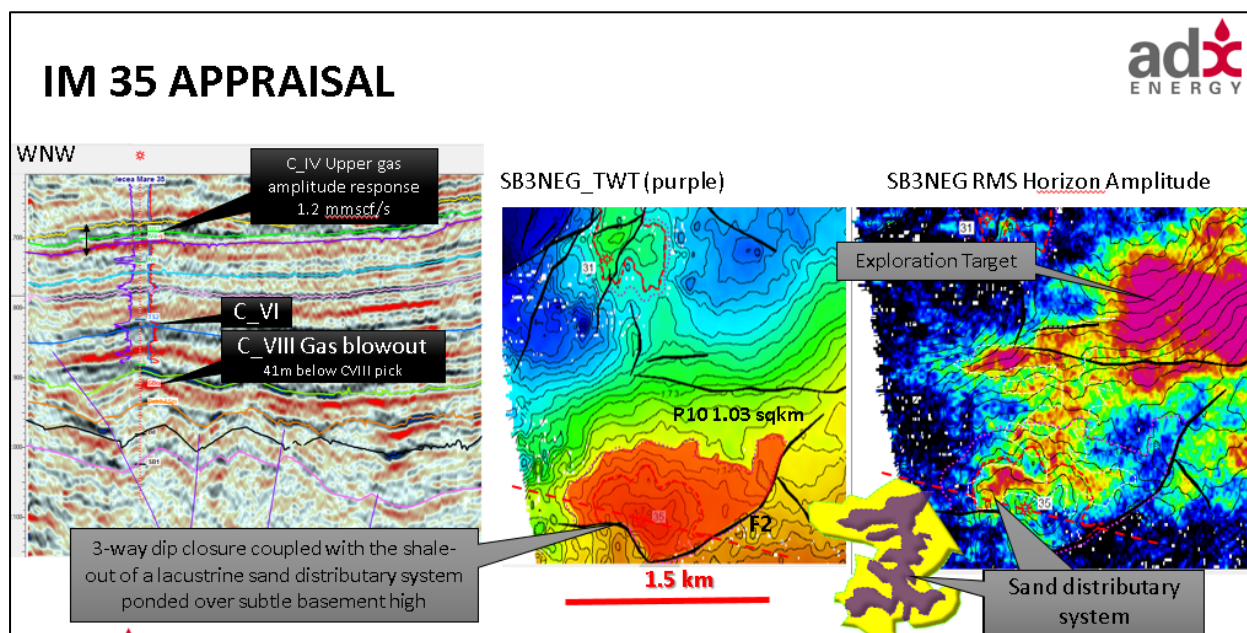
In addition, ADX has successfully obtained a small (20km<sup>2</sup>) modern 3D seismic over the recently abandoned Iecea Mare oil field which has been made by the NAMR available. The (now relinquished) Iecea Mare oil field area is inside the Parta license. Prospect mapping has started and it is intended to provide updates within the next quarter. Importantly, the Iecea Mare 3D demonstrates the excellent visualization that can be obtained from 3D seismic in this prolific hydrocarbon area demonstrating the value expected from the upcoming 3D seismic acquisition program currently being tendered.

Technical work during the quarter has focused on completing the prospect mapping on the Iecea Mare 3D seismic. While detailed resource estimation is still ongoing, the 3D seismic has facilitated a better understanding of the abundance of oil and gas shows in several old and largely untested wells as well as identified a number of well defined, low risk, small to mid-sized drilling opportunities. Due to low drilling costs, shallow depths (900 to 2000 meters), good infrastructure, an active local gas market and excellent fiscal terms, small discoveries can be highly profitable in onshore Western Romania. It can be expected with good reason that the much larger 3D seismic (150 km<sup>2</sup>) which will be acquired will yield a substantial, low risk drilling inventory next to producing oil & gas fields.

Figure 3 below shows a typical prospect for the northern area of the block. A gas well (IM-35) had excellent shows, but only one reservoir was tested at the time of drilling (1988) since only oil had commercial value in Western Romania at that time. The well tested about 1.2 mmscf/d from this specific interval but was never produced. None of the other slightly deeper gas bearing horizons were tested. 3D seismic not only allows definition of the trapping mechanism (i.e. 3 way dip closure against an updip pinchout) but also the detailed mapping of areas of improved reservoir development.

ADX intends to issue shareholder updates on the drilling inventory identified from the Iecea Mare 3D seismic and the results of the 3D seismic tendering process during second quarter 2017.





**Figure 3 Typical 3D seismic covered appraisal opportunity**

## NEW VENTURES

There were no significant new ventures activity during the quarter.

## FINANCE AND ADMINISTRATION

ADX's cash at the end of the March 2017 quarter was \$495,000.

## TENEMENT TABLE

Tenements held at the end of the quarter, their location, ADX's percentage held at the end of the quarter and changes thereof:

Permit	Percentage held at the beginning of the Quarter	Percentage held at the end of the Quarter	Percentage acquired
Offshore Tunisia, Kerkouane	100%	100%	-
Offshore Italy, d363C.R.-AX*	100%	100%	-
Offshore Italy, Pantelleria	100%	100%	-
Offshore Italy, d364C.R.-AX	100%	100%	-
Onshore Romania, Parta	50%	50%	-

\* ADX has commenced a process with the Italian Designated Authority to convert the exclusively awarded application to a ratified licence. This process was commenced after the award by the Ministry of Industry. ADX believes ratification will occur during the last quarter of 2016.

## SHARE INVESTMENTS

ADX Energy holds 26.7 million shares in ASX listed Riedel Resources Limited (ASX:RIE) (<http://www.riedelresources.com.au>).

Yours faithfully,

A handwritten signature in blue ink, appearing to read 'Paul Fink'.

**Paul Fink**

**CEO/Technical Director**

A handwritten signature in blue ink, appearing to read 'Ian Tchacos'.

**Ian Tchacos**

**Executive Chairman**

*PERSON COMPILING INFORMATION ABOUT HYDROCARBONS* Pursuant to the requirements of the ASX Listing Rules 5.41 and 5.42, the technical and resource information contained in this presentation has been reviewed by Paul Fink, Technical Director of ADX Energy Ltd. Mr. Fink is a qualified geophysicist with 23 years of technical, commercial and management experience in exploration for, appraisal and development of oil and gas resources. Mr. Fink has reviewed the results, procedures and data contained in this presentation and considers the resource estimates to be fairly represented. Mr. Fink has consented to the inclusion of this information in the form and context in which it appears. Mr. Fink is a member of the EAGE (European Association of Geoscientists & Engineers) and FIDIC (Federation of Consulting Engineers).

**DISCLAIMER:** The estimated quantities of petroleum that may potentially be recovered by the application of a future development project relate to undiscovered accumulations. These estimates have both an associated risk of discovery and a risk of development. Further exploration appraisal and evaluation is required to determine the existence of a significant quantity of potentially moveable hydrocarbons.