ASX Release

20 December 2017

Letter from Chairman – Dougga Appraisal Project Update

Dear Shareholder,

I am pleased to report to you our progress with ADX Dougga Gas Condensate Project "Dougga" in the Kerkouane Licence, offshore Tunisia which is now ready for appraisal drilling in the later half of 2018. We hope to reward shareholders with a clear funding ABN 50 009 058 646 path way for Dougga by the end of Q1 2018.

Our recent emphasis on Dougga and the Parta (Romania) transaction should not be seen as ADX backing away from our commitment to the Nilde Oil Redevelopment project, offshore Italy. We expect to provide further progress updates regarding Nilde in the near future. Dougga has been fast

tracked in response to our license obligations, the availability of the GlobeTrotter II drilling rig in 2018 on very attractive terms and the interest shown from potential farminees, equipment providers and finance providers for this potentially high value, long lived gas and liquids project. It is regrettable that the farmout preparation process has taken longer than expected however on

the positive side the Company is now in a position to progress funding for all of its potentially transformational assets simultaneously and has created alternative funding pathways with the creation of investment vehicles such as Danube Petroleum (to fund the Parta Appraisal Project in Romania).

Dougga is a valuable discovered resource that has been overlooked for a long time due to a number of reasons;

- A preference by the previous ADX management for high impact oil exploration opportunities when the oil price was high;
- A poor understanding of how this significant gas condensate resource could be reliably and economically commercialised;
- Insufficient resource definition work utilising the full attributes of the ADX acquired high quality 3D seismic data set over Dougga;
- The Arab spring which curtailed E&P activities in Tunisia; and
- The Kerkouane license committed work program which required further exploration seismic ٠ acquisition and the drilling of an exploration well.



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Now a combination of factors have come together to create a very compelling investment proposition for Dougga. They can be summarised as follows;

- After a year of lobbying, the Tunisian Authorities have agreed to vary the license work program from further 3D seismic and an exploration well to the drilling and testing of Dougga Sud which will intersect the Dougga discovery at an optimal location +200 meters updip from the original Dougga-1 discovery well.
- A desperate demand for gas in Tunisia which has gone from self-sufficiency to a heavy dependency on imported gas.
- Attractive domestic gas pricing which is sold in Tunisia on an oil equivalent basis.
- The investment by ADX in geotechnical studies which provides a more credible resource estimate.
- The adoption of a technically robust development option based on the TechnipFMC development study.
- Reduced project capital costs due to a more appropriate development concept and favourable contracting conditions.
- An appetite for appraisal development opportunities that are economic at oil prices below US\$ 50 per barrel.

It is important to note that the Dougga project is as much a liquids project as it is a gas project with a projected base case sales gas rate of 56 mmscfpd and 8,500 bopd of liquids for over 25 years. The potential financial scale of the project is substantial - the base case translates to US\$ 300 million per year of gross revenue and US\$ 8.2 billion over the 25 year life of the project for a US\$ 50 per barrel oil price.

The attached "*Dougga Gas Appraisal & Development Project Update*" presentation outlines ADX's recent technical work which demonstrates the commercial potential of the project and forms the basis for an investment proposition that can now be made to farminees and funding partners.



The key project parameters can be summarised as follows;

Dougga Gas & Liquids Project Summary (December 2017)						
CONTINGENT RESOURCES "note 1"		1C		2C	 3C	
Sales Gas (BCF)		368		564	851	
Liquids (MMBBLS)		54		83	125	
Total Oil Equivalent (MMBOE)		108		165	250	
DAILY PRODUCTION RATE "note 2"		1C		2C	3C	
Sales Gas (MMSCFPD)		56		56	56	
Liquids (BBLPD)		8500		8500	8500	
Barrels of Oil Eqivalent (BOEPD)		16717		16717	16717	
Production Years		18		27	41	
PROJECT CAPITAL COST ESTIMATES "note 3"		1C		2C	3C	
Appraisal Well Costs (US\$ Millions)	\$	24	\$	24	\$	24
Base Case Development Costs (US\$ millions)	\$	905	\$	905	\$	905
Capital Costs per BOE	\$	8.38	\$	5.48	\$	3.62
Notes 1) 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.

2) Based on "Base Case" development concept design rate of 100 MMSCPD Raw Gas Rate

3) Based on "Base Case" development concept design rate of 100 MMSCPD Raw Gas Rate

The above summary is the result of the recently completed detailed subsurface studies that have, for the first time, fully integrated the revised analyses of the Dougga-1 discovery well with the dual sensor 3D seismic survey acquired by ADX, fracture network modelling and relevant reservoir production analogue information. The work re-defines the interpreted resource potential of Dougga incorporating all available data and provides the technical and commercial justification for an appraisal well to be drilled approximately 2km south west and ~200m updip of Dougga-1 discovery well.

ADX has also undertaken development planning incorporating the TechnipFMC study and cost estimates determined through market engagement and expressions of interests from a variety of gas plant, pipeline and subsea service contractors. Based on advancements in flow assurance engineering and the maturing of the supply side of the subsea equipment market it has been determined that a 45km subsea tie-back to shore is less capital intensive, with lower operating expense and de-risks the development in comparison to the previous basis of design incorporating a floating production system concept.

The current development concept contemplates a raw gas flowrate of 100 MMCFD produced from 6 subsea wells including Dougga Sud appraisal well. The raw gas is transported from the subsea wells via 45km pipeline onshore where it is processed, delivering 56MMCFD sales gas and 8,500BPD liquids products. Total project cost is now estimated to be approximately US \$900 million with first



gas 30 months from project sanction. This translates to an attractive development cost per barrel of approximately US\$ 5.50 per barrel based on the 2C resources case.

Of particular consequence for the funding of Dougga is the unsolicited interest received for the project which has led us to fast-track the opening of a confidential dataroom where technical due diligence reviews are already underway by multiple potential farminees and financiers.

Your Board is highly encouraged by the results of the recent studies which we believe will translate into a motivating investment proposition for potential farminees and investors. Our current high equity interest of a 100% in the Kerkouane PSC (and Dougga Development) provides the Company with exceptional leverage if funding for the planned Dougga Sud appraisal drilling can be achieved on attractive terms which we expect will demonstrate the feasibility of this valuable asset whilst conserving cash and minimizing shareholder dilution.

We look forward to providing further updates in the near future.

Yours Sincerely

lan Tchacos Executive Chairman





DOUGGA GAS APPRAISAL AND DEVELOPMENT PROJECT UPDATE

KERKOUANE LICENSE OFFSHORE TUNISIA 20 DECEMBER 2017



DISCLAIMER



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CONTINGENT RESOURCES & DEFINITIONS

Tunisia: Refer to ASX announcements 26/9/2012 (contingent). **Italy:** Refer to ASX announcements 17/2/2016 & 14/2/2017 (contingent) and 21/4/2016 (prospective). **Romania:** Refer to ASX announcement 8/8/2017 (contingent and prospective). ADX confirms that it is not aware of any new information or data that affects the information included in those market announcements and that all the material assumptions and technical parameters underpinning the estimates in the relevant market announcement continue to apply and have not materially changed.

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.

1C, 2C, 3C Estimates: in a probabilistic resource size distribution these are the P_{90} (90% probability), P_{50} , and P_{10} , 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.

Persons 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 Limited. 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).

APPRAISAL & DEVELOPMENT PORTFOLIO



DOUGGA ASSET STRATEGY



Convert Large Resource Base to Reserves

- 100% Working Interest in large, existing Contingent Resources base of 165MMBOE (564BCF Sales Gas and 83MMBBL LPGs and Condensate)
- Negotiated appraisal focussed work program with partner & NOC
- Executed rig contract option for 2018 appraisal well with no mob/demob
- US \$24.4 million Dougga Sud drilling cost estimate;
- Evaluated numerous proposals for leased and purchased facility packages to maximise value and return on investment
- US \$905million development cost estimate
- Strong demand for gas and liquids in Tunisia

Introduce New Capital to an Undervalued Asset

- Operatorship and large equity interest enables a number of funding opportunities and strategic partnerships (eg Reabold at Parta & COPL at Nilde)
 - Vendor finance or leasing of facilities and equipment.
 - Strategic investment at an asset or holding company level.
 - Conventional industry Farmins.
 - Offtake-linked funding and investment.
- In response to unsolicited interest from multiple potential partners/funders, the Dougga Dataroom was opened early and is attracting serious engagement

Convert Large Resource Base to Reserves

> Compliment Resources with Production

Introduce New Sources of Capital in line with maturation of Asset Base

"Our Goal is to secure funding at an asset level to deliver maximum value and leverage for shareholders"

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DOUGGA – PROJECT OVERVIEW





100% Operated Working Interest:

- Large 70km², 3D-defined gas-condensate discovery
- 165MMBOE 2C Resource with potential for high liquids yields and longlived revenue streams; 56MMCFD sales gas and 8500BPD liquids (C3/4 +condensate).
- High productivity, dual-porosity system from DST; fracture networks identified on 3D seismic; supported by analogues
- Subsea tie-back to shore development concept confirmed as technically optimal and viable by TechnipFMC study
- High gas demand in Tunisia (currently 50% imported) with current pricing of US\$5-\$6/MCF; local LPG is also sold at a premium to international pricing

Dougga Sud Appraisal Well Planned for 2018:

- Drill and test at the crest of the Dougga structure to confirm product yields, reservoir quality and deliverability of Abiod Formation
- Rig contract option signed for 2018
- Satisfies 3 year licence extension obligation upon completion

Further Upside Potential:

 Large exploration upside with two 3D seismic covered oil exploration prospects (Dougga West and Elissa), Lambouka and Kerkouane-1 appraisal potential and multiple leads on 2D seismic

Kerkouane PSC Resource Base			
2C Contingent Resource:	Dougga:	564 Sales Gas 83 MMBBLS (LPG & Cond) 165 MMBOE	
Total Prospective Resource:	1316 MMBOE (Best Estimate)		

KERKOUANE PSC PERMIT HISTORY



- At the time, 2 sub-commercial gas condensate discoveries had been made in block, namely Dougga and Kerkouane
- In 2010, the JV acquired a Geostreamer 3D seismic survey in Italy and Tunisia and drilled the Lambouka-1 well. The well intersected 2 hydrocarbon bearing zones in the Ain Grab, but was plugged and suspended as a non-commercial discovery
- Since the drilling of Lambouka-1, the JV refocussed on the region immediate south and west of the Lambouka Field, and has identified significant updip potential at the Dougga Field
- In 2017, Tunisia NOC partner ETAP agreed to vary the PSC work program from 3D seismic and 1 exploration well to drilling and productivity testing of Dougga Sud (Appraisal)
- The Dougga Sud well is targeting a 600m gas column, and is prognosed to intersect the Abiod primary target ~200m updip of Dougga 1





PGS M/V Atlantic Explorer acquiring 3D in the PSC



Atwood Southern Cross, which drilled Lambouka-1



NEW INTEGRATED SUBSURFACE ANALYSIS



Summary of recent work:

- 3D seismic identifying updip potential as well as highlighting reservoir sweet-spots
- New petrophysics and regional analogues support important 3 layer subdivision of Abiod limestone reservoir
- An upper, better quality layer in Dougga 1 is expected to thicken to the structural crest
- Fracture Analysis and analogue studies support prediction of excellent fracture connectivity and well deliverability
- Petrel modelling derives a better representation of matrix and fracture porosity
- Strong analogue support for commercial flow rates @ 15-25 MMCFD/well
- Original DST results invalid due to mechanical failure, formation damage and poor techniques, but qualitative indications support fracture connectivity and productivity.

The integrated work provides a high degree of confidence in the subsurface model and indicates improved reservoir quality and productivity updip toward Dougga Sud.



3D SEISMIC SHOWS UPDIP POTENTIAL - AT ABIOD RESERVOIR LEVEL



- > Updip potential confirmed in seismic time and depth
- Some internal geometries can be seen, although Abiod thickness is at the resolution of seismic

ABIOD RESERVOIR GEOMETRIES





Abiod Carbonate Reservoir Potential:

- Undrilled Reservoir Upside
- Clear indications of strata truncation on seismic
- Dougga-1 did not intersect the complete (Upper) Abiod section. The younger Abiod reservoir section tends to be better quality by analogy

FRACTURE NETWORK MODELLING RESULTS



2 possible models derived from 3D seismic :

- 1. Transtensional, Max Hz Stress N150°
- Closer to regional observation
- Tectonic strike slip environment
- Diffuse Fault and fracture distribution





- 2. Transpressional, MaxHz Stress N60°
- Petrel Model driven, determined from seismic fault orientation
- Fracturing more concentrated around faults





Discrete Fracture Modelling (DFN) supports open fractures associated with faults, and shows increased connectivity towards crest (and Dougga Sud).

RESERVOIR ATTRIBUTES - DUAL POROSITY SYSTEM Micro-scale





Matrix Porosity

- Good matrix reservoir quality in Abiod
 Formation; up to 18% porosity
- Improvement/thickening of upper Abiod layer towards Dougga-Sud expected from 3D seismic facies interpretation
 - Supported by surrounding analogue information at Tazerka, Maamoura and Sidi Khalif

Fracture Porosity

- Abiod, Fahdene & Sidi Kilani petrography, well testing and analogues indicate presence of natural fractures
- DFN Study
 - Qualitative fracture density modelling
 - 3D seismic based modelling
 - Open fractures
 - Reservoir connectivity and fracture density increases towards crest and faulting (Dougga-Sud)



UPDATED CONTINGENT RESOURCE ESTIMATES

DOUGGA CONTINGENT RESOURCES ¹ (2017)	1C	2C	3C
Total Oil Equivalent (MMBOE)	108	165	250
Sales Gas (BCF)	368	564	851
Liquids: LPG (MMBBLS)	29	44	66
Liquids: Condensate (MMBBLS)	25	39	59
2012 Contingent Resource Estimate ² (MMBOE)	88	173	268
Difference	+20	-8	-14

While the total contingent resources have not changed significantly they are based on lower recovery factors and more conservative gas liquid ratios representing a more robust technical case.

Note 1. 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.

Note 2. Refer to ASX announcements 26/9/2012 (contingent)

GlobeTrotter II Rig Option for Dougga Sud



DOUGGA SUD APPRAISAL WELL OBJECTIVES



Appraisal is required to facilitate a development decision, confirm development well numbers/location and detailed facilities design

Appraisal Objectives	Base Case Expectation	Data acquisition program to include
Well productivity	15-25MMCFD	Stabilised flowDST and pressure build up
Matrix Reservoir Quality	Improved reservoir thickness and quality to crest	 Crestal well location in thickened section on seismic Logging suite & DST
ldeal liquids yields	LPGs 45BBL/MMCF raw gas Condensate 40BBL/MMCF raw gas	Stabilised flow to surfaceSurface & downhole samples
Gas Quality	CO2 ~30% Raw Gas	Stabilised flow to surfaceSurface & downhole samples
Fracture system quality	Validate open connected fracture modelling	FMIDSTSWC



- Dougga Sud to be drilled and tested near the crest of the structure to confirm product yields, reservoir quality and productivity
- Proposed Dougga Sud Additional reservoir section updip Dougga 1
- Rig contract option signed for 2018 on attractive terms and zero mob/demob charges
- Dougga Sud satisfies 3 year licence extension terms upon completion

DOUGGA SUD WELL COST ESTIMATE





DOUGGA PROJECT - DEVELOPMENT POTENTIALad

Production forecasting from subsurface modelling indicates:

- 1. Long-lived revenue streams from both gas and liquids
- 2. 100MMCFPD raw gas is expected to deliver 56MMCFDPD sales gas and 8500 BBLPD liquids (C3/C4 and condensate)

Dougga Development Concept:

- TechnipFMC development concept study concluded subsea wells tied back to onshore plant is feasible and the preferred concept
- Likely development is 6 wells tied back via 100MMCFPD raw gas onshore plant
- Potential for gas hub involving nearby smaller gas accumulations including Kerkouane and Tazerka



DOUGGA PROJECT – DEVELOPMENT CONCEPT

- The Development Concept has significantly matured during 2017 resulting in reduced CAPEX estimate of \$905 million and <30 month FID to first gas schedule
- Technip FMC Screening and Selection Study recommended a 45km Subsea tie-back to Beach development concept over 2 alternative concepts considered (FPSO and subsea dehydration)
 - Lower CAPEX : 65-75% of a Floating Production Solution (FPS)
 - Proven Technology : Numerous successful analogues worldwide for a three phase, 45km+ subsea tie-back (including Gorgon and Macedon)
 - **Fit for purpose** : Suitable for Dougga gas properties and environment; appropriate flow assurance risk management
 - Hydrates manageable / treatable
 - Slugging concerns are low
 - High quality materials for CO2/corrosion management
 - **Flexibilility** : 10-12" pipeline with capability of future subsea compression and/or subsequent field tie-ins.







ONSHORE GAS PROCESSING FACILITIES

- The Tunisian Sales Pipeline Gas Specification requires the following gas plant configuration:
 - Slug catcher and primary separation & MEG regen
 - Acid Gas (CO₂ & H₂S) Removal Unit (AGRU) utilising MDEA solvent technology
 - Dehydration utilising molecular sieve technology
 - LPG Fractionation (De-ethaniser, De-propaniser, De-Butaniser)
 - Propane Refrigeration System
 - Power Generation
 - Heating Value Unit
 - Condensate Stabilisation
 - Offloading of sale products
 - Calm buoy for Condensate
 - Road tanker for Propane/Butane/Butapro-blend
 - Sales gas pipeline
 - CO₂ compression
 - CO₂ wells
 - Water Treatment & Disposal
- The onshore plant concept and design is maturing
 - Block Diagrams & PFDs have been developed completed with Preliminary Mass & Energy Balances.
 - Major Equipment sizing has been performed together with process and utility process descriptions.
 - Preliminary Plot Plan has been developed

	Units	Minimum	Maximun
Gross Heating Value (GHV)	kcal/Nm ³	9300	10228
Wobbe Index	kcal/Nm ³	11961	12640
Cricondentherm	°C		-5
CO ₂	mole%	12	0.5
Na	mole%		6.5
Water content	ppm wt		80
Sulphur Concentration	mg/Nm ³	18	
Mercaptan Concentration	mg/Nm ³	2	
H ₂ S Content	mg/Nm ³	Sec. 1	8
Delivery Pressure	bara	69	76
Delivery Temperature	°C	10	50
ondensate &	OD reinischim	Export G	
Accd Gay Records and Control of C	Chen Hoo	Fuel gas Dess It comments acc	WU bit 3 national N2 contro Unit 3000
Accid Say Accid Say Accid Say Accid Say Accid Say Accid Say Accid Say Removal Unit 200 Debugging and Debugging and	Gun too	Puel gas	C1, C4, LPG-Butapro

- Process - Utilities - Offsites

Technip#MC



DOUGGA PROJECT – DEVELOPMENT COST & SCHEDULE ad

- In Q4-2107 ADX approached a number of Tier 1 & 2 contractors/vendors through an "Expressions of Interest" process for three separate Scopes of Work:
 - On-shore Gas Plant & Onshore pipeline
 - Offshore Pipelines & Umbilical Supply & Installation
 - Subsea Production System (SPS) & Subsea Umbilical, Riser and flowlines (SURF) including manifolds, PLETs and Installation etc.
- A positive response was received from an eager market enabling ADX to establish a credible CAPEX estimate and schedule.
- The Expressions of Interest received provided for a variety of solutions from main equipment supply only, through to EPIC-Turnkey and potential for lease-operate arrangements.
- The resulting Class IV CAPEX estimate is US\$930 million including the Dougga Sud appraisal well and US\$120million contingency
- The OPEX Estimate is US\$15million/year (including variable costs of US\$0.15/MCF)



DOUGGA SCHEDULE – FIRST GAS POSSIBLE Q2/3-2021



The Project Execution Philosophy is to minimise interfaces and reduce offshore sequencing to reduce overall installation and cost risks.

Schedule highlights:

- 2H2018 Dougga Sud Appraisal well
- 3Q2019 Final Investment Decision
- 2Q2021 First Gas



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