

# **Echo Energy PLC**

(AIM: ECHO)

March 28, 2018

Price (as of Mar 27, 2018) (GBX): £0.121

Beta: 3.14

Price/Book: N/A

Debt/Equity Ratio: N/A

Listed Exchange: AIM (London)



#### Recent News

**3-Mar-18**: The Company appointed Geoff Probert as Chief Operating Officer and provided an update on its technical work program in Bolivia

12-Feb-18: Echo Energy detailed a 3 back- to- back workover program of existing wells at its Fraccion D license, followed by a 4 back-to-back exploration well program at its Fraccion C and Lagunos De Los Capones licenses.

**31-Jan-18**: Provided an update on the 2018 work program planned at its Argentinian licenses, which includes issuance of tenders for planned seismic acquisition and drill permits.

**3-Jan-18**: Echo receives approval to acquire 50% interest in 4 licenses held by Compañía General de Combustibles S.A ("CGC") and shares are readmitted.

1-Nov-17: Entered into a binding farm-in agreement with Compañía General de Combustibles S.A. ("CGC") to acquire 50% interests in Fracción C. (Cagones and Tapi Aike licenses in Argentina, and also issued 36,391,412 ordinary shares at 17.5 pence per ordinary share.

**15-Sep-17**: Awarded seismic reprocessing contract for processing 3D seismic data of Huayco and Rio Salado blocks to DMT Petrologic.

 Ordinary Shares Outstanding:
 402,003,697

 Shares Fully Diluted:
 768,400,735

 Market Cap:
 £48.64 million

 52 Week High:
 GBX £0.26

 52 Week Low:
 GBX £0.072

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# **Promising LATAM Natural Gas Prospect**

Echo Energy PLC (AIM: ECHO) ("Echo" or "the Company") is a Latin American (LATAM) based natural gas exploration company headquartered in London. Echo Energy envisions becoming a mid-cap LATAM exploration and production company, focusing on high value natural gas exploration currently with assets in Argentina and Bolivia. The Company has acquired 50% operating interests in four licenses (Fracción C, Fracción D, Laguna de los Capones and Tapi Aike licenses) in onshore Argentina, through a farm-in binding agreement with Compañía General de Combustibles S.A ("CGC"), a privately-owned subsidiary of Argentinian conglomerate, Corporación América International. A portion of the acquired assets have existing production of approximately 11.2mm scfe/d. Additionally, the Company holds operating interests in two assets namely, Huayco and Rio Salado, in the Greater Huayco region of Bolivia. Echo secured its operating interest in Huayco through a Joint Evaluation agreement (JEA) signed with Pluspetrol, an independent oil and gas exploration and production company operating in Latin America. Further, the Company secured its operating interest in Rio Salado, through a Technical Evaluation Agreement (TEA) signed with Pluspetrol and Yacimientos Petroliferous Fiscales Bolivianos (YPFB), the stateowned oil and gas company of Bolivia. The Company plans to take advantage of the burgeoning natural gas demand from Latin American countries, specifically, Argentina for its future growth. Attractive locations with significant infrastructure facilities, coupled with the increasing natural gas demand in the region should benefit Echo's growth.

# **Investment Rationale**

## **Argentinian licenses support favorable economics**

- Fracción C and Fracción D licenses have an existing gross production of approximately 11.2 million standard cubic feet per day (mmscfe/d), with the potential to increase it to over 80 mmscfe/d.
- Independent audit revealed an estimated post-tax Net Present Value (NPV) of US\$49.4 million at a 10% discount rate for the 2P + 2C.
- The Company has identified thirteen exploration prospects across the region with a net risked Expected Monetary Value ("EMV") of US\$69.2 million at a 10% discount
- Unrisked PMean EMV calculated by GCA is an impressive \$199.7m net to Echo.
- GCA assess that Tapa Aike contains 41 identified leads with gross prospective GIIP of 22.5 TCF (high case). 4 wells planned to test 3 independent well types.
- Detailed 2018 work program includes drilling of four wells at Fraccion C and Laguna de los Capones, workover of three existing wells at Fraccion D license and a seismic acquisition program.

# Strategic presence in the highly prospective LATAM region

• The Company's assets are located in Argentina and Bolivia, which are oil & gas rich countries, with significant underlying resources and favorable FDI (Foreign Direct Investment) policies.

## Management team has over 100 years of industry experience

- CEO Ms. MacAulay has more than 30 years of experience in the industry
- Dr. Julian Bessa, VP Exploration, is a highly experienced geologist with more than 25 years of exploration experience in the Latin American region.
- COO Geoff Probert brings over 30 years of operational experience in exploration drilling, field appraisal, field development and field rehabilitation operations.
- CFO Mr. Will Holland proven financier with significant M&A experience.

#### Strategic regional partnerships should enhance exploration opportunities

- Strategic partnerships with CGC, Pluspetrol and YPFB, leading oil and gas explorers with significant presence in Argentina and Bolivia.
- Echo Energy also has a strategic partnership with Zenith Energy, an independent project management and well engineering consultancy company, providing specialized services in the oil and gas sector.

## Natural gas consumption is expected to grow by 43% in 2040 from 2015 levels

- The U.S. Energy Information Administration (EIA) estimates an increase of 28% in world energy consumption in 2040, compared to 2015.
- Demand for Latin-American natural gas reserves due to demand from Bolivia, Brazil and Argentina.

# Company Overview Business

Echo Energy is an emerging natural gas exploration and production company, focused on acquiring and developing natural gas assets, in the prospective Latin American region, primarily in Argentina and Bolivia. The Company expects to secure operating interests in the hydrocarbon-rich regions of Argentina and Bolivia. In January 2018, the Company acquired 50% operating interests in the Tapi Aike permit and the Fracciòn C, Laguna de los Capones and Fracciòn D concessions located in onshore Argentina from Compañía General de Combustibles S.A ("CGC"). On November 1, 2017, the Company entered into a farm-in agreement with CGC to acquire these operating interests. Further, the Company also signed joint evaluation agreements with Pluspetrol and YPFB to secure operating interests in two assets, the Huayco and Rio Salado blocks of the Greater Huayco region, Bolivia.

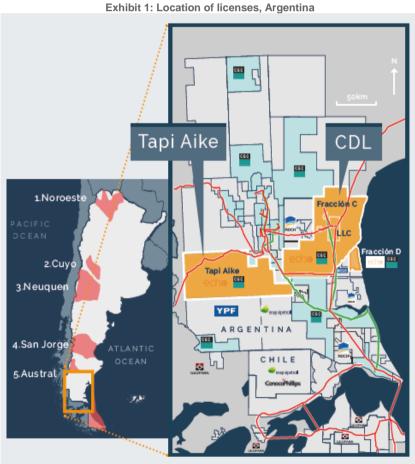
Currently, Echo has framed a '2018 work program' for its Argentinian assets and expects to start drilling new wells on Laguna de los Capones and Fracciòn C and workovers of existing wells on Fracciòn D in March 2018. In addition, the Company plans a seismic acquisition program at its Tapi Aike permit simultaneously. The Company is also working on a technical evaluation program (seismic reprocessing) of the greater Huayco region in Bolivia to begin exploration. Echo plans to take advantage of the burgeoning Latin American natural gas market. Attractive locations with significant infrastructure facilities, coupled with the increasing natural gas demand in the region should benefit the Company's growth.

In this section, we discuss Echo's strategic exploration agreements in Argentina and Bolivia followed by strategic partnerships in the Latin American region and export markets.

# **Argentina Projects**

#### **In-place exploration agreements**

Echo Energy PLC entered the Argentinian hydrocarbon market on November 1, 2017 through a farm-in binding agreement with CGC to acquire 50% interests in each of the four operational licenses. CGC and Echo have now a 50/50 ownership interest in all these licenses. The four licenses cover a total of 11,153 km² (square kilometers) in the highly productive Austral basin of the Santa Cruz province. The Austral basin has multi-Tcf potential with approximately 22.5% of natural gas reserves in Argentina. Exhibit 1 and 2 show the locations and license summaries of the Company's Argentinian assets.



Source: Echo Energy Final Admission Document

**Exhibit 2: Summary of Licenses** 

License	Operator	Status	License expiry	License Area (km²)
Fracción C	Echo	Exploitation	13 <sup>th</sup> November, 2027	5,288
Laguna De Los Canopes Concession (LLC)	Echo	Exploitation	18 <sup>th</sup> April, 2026	398
Fracción D	Echo	Exploitation	13 <sup>th</sup> November, 2027	280
Tapi Aike	CGC	Exploration	8 <sup>th</sup> September, 2020	5,187

Source: Echo Energy Final Admission Document

Further, a well-connected gas export pipeline links the Austral basin to major pipelines in Buenos Aires (Transportadora de Gas del Sur S.A.). Transportadora de Gas del Sur S.A. (TGS) is an Argentine company that processes and transports natural gas. TGS's pipeline connects western and southern gas fields of Argentina with Buenos Aires and gas distributors in each area. TGS transports approximately 62% of the natural gas consumed in the country through its pipeline network that runs for 5,706 miles (9,183 kilometers). Exhibit 3 shows the pipeline system of TGS in Argentina.



Source: Oil & Gas journal

We now discuss in detail the overview, exploration opportunity and future work program of the Company's Fracción C and LLC licenses, Fracción D license followed by the Tapi Aike license.

#### **Overview of Licenses**

#### Fracción C and LLC Licenses

The LLC license area covers an area of approximately 400 km<sup>2</sup> in the Santa Cruz province. The Fracción C license is a 5,288 km2 area surrounding the LLC license as seen in Exhibit 3. The Fracción C & LLC licenses consists of existing production facilities with an estimated net production of 5.4 mmscf/d, along with 7 drill ready prospects for near term exploration (2018). In addition, the Fracción C license area also benefits from 1,192 square kilometers of 3D as well as 2D seismic coverage. The Company estimates the exploration potential to be more than one Tcfe.

#### Fracción D License

The Fracción D license is located south-east of the Fracción C license covering a 280 km<sup>2</sup> area. The Fracción D license hosts the Cañadon Salto oil and gas field and several other small-scale exploration facilities. The Company identifies a gross unrisked gas estimate of 183 Bcfe mid-case, 341 Bcfe upside case and 98 Bcfe low case, signifying notable exploration potential.

Exhibit 4 shows the location of Fracción C, LLC & Fracción D licenses

Licence
Producing /
Shut in oil fields
Oil Discovery
from 3D
3D seismic coverage
• Well
Oil pipeline
Gas pipeline

Exhibit 4: Location of Fracción C. Fracción D and LLC Licenses

Source: Echo Energy Investor Presentation

#### **Lucrative Exploration Opportunity**

The exploitation licenses (Fracción C & D, LLC licenses,) host significant reserves proven by numerous exploration wells. Few of the wells are still in production, including the well at Laguna de Maria (2015) in the Fracción C license area highlighted in Exhibit 3. The Fracción C and Fracción D licenses have an existing net production of approximately 5.6 mmscfe/d (pre-royalty), and the Company intends to significantly increase it to over 40 mmscfe/d within five years. The 2P (Proved + Probable) oil and gas reserves (net to the Company's 50% working interest, pre-royalty) of the Fracción C and Fracción D licenses are estimated at an attractive 0.51 mmbbl of oil and 6.3 bscf (billions of standard cubic feet of gas) of natural gas. Further, the Company also identified four potential projects (Estancia La Maggie X-1004, Laguna de Maria, CS Tobifera and CS Central Gas Cap) as contingent resources (potentially recoverable resources from accumulations estimated as of a given date, but not mature enough). The 2C (Proved + Probable) resources are estimated at 0.57 mmbbl of oil and 20.97 bscf of natural gas. Exhibit 5 shows the reserves and contingent resources of the licenses.

The Company benefits from the opportunity to develop the contingent resources at Laguna de Maria discovery and other few exploration wells, including the discovery adjacent to Estancia La Maggie (yet to be developed). Further, the Company could also monetize the Cañadon Salto gas discovery in the Fracción D license by linking the field with an existing San Martin pipeline located just approximately 28 km west of the field.

Exhibit 5: Oil & Gas reserves net to Echo Energy's 50% Working Interest (WI)

		Pre-Royalty		Post-Royalty		
Particulars	Proved	Proved+Probable	Proved+Probable +Possible	Proved	Proved+Probable	Proved+Probable +Possible
Reserves- Oil (mmbbl)	0.55	0.60	0.65	0.46	0.50	0.55
Reserves- Gas (bscf)	6.50	7.50	7.90	5.60	6.30	6.70
Contingent Resources- Oil and Condensate (mmbbl)	0.30	0.67	1.50	0.25	0.57	1.28
Contingent Resources- Gas (bscf)	10.70	24.50	55.40	9.10	20.90	47.10

Source: Echo Energy Final Admission Document

Additionally, the Company also identified three gas and five oil prospects in the Fracción C, LLC license, and five gas prospects in the Fracción D license as Prospective Resources (Prospective Resources are those quantities of potentially recoverable resources from undiscovered accumulations, as of a given date, by application of future development projects). Exhibit 6 shows the location and prospective resources of the Fracción C and Fracción D licenses respectively.

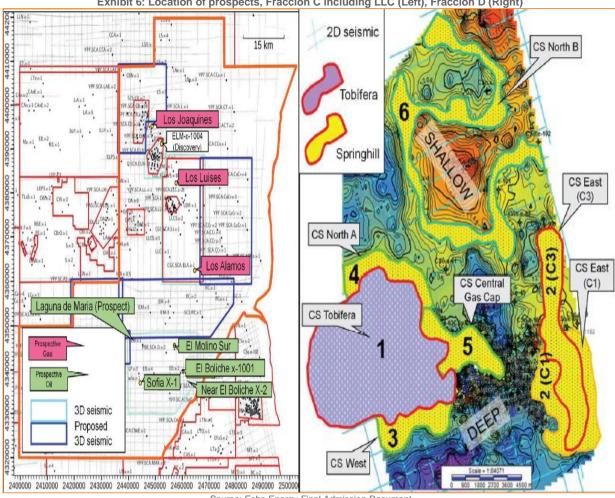


Exhibit 6: Location of prospects, Fracción C including LLC (Left), Fracción D (Right)

Source: Echo Energy Final Admission Document

#### Economic assessment of the licenses revealed attractive results

Gaffney, Cline & Associates (GCA) prepared the economic assessment of the Company's licenses as a part of the Competent Person's report (CPR is an independent technical report on the company's oil and gas assets). GCA has estimated the NPV, based on discounted cash flows from each reserves category of the licenses (discounted on a mid-point basis to 31st August, 2017). Exhibit 7 presents the summary of the NPV from 2P oil and gas reserves estimated at a 10% discount rate. The post-tax NPV (2P) of the Fracción C and Fracción D licenses are estimated at an attractive US\$14.1 million.

Exhibit 7: Summary of 2P reserves NPV (US\$ Million (MM)) at 10% discount rate (Discounted as at 31st August, 2017), Net of 50% Working Interest

Asset	Pre-Tax	Post-Tax
Asset	Proved+Probable	Proved+Probable
Fracción C	20.60	13.30
Fracción D	1.10	0.70
Total	US\$21.70	US\$14.10

Source: Echo Energy Final Admission Document

GCA has performed their economic evaluation based on the price assumptions illustrated in Exhibit 8.

Exhibit 8: Oil and gas price scenario assumptions

Vacu		Gas (US\$/One Million British Thermal Units		
Year	Brent (US\$/Bbl.)	Medanito (US\$/Bbl.)	Fracción C& D	(MMBTU)
2017 (last 4 months)	48.93	55.00	47.00	2.68
2018	50.82	55.00	47.00	4.20
2019	57.91	57.91	49.91	4.80
2020	65.00	65.00	57.00	4.90
2021+	+2.0% p.a.	+2.0% p.a.	Medanito less	+2.0% p.a.

Source: Echo Energy Final Admission Document

Exhibit 9 and 10 present the sensitivity of the pre-tax and post-tax NPV to variations in discount rates, OPEX and commodity prices. It shows that the NPV remains positive in all case scenarios.

Exhibit 9: Sensitivity of NPV (US\$ MM) (2P reserves) to discount rates

License	Pre-Tax			Post-Tax		
Discount rates	7.5%	10.0%	12.5%	7.5%	10.0%	12.5%
Fracción C	22.1	20.6	19.4	14.3	13.3	12.5
Fracción D	1.2	1.1	1.0	0.8	0.7	0.6
Total	US\$23.3	US\$21.7	US\$20.4	US\$15.1	US\$14.0	US\$13.2

Source: Echo Energy Final Admission Document

Exhibit 10: Sensitivity of NPV (US\$ MM) (2P reserves) to discount rates

	Pre-Tax							Post-Tax		
License	Bass	Oil and G	as Prices	ОР	EX	Penn	Oil and G	as Prices	ОР	EX
	Base	-20%	20%	-20%	20%	Base	-20%	20%	-20%	20%
Fracción C	20.6	12.1	29.3	24.6	16.8	13.3	7.8	19.0	15.9	10.8
Fracción D	1.1	0.8	1.3	1.1	1.1	0.7	0.5	0.9	0.7	0.7
Total	US\$21.7	US\$13.0	US\$30.6	US\$25.7	US\$17.9	US\$14.1	US\$8.4	US\$19.8	US\$16.6	US\$11.5

Source: Echo Energy Final Admission Document

GCA has also estimated the unrisked mean NPV of future revenue from contingent resources, and also has evaluated prospective resources based on an EMV (Expected Monetary Value) basis at a 10% discount rate. Exhibit 11 shows the summary of pre-tax and post-tax unrisked NPV estimated for the contingent resources and Exhibit 12 shows the summary of economic assessment of prospective resources. The results revealed positive NPVs for both contingent and prospective resources, which strengthen the viability of expansion.

Exhibit 11: Unrisked Mean NPV (US\$ MM) at 10% discount rate of future revenue from contingent resources, Net of 50% Working Interest (as of August 31, 2017)

Project	Unrisked Mean NPV10(US\$ MM)			
	Pre-Tax	Post-Tax		
Estancia La Maggie	27.0	16.9		
Laguna de Maria Tobífera Wedge	2.3	0.9		
CS Tobífera	26.7	16.5		
CS Gas Cap	3.1	1.0		

Source: Echo Energy Final Admission Document

Exhibit 12: Economic Assessment of Prospects, Net of 50% Working Interest, as of 31st August, 2017

License	Prospect		lean NPV10 (US\$ MM)	Risk Capital	GCoS (%)	EMV10 (US\$ MM)	
Literise	Trospect	Pre-Tax	Post-Tax	(US\$ MM)	GC03 (78)	Pre-Tax	Post-Tax
	Los Alamos	17.4	10.5	1.2	50	8.2	4.8
	Los Joaquines	24	15	1.3	36	7.9	4.7
	Los Luises	42	26.4	1.1	48	19.6	12.2
Fracción C	El Boliche X-1001	11.2	5.9	1.3	50	5	2.4
Fraccion C	Near El Boliche X-2	29.7	18.1	1.3	24	6.2	3.4
	Near El Molino Sur X-1	114.3	69.8	1.3	36	40.4	24.3
	Sofia X-1	22.6	9	1.4	50	10.7	3.9
	Laguna de Maria X-1	14.8	6.1	1.4	63	7.4	2.7
	CS Tobífera B	26.7	16.5	1.3	36	8.9	5.2
	CS East	15.6	8	1.3	50	7.2	3.4
Fracción D	CS West	3	1.7	1.3	36	0.3	-0.1
	CS North B	4.1	2.3	1.3	36	0.8	0.1
	CS North A	17.6	10.1	1.3	36	4.5	2.2
	Total	-	-	16.4	-	127.2	69.2

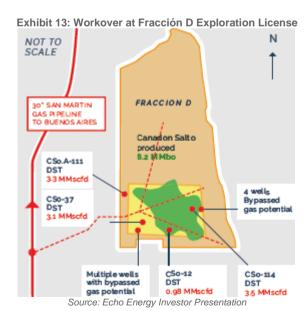
Source: Echo Energy Final Admission Document

We now present the reader with the Company's 2018 work program to be conducted at the Fracción C, LLC and Fracción D licenses.

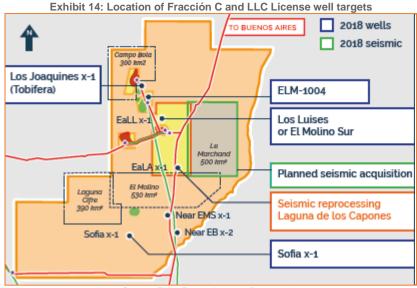
#### 2018 Work Program highlights rapid development at its Fracción C, LLC and Fracción D licenses

The Company's 2018 work program, which is expected to commence in March 2018, includes:

Workover at three existing gas wells (previously drilled but suspended) on Fracción D exploration license, with the
potential to unlock more than 100 Bcf of natural gas. The workover program involves perforation and re-perforation of
the wells, followed by comprehensive well test for potential commercialization. Exhibit 13 shows the location of wells at
the Fracción D exploration license. The program is estimated to cost approximately US\$0.55M per well extending over
10 days.



Drilling and testing of four high value exploration well targets (Estancia La Maggie X-1004, Los Alamos, Molino Sur, Los Joaquines) at Fracción C and LLC licenses. This well drilling program is projected to cost approximately US\$1.0 million (gross) extending over a period of 15 days. Successful exploration wells could magnify the production capacity of the licenses by almost four times over a period of 18 months. Exhibit 15 shows the details of well targets at Fracción C and LLC licenses.



Source: Echo Energy Investor Presentation

Exhibit 15: Details of well targets at Fracción C and LLC License

Well	Expected Spud	Maximum Anticipated Depth/Target Reservoir	Prospect size (P50) Gross	Post tax unrisked Mean NPV10 (Net to Echo 50%) US\$M	Estimate Chance of Success (GCOS)
Estancia La Maggie X-1004	May 2018	1700m (Tobifera)	20 BCF	\$16.90	40%
Los Alamos	June 2018	1900m (Springhill/Tobifera)	21 BCF	\$10.50	36%
Molino Sur	June/July 2018	2300m (Springhill)	11 MMBBLS	\$69.80	36%
Los Joaquines	July /August 2018	1700m (Tobifera)	15 BCF	\$15.00	36%

Source: Echo Energy Investor Presentation

Seismic Acquisition of 500 square kilometers of the Fracción C license

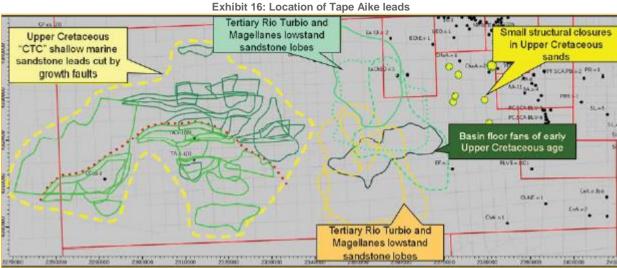
Such a lucrative 2018 work program, coupled with significant underlying resources, and close proximity to existing infrastructure (existing 28-kilometer pipeline to the gas metering point), should enable the Company to bring natural gas to the market rapidly at low incremental costs.

#### Terms of the agreement

The farm-in agreement for Fracción C, Fracción D and LLC licenses required an initial cash payment of US\$2.5 million. The Company is expected to carry the total cost of the 18-month initial exploration work program. The agreement also requires a deferred cash payment of US\$ 2.5 million, on completion of the initial exploration work program. Subsequently, the Company has an option to proceed to the second term of the work program, which includes expansion of the seismic blocks acquired, to about 2,000 kilometers and drilling of an additional 8 exploration wells across the licenses. If Echo Energy were to proceed to the second term of exploration, the total carry of CGC's interest is estimated to be US\$35 million, with a second deferred payment of US\$5 million, which could be used to fund CGC's development costs. The transaction was completed on 3<sup>rd</sup> January 2018.

#### Tapi Aike License Overview

The Tapi Aike License is one of the largest exploration blocks in Argentina, spanning 5,187 square kilometers positioned in the Andes Mountains' foothills in the Santa Cruz province. Tape Aike lies in one of the few underexplored basins of the hydrocarbon rich province of Argentina. The license area also includes 3,400 kilometers of existing 2D seismic data. Three wells that have been drilled on the license have shown encouraging signs of gas discovery, but none have been declared a commercial gas discovery because the wells were drilled searching for oil rather than gas. Exhibit 16 shows the Tape Aike leads location map.



Source: Echo Energy Investor Presentation

#### Tape Aike shows multi TCF exploration potential

Echo has identified 41 leads at depth of 1,300 to 4,100 meters in the project area. GCA has independently assessed the gross prospective un-risked resource GIIP at 22.5 Tcf. Exhibit 17 presents the estimates of GCA. GCA estimates the potential recovery factors in the favorable range of 40-70%. The Company expects to undertake additional work, in order to advance these leads to drill ready prospects.

Exhibit 17: GCA estimates - Tapi Aike

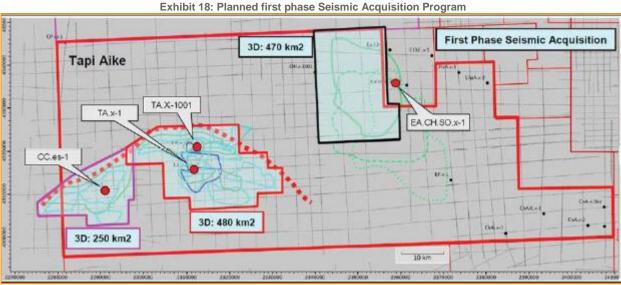
Tcf	LOW	MID	HIGH
Gross prospective GIIP 41 leads	2.7	7.7	22.5
Net prospective resource	0.7	2.1	6.22

Source: Echo Energy Investor Presentation

#### **Initial Work Program**

Echo expects to carry out an exploration program of three years duration. The Company expects to reprocess the existing 2D and 3D seismic data, acquire 3D seismic data for approximately 1,200 km<sup>2</sup> and drill 4 exploration wells (first exploration drill planned in 2019) to inspect the existing resource base.

As an initial step towards its first exploration drill, the Company has planned a 1,200 km²-seismic acquisition program focused on prospective leads. The tender for seismic acquisition is in progress with six companies called for bidding. The Company plans to start the seismic acquisition program in Q4 2018. The results of this program will assist in the planning of first exploration drilling in 2019. The seismic acquisition targets include 250 km² in the Cancha Carrera area, 480 km² in the Growth Fault area, 470 km² in Lower Magallanes Lobes area as shown in Exhibit 18. The red circles represent the existing discovery wells, which are to be used in calibrating the new data and advancing the leads to prospects.



Source: Echo Energy Investor Presentation

#### Terms of the agreement

There is no upfront cash consideration as per the farm-in binding agreement. However, the agreement requires the Company to carry 15% of the first phase exploration program costs, spanning 3 years (4 years when there is tight gas classification).

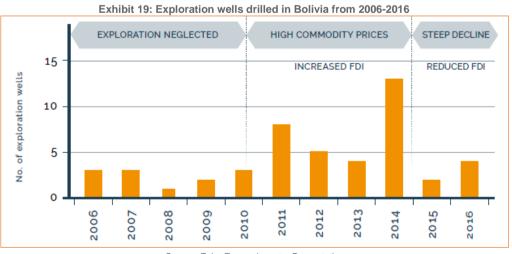
We now present the reader with an overview of Bolivian natural gas opportunity, followed by the Company's Bolivian assets,

# **Bolivia Projects**

#### **Bolivia - Lucrative untapped LATAM natural gas opportunity**

Bolivia is a resource rich country located in Central South America, south west of Brazil. Bolivia is the third largest hydrocarbon producing nation in South America, and the country's economy is highly dependent on natural gas production and exports. Natural gas exports accounted for approximately 28% of the total exports in 2016 respectively. The Bolivian government estimates the actual volume of total natural gas reserves in the country at 60 Tcf (trillion cubic feet), while the proved natural gas reserves are estimated at 11 Tcf (as per Gazprom, a Russian-based energy company). The country has experienced strong economic growth through natural gas exports to nearby lucrative markets, such as Argentina and Brazil. The Bolivian economy has grown by over 4% p.a. for the past ten years, and has even led South America's economic growth rates in the past three years (2014-2016). However, the fall in commodity prices since late 2014 added to a lack of FDI that has resulted in declining production has exerted significant downward pressure on the country's economic growth (GDP growth of 4.9% in 2015 and 4.3% in 2016, compared to 6.8% and 5.4% in 2013 and 2014 respectively) and FDI. The Bolivian current account is now in deficit and the government has recognized that further investment in the oil and gas sector is required to push the country's finances back into the black.

Exhibit 19 shows the number of exploration wells drilled from 2006-2016. We can see that there is a sharp decline in the number of exploration wells drilled in the region since late 2014 due to reduced FDI inflows.



Source: Echo Energy Investor Presentation

However, currently, Bolivia is actively looking to increase investments in the exploration and development of existing, as well as new gas fields. YPFB, the state-owned oil and Gas Company plans to invest nearly US\$5 billion in geological exploration through 2015-2019 to increase the natural gas reserves by about 7 Tcf. Further, Bolivia also expects to widen the proven reserves and increase the production necessary to suffice both external contracts (exports) and increase internal demand. This should increase opportunities for Echo Energy to further acquire and explore assets in the resource rich Bolivian region.

Exhibit 20 shows the Bolivian hydrocarbon market size in 2015 and 2016. It could be seen that the market size has expanded in 2016, while the total production has actually fallen, signifying the need for further exploration in the region.

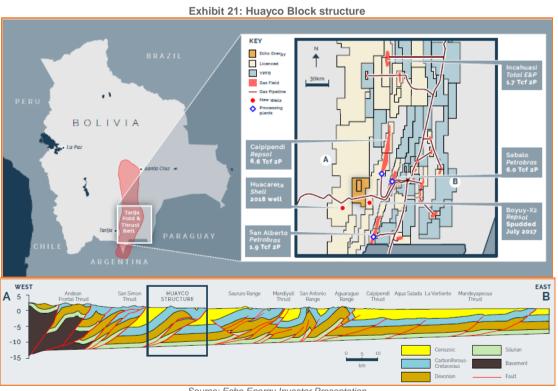
Exhibit 20: Bolivian Hydrocarbon market size

Hydrocarbons Market Size (USD thousands)				
	2015	2016		
Total Market Size	\$2,337,280	\$3,792,532		
Total Local Production	\$5,224,020	\$5,151,507		
Total Exports	\$3,972,242	\$2,119,108		
Total Imports	\$1,085,502	\$760,135		
Imports from the U.S.	\$136,592	\$135,814		

Source: Export.gov

#### In Place Exploration Agreements- Bolivia

The Company has exploration interests in two assets, namely Huayco and Rio Salvado blocks of the greater Huayco structure. The Huayco structure is one of the few untapped and highly prospective hydrocarbon exploration regions of Bolivia. The Huayco block spans 75 km<sup>2</sup> within the Tarija basin (the Tarija basin is estimated to produce approximately 70% of the total natural gas in the country, as per the International Monetary Fund), a major hydrocarbon province. The Huayco structure also hosts proven and producing multi TCF underlying resources with high-reward exploration play. Operations in the region also benefit the Company with 80% operating interest at zero up-front costs and negligible risk through an up-front work-program. Exhibit 21 shows the three-prime oil and gas producing regions (La Paz, Santa Cruz, and Tarija) and the schematic cross section of Huayco structure in Tarija basin, Bolivia.



Source: Echo Energy Investor Presentation



We now explain in detail the two assets and the individual terms of agreement.

#### Huayco Block

On June 21, 2017, the Company signed a binding joint evaluation agreement with Pluspetrol Bolivia Corporation SA ("Pluspetrol") to secure an 80% operating interest in the Huayco Block. As per the agreement, the Company will take 80% operating position in the asset, subsequent to a successful technical evaluation program and regulatory approvals. The agreement requires the Company to fund 100% of the agreed technical studies, and the subsequent expenditures of the first exploration well (and pay 80% for the wells thereafter). The Company's acquisition of interest remains dependent on the commercial terms agreed, and does not hold during the non-exclusive evaluation period.

#### Rio Salado Block

On July 25, 2017, the Company signed a technical evaluation agreement for the Rio Salado Block with Pluspetrol and YPFB. The Rio Salado Block surrounds the Huayco Block and contains an extension of the structure identified in the Huayco block. The agreement enables the companies (Echo energy and Pluspetrol) to carry out technical evaluation of the block, subsequent to which they have the opportunity to conduct the work program

Further, the Company's assets are in close proximity to key export gas pipelines, which connect the region with high value gas markets in Brazil and Argentina as seen in Exhibit 22.



Transportadora de Gas del Norte S.A.'s (TGN) northern pipeline network connects the gas from Bolivia all the way through to Buenos Aires. TGN is an Argentina based company that transports nearly 40% of the natural gas used for consumption. TGN's pipeline network connects gas fields in the northern and central region with Buenos Aires. TGN's pipeline network runs for 6,806 kilometers. Exhibit 23 presents the pipeline system of TGN in Argentina.



Source: Oil & Gas journal



The presence of company's exploration interests in the highly prospective Tarija region benefits them with the existing infrastructure and resources available for operations.

#### **Current Work Program**

The Company is currently involved in technical evaluation of the Huayco and Rio Salado blocks for exploration. As a part of the technical evaluation program, the Company awarded the seismic reprocessing contract to DMT Petrologic GmbH (a geophysical service provider) to arrange 3D seismic data for Huayco and Rio Salado blocks for technical evaluation.

#### **Development Timeline & Future strategy**

Exhibit 24 presents the milestones and development timeline of the Company's Bolivian assets. It can be seen that the Company expects to finalize investment decisions and commercial negotiations by Q2 2018, and start to work on exploration well planning and permitting of the Huayco and Rio Salado blocks from Q3 onwards. Further, the Company is currently analyzing several exploration opportunities in the Latin American region to add to its existing project pipeline.

Exhibit 24: Bolivian asset Milestones - Project Development Timeline 2018 JEA signed with Pluspetrol for Huavco TEA signed with Pluspetrol & YPFB for Rio Salado Seismic re-processing Seismic interpretation Prospect generation Investment decision and commercial negotiations Possible well planning and Q3 onwards promoting

Source: Echo Energy Investor Presentation

# Significant Trade Partnerships

### Compañía General de Combustibles S.A ("CGC") – a subsidiary of Corporación América S.A.

CGC is a subsidiary of Corporación América S.A. Corporación América S.A. is an Argentina based holding company that owns 70% of the interest in CGC since 2013. Corporación América is in businesses such as Airports, Agroindustry, Services, Energy, Infrastructure and Technology. CGC is involved in the transportation of gas, exploration and production of gas and oil in Argentina. CGC also conducts business in Venezuela and Chile. CGC has been in the gas transportation business since 1992, and has transported nearly 17,414 MMm³ (million cubic meters) of gas during a period of nine months ended September 30, 2017. CGC's gas pipelines run for about 7,749 kilometers with a capacity of 2.6 BCF/d (billion cubic feet per day). The 50/50 partnership with CGC should strengthen Echo as a natural gas producer.

#### **Pluspetrol**

Pluspetrol is a leading private, independent oil and gas company operating in Latin America. Pluspetrol has more than 35 years of experience in the exploration and production of natural gas with market presence in regions such as Argentina, Bolivia, Brazil, Peru, Venezuela and others. Pluspetrol operates at a production rate of 434,000 boe/d, and net proven reserves of 789 MMboe. Further, Pluspetrol is a well experienced operator in the Bolivian region, carrying out oil and gas exploration activities since 1990. The long-term relationship between Pluspetrol and Echo Energy strengthens the opportunity for Echo to secure and explore further production assets in the region.

#### **YPFB (Yacimientos Petroliferous Fiscales Bolivianos)**

YPFB is the state-owned oil and gas company of Bolivia, formed in 1936. YPFB is actively engaged in developing the country's energy resources. YFPB generally forms joint ventures (55-45% sharing) with private companies for extraction services, with the state owning the major portion of the share. YPFB also holds significant acreage in the Tarija basin in which the Company's Huayco block is located. Early engagement with YPFB provides significant opportunity for Echo to secure further exploration rights in the region.

#### **Zenith Energy**

Zenith Energy is an independent project management and well engineering consultancy company, providing specialized services in the oil and gas sector. The Company engaged Zenith Energy to provide integrated well design and drilling support for the technical assessment of the wells that make up the Company's drilling and work over program. Through this strategic alliance, Zenith will also provide enhanced well management systems and operator capability for the project. Zenith's wide international experience and industrial expertise should benefit the Company's operations.



Company Timeline and Key Events

Exhibit 25 below shows the reverse chronological timeline of the evolution of Echo Energy PLC, summarizing key annual events.

Exhibit 25: Timeline summarizing significant annual events

Dates	Events
3-Mar-18	The Company appointed Geoff Probert as Chief Operating Officer and provided an update on its technical work program in Bolivia
12-Feb-18	Echo Energy detailed a 3 back-to-back workover program at its Fraccion D license and 4 back-to-back exploration well programs at its Fraccion C and Lagunos De Los Capones licenses.
31-Jan-18	Provided a detailed update of the 2018 work program planned at its Argentinian licenses, which includes issuance of tenders for planned seismic acquisition and drill permits
3-Jan-18	Received approval to acquire 50% interest in 4 licenses held by Compañía General de Combustibles S.A ("CGC") and shares are re-admitted
18-Dec-17	Admission Document published and Echo shares resume trading (Echo issued 36,391,412 ordinary shares at 17.5 pence per ordinary share)
1-Nov-17	Entered into a farm-in binding agreement to acquire 50% interest in each of the Fraccion C, Fraccion D, Laguna de los Capones and Tapi Aike licenses, Argentina. Echo shares are suspended from trading subject to completion of an Admission Document
15-Sep-17	Awarded Seismic reprocessing contract for processing 3D seismic data of the Huayco and Rio Salado blocks to DMT Petrologic, an independent geophysical services and data solutions company
14-Sep-17	Appointed Mr. Andres Brookman as the Bolivian country representative and commercial manager. Mr. Brookman previously worked for Petrobras Bolivia, where he held senior executive positions
10-Aug-17	Appointed Smith & Williamson Corporate Finance Limited as the Nominated Advisor to the Company. Smith & Williamson is an UK based independent financial and professional services firm with more than 130 years of experience
7-Aug-17	Appointed Hannam & Partners as the Financial Advisor and Corporate Broker to the Company. Hannam & Partners is a private merchant bank offering corporate finance and capital market advise to companies and institutions
4-Aug-17	A new investor syndicate (held by Brandon Hill) purchased 21,879,259 ordinary shares of the Company
26-Jul-17	Signed a Technical Evaluation Agreement with Pluspetrol and YPFB for an operated interest in Rio Salado Block, Bolivia
5-Jul-17	Provided an update on the continuing technical evaluation and 3D re-processing work carried out in the Huayco block, Bolivia.
27-Jun-17	Appointed Mr. Will Holland as the Chief Financial Officer (CFO) of the Company. Mr. Holland has over 20 years of experience in the oil and gas upstream industry, with expertise in corporate acquisitions, growing small E&P companies and others
21-Jun-17	Secured 80% operating position in the Huayco Block, Bolivia through a binding joint evaluation agreement with Pluspetrol Bolivia Corporation. This is the first asset transaction carried out by the Company in Bolivia
13-Jun-17	Issued 98,765,429 new ordinary shares to raise GBP 10,000,000 in gross proceeds. Pegasus A. Fund Ltd, SAC and other institutional investors subscribed for the issue.
12-Jun-17	Appointed Ms. Fiona MacAulay as the Chief Executive Officer (CEO) and Director of the Company. Ms. Fiona has more than 30 years of experience in the oil and gas industry and has previously worked as CEO and Technical Director of Rockhopper Exploration PLC.
19-May-17	Raised €10,000,000 through the issuance of 2.4 billion ordinary shares at a price of GBP 0.004050.
15-May-17	Signed its first institutional funding agreement with Greenberry PLC to raise €20,000,000 through the issuance of principal secured loan notes
18-Apr-17	Changed the Company's name from Independent Resources PLC to Echo Energy PLC.

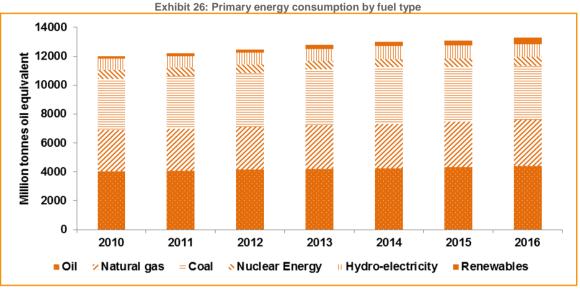
Source: Company filings

We now discuss the recent trends in global energy production and the economics of the natural gas industry.

# **Industry Overview**

#### Primary energy consumption is forecast to grow at a CAGR of 1.3% from 2015 to 2035

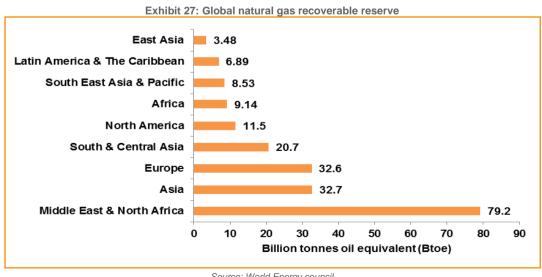
The U.S. Energy Information Administration (EIA) estimates a 28% increase in the global energy consumption from 2015 to 2040. The increasing global population and the growth of emerging economies, with a significant contribution from China and India, should drive this energy demand. The current global energy needs are satisfied through both non-renewable and renewable energy mix such as oil, natural gas, coal, nuclear energy, hydro-electricity, wind, solar, etc. Exhibit 26 shows the global primary energy consumption by fuel type (Primary energy consists of commercially traded fuels, including renewables used in electricity generation). British Petroleum's 'BP Energy Outlook 2017' also forecasts energy consumption to grow at 1.3% every year for the period 2015-2035.



Source: BP Statistical review of world energy (2011-2017)

#### Recoverable reserves of natural gas are estimated to be 172 billion metric tons oil equivalent (Btoe)

Natural gas is naturally present deep below the earth's surface. It is a gaseous mixture of hydrocarbons, which comprises primarily of methane and is combustible in nature. Further, classification of natural gas is based on its energy value as high-calorific and low-calorific gas. Rather than being used in electricity generation, natural gas has also found its applications in industrial and commercial usage. Moreover, it is the efficient and cleanest among all fossil fuels, and expected to play a significant role in global transition to cleaner energy. Exhibit 27 lists recoverable reserves of natural gas across various regions in the world. The World Energy Council estimates natural gas recoverable reserves to be 172 Btoe (Billion tons oil equivalent). The Latin America and the Caribbean regions alone are estimated to have 6.89 Btoe of recoverable natural reserves. Companies like Echo energy should benefit through their exploration activities in that region.



Source: World Energy council

#### Applications of natural gas in various sectors have increased over the years

Major characteristics of natural gas are its clean combustion and low levels of emissions of carbon dioxide (CO<sub>2</sub>) and nitrogen oxides. The BP Energy Outlook also states that the expected energy consumption growth will be coupled with lower carbon emissions. According to the American Gas Association, natural gas emits 117,000 pounds of CO<sub>2</sub> compared to oil and coal, which emit 164,000 pounds and 208,000 pounds of CO<sub>2</sub> respectively. Exhibit 28 shows the increase in use of natural gas in sectors other than the industrial sector. The residential, commercial and public services and non-energy usage has increased from 22.8%, 10.8% and 2.8% respectively, in 1973, to 30%, 13% and 11.4% respectively in 2015. To note, global natural gas consumption has increased from 652 Mtoe (Million tons oil equivalent), in 1973, to 1,401 Mtoe in 2015.

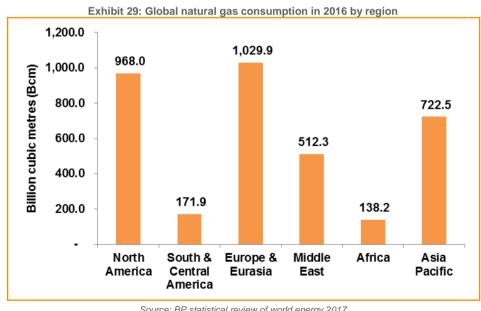
Non-energy use, 2.8% Other 6.3% Non-energy Other, 0.9% use, 11.4% Commercial and public services. Commercial 10.8% and public Transport, 13.0% Industry, Industry, Transport, Residential 22.8% Residential, 30.0%

Exhibit 28: Comparison of global natural gas consumption by sector

Source: Key World Energy Statistics 2017 - IEA

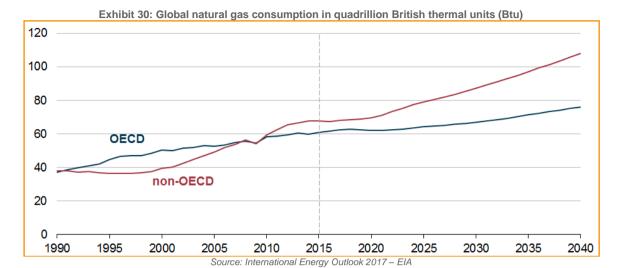
# Significant increase in demand for natural gas from non-OECD countries is expected

According to the International Energy Agency's (IEA) 'Natural Gas Information 2017', global natural gas demand has increased 2.7% to 3.648 Billion cubic meters (Bcm), in 2016, compared to 2015, OECD Europe recorded a 6.4% increase in consumption due to demand from United Kingdom (UK), France, Italy and Germany. UK's carbon price floor led to a switch in power generation from coal to gas. In addition, France also turned to natural gas to meet its energy needs due to the fall in nuclear power generation. These factors have ultimately contributed to Europe's natural gas demand. In total, natural gas demand of OECD countries increased 3.1%, whereas, non-OECD countries increased 2.3%, in 2016, compared to 2015. Exhibit 29 shows natural gas consumption in 2016 by region. To note, China was the largest consumer of natural gas in the Asia Pacific region, and consumed about 210 Bcm in 2016.



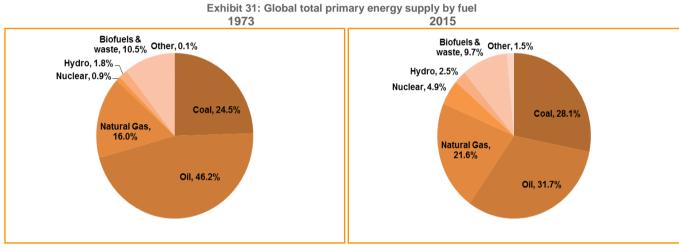
Source: BP statistical review of world energy 2017

EIA's 'International Energy Outlook 2017' estimates global consumption of natural gas to increase by 43% from 2015 levels to 2040. Exhibit 30 presents this outlook and consumption in OECD and non-OECD countries.



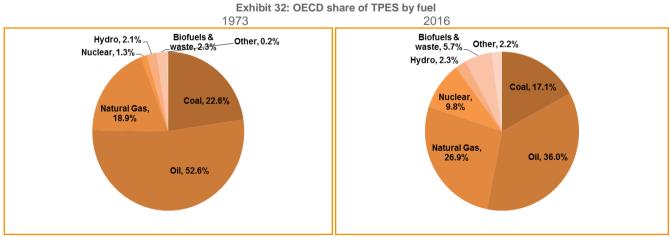
#### Natural gas holds a significant share in the global total primary energy supply

According to IEA, the share of natural gas in global Total Primary Energy Supply (TPES) increased from 16% of 6,101 Mtoe in 1973, to 21.6% of 13,647 Mtoe in 2015. Exhibit 31 compares the share of natural gas to global TPES in 1973 and 2015.



Source: Key World Energy Statistics 2017 – IEA Note: 'Other' includes solar, geothermal, heat, wave/tide/ocean, wind and other.

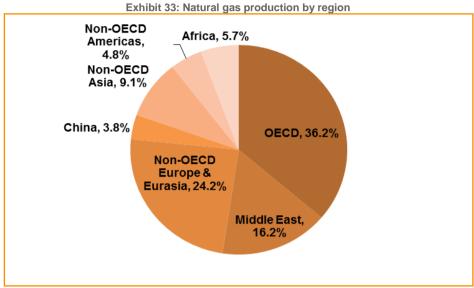
In addition, the contribution of natural gas in OECD total primary energy supply increased from 18.9% of 3,740 Mtoe in 1973, to 26.9% of 5,257 Mtoe in 2016. Exhibit 32 presents the comparison between OECD's share to global TPES in 1973 and 2016.



Source: Key World Energy Statistics 2017 - IEA

#### Natural gas production continues to grow at a slower pace

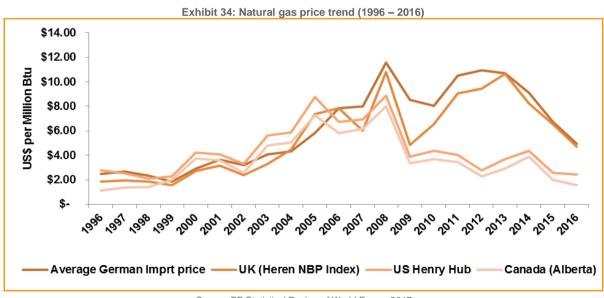
According to IEA, natural gas production in 2016 grew by 29.1 Bcm (0.8%) to 3,613 Bcm compared to 2015. Production in the US fell by 17.3 Bcm for the first time since its shale gas revolution. Despite the fall in natural gas production in the US and Netherlands, the natural gas contribution of OECD increased by 0.4% in 2016. Australia's increasing natural gas production capacity and commencement of natural gas production in Ireland added 21 Bcm and 3 Bcm respectively to OECD's share. This helped to offset the fall in production in other OECD nations. The share of non-OECD Eurasia/Europe fell 0.2%, whereas, Gas Exporting Countries Forum (GECF) production increased 1.5% and contributed 36.8% of global natural gas supply. Moreover, production in countries such as Saudi Arabia, Indonesia, China, Peru and Malaysia has jointly increased 0.4% to 973 Bcm, thereby increasing their global share to 26.9% in 2016, compared to 19.8% in 1990. Exhibit 33 presents the share of global natural gas supply among various countries and membership unions in 2016.



Source: Key World Energy Statistics 2017 - IEA

#### Natural gas prices continue its downward trend due to falling oil prices

The price of natural gas continued to fall in 2016. US Henry hub price of natural gas fell 5% from US\$2.6 per million Btu (MBtu) in 2015, to US\$2.46 per MBtu in 2016. In 2015, the prices fell by 40% compared to 2014. Exhibit 34 presents the price trend of natural gas for the period 1996 to 2016. According to IEA, prices of natural gas import through pipeline also fell by 23% in the US to US\$ 2.14 per MBtu and 28.2% in European Union to US\$4.93 per MBtu, in 2016. The prices of Liquefied Natural Gas (LNG) stood at US\$ 3.99 per MBtu in the American market and at US\$4.78 per MBtu in Europe. As with most commodities, natural gas prices tend to move based on market demand and supply. In the past few years, the fall in oil prices has lowered the demand for natural gas, which, in turn, has led to the fall in natural gas prices.



Source: BP Statistical Review of World Energy 2017



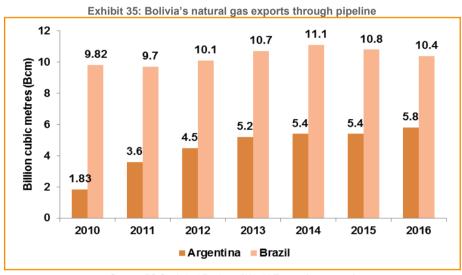
We now present the reader with Latin American natural gas market overview, focusing on Argentina and Bolivia.

#### Argentina has 802 Tcf of unproven natural gas reserves

The World Energy Council reports Argentina's natural gas recoverable reserves to be 299 Mtoe. Argentina also has the second largest reserves of natural gas in the world. The US EIA estimates unproven natural gas reserves to be 802 Tcf. Argentina's natural gas consumption has increased from 41.8 Bcm in 2006, to 49.6 Bcm in 2016. Despite such huge reserves, Argentina remains a net importer of natural gas to meet its energy needs. However, the Argentine government provides subsidies to companies, which explore natural gas from unconventional resources. Argentina's state-owned oil company, Yacimientos Petrolíferos Fiscales (YPF), is the largest oil and gas company in the country. YPF has plans to increase natural gas production to meet the country's energy demand.

#### Bolivia intends to increase exports in the future

Estimates show Bolivia's natural gas reserves to be 18.1 trillion cubic feet (Tcf). The state-owned Yacimientos Petrolíferos Fiscales Bolivianos (YPFB) is Bolivia's largest oil and gas exploration company, and has natural gas sales agreements with Brazil and Argentina. Exhibit 35 presents Bolivia's natural gas exports from 2010 to 2016. In 2016, Bolivia exported 5.8 bcm and 10.4 bcm of natural gas (through pipeline) to Brazil and Argentina respectively, accounting for 82% of the total natural gas production in Bolivia as per the BP Statistical Review of World Energy 2017 report. Bolivia's sales agreement with Argentina requires the country to increase its natural gas exports to 27.7 million cubic metres (MMm³) per day by 2021. Even though Bolivia's natural gas reserves are nationalized, in order to meet Argentina's growing natural gas demand, YPFB has planned to collaborate with multinational companies like Echo Energy.



Source: BP Statistical Review of World Energy (2011-2017)

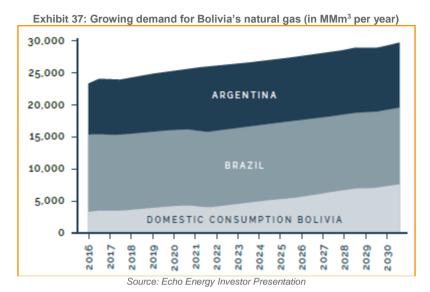
Exhibit 36 shows the existing and under construction pipelines, LNG (Liquefied Natural Gas) liquification and regasification terminals connecting Bolivia and Argentina.



Source: Echo Energy Investor Presentation

#### Bolivia seeks new joint exploration projects with Argentina

On January 18, 2017, YPFB and YPF entered into an agreement to conduct study and exploration activities at Charagua area in Southern Bolivia. Estimates show a presence of 2.7 Tcf of natural gas in this region. If the study proves exploration activities commercially feasible, then YPFB and YPF would form a joint venture with YPFB holding 51% stake. Further, this exploration will enable Bolivia to meet Argentina's growing natural gas demand. Exhibit 37 shows forecasts of Bolivia's natural gas demand across domestic and export countries such as Brazil and Argentina.



We now provide the reader with Echo Energy's major comparables.

## **Echo Energy - Comparables**

We have chosen the following companies (President Energy, Amerisur, Phoenix Global, Crown Point, Canacol, GeoPark and Gran Tierra) as Echo Energy's comparables because they are also in the Oil & Natural gas exploration and production industry with a focus on assets in Latin America. Exhibit 38 presents Echo Energy's comparables.

- President Energy (LON: PPC) ("President Energy") President Energy is an oil & gas exploration and production company listed on the London stock exchange with a market capitalization of GBX 103.27 million. President Energy is mainly focused in Argentina with independently audited 2P reserves of over 25 million barrels of oil equivalent per day (boe/d). President Energy also holds exploration assets in Paraguay, Australia and the United States.
- Amerisur Resources PLC (LON: AMER) ("Amerisur") Amerisur is an oil and gas exploration company focused
  on South America with a market capitalization of GBX 198.97 million. Amerisur owns assets in Colombia and Paraguay.
  In 2016, Amerisur constructed the strategic Oleoducto Binacional Amerisur (OBA) pipeline into Ecuador. Amerisur's
  monthly OBA throughput averaged at 6,749 barrels of oil per operational day.
- Phoenix Global Resources PLC (LON: PGR) ("Phoenix") Phoenix is an oil and gas production and exploration company based in the United Kingdom with a market capitalization of GBX 885.48 million. Phoenix owns assets primarily in Argentina, Paraguay and Colombia. Phoenix has more than 61.7 million barrels of oil equivalent (mmboe) 2P reserves with Average Daily Production of 11,537 boepd.
- Crown Point Energy Inc. (CVE: CWV) ("Crown Point") Crown Point is a Calgary-based oil and natural gas exploration and production company with a market capitalization of CAD 13.21 million. Crown Point owns assets in the Austral basin and Neuguén basin in Argentina. Crown Point delivers 1,200 boepd from its core assets in Austral Basin
- Canacol Energy Ltd (TSE: CNE) ("Canacol") Canacol is a Canadian oil and natural gas exploration and production company with a market capitalization of CAD 738.77 million. Canacol has its operations in Colombia and Ecuador and owns oil and natural reserves of about 79 mmboe.
- Geopark Ltd (NYSE: GPRK) ("Geopark") Geopark is a Latin American based oil and natural gas exploration and production company with a market capitalization of US\$ 596.16 million. Geopark has oil and gas assets in Chile, Colombia, Brazil, Argentina and Perú. Geopark delivers more than 33,000 boepd and has over 159 million barrels oil equivalent (boe) of proven and probable reserves.
- Gran Tierra Energy Inc. (TSE: GTE) ("Gran Tierra") Gran Tierra Canacol is an oil and natural gas exploration and production company primarily focused on Colombia with a market capitalization of CAD 1,250 million. Gran Tierra has its core assets in the Middle Magdalena and Putumayo basin. In the fourth quarter of 2017, Gran Tierra has working interest production of 34,477 boepd.

Exhibit 38: Echo Energy Comparables (as of March 8, 2018)

		oo. Echo Energ	y Comparables (	as or mar	CII 6, 2016)	
<u>Companies</u>	Market Cap (million)	<u>Price</u>	EV/Revenue	<u>P/S</u>	<u>P/B</u>	1-year price charts
President Energy (LON: PPC)	GBX £103.27	GBX <b>£</b> 9.70	5.45x	9.47x	38.19x	## 15 P 2 R 3 P 3 P 5 P 5 P 5 P 5 P 5 P 5 P 5 P 5 P
Amerisur Resources PLC (LON: AMER)	GBX <b>£</b> 198.97	GBX £16.40	2.89x	3.27x	96.47x	
Phoenix Global Resources PLC (LON: PGR)	GBX <b>£</b> 885.48	GBX <b>£</b> 34.90	N/A	N/A	N/A	No. 25 25 25 25 33 32 35 35 35 35 35 35 35 35 35 35 35 35 35
Crown Point Energy Inc. (CVE: CWV)	CA\$13.21	CA\$0.43	1.13x	1.21x	0.26x	No. 18 to
Canacol Energy Ltd. (TSE: CNE)	CA\$738.77	CA\$4.19	6.51x	4.65x	1.90x	THE STATE OF THE S
Geopark Ltd. (NYSE: GPRK)	US\$596.16	US\$9.92	3.08x	2.10x	6.62x	
Gran Tierra Energy Inc. (TSE: GTE)	CA\$1,250	CA\$3.19	7.15x	3.23x	1.28x	IN THE PARTY OF TH
Echo Energy PLC (AIM: ECHO)	GBX £49.44	GBX £0.123	N/A	N/A	N/A	No.   12   12   13   13   14   15   15   15   15   15   15   15

Source: Yahoo! Finance and Google Finance



# **SWOT**

#### **Strengths**

#### Significant cash positions

The Company's balance sheet is strong with cash and cash equivalents of approximately US\$32 million as of January 2018, mainly due to the issuance of shares and bonds. The Company issued a EUR 20 million bond at 8% maturing 2022. On December 15, 2017, the Company raised £6.4 million (through the issuance of 36,391,412 new ordinary shares at 17.5 pence per share) to fund the development of the licenses and for other working capital needs. Such significant cash position places the Company in an advantageous position to close asset transactions in the LATAM region.

#### Significant underlying resources

The 2P oil and gas reserves (Post-Royalty) at the Fracción C & D, LLC Licenses are estimated at 0.5mmbbl and 6.3bscf respectively. Further, the licenses also hold 0.57mmbbl and 20.9bscf of contingent resources respectively. Further, three oil and five gas prospects in Fracción C, LLC licenses and five gas prospects in the Fracción C license are identified as significant prospects. The Tapi Aike license has also identified 41 leads at depth of 1,300 to 4,100 meters in the project area with significant reserve potential that will be tested in the near term.

#### **Experienced management team**

Echo Energy's management expertise in technical and financial skills strengthens the Company's business operations. The Company's top executives have more than 100 years of combined experience. Ms. Fiona MacAulay, Chief Executive Officer of the Company, has more than 30 years of experience in the oil and gas E&P industry. Mr. Will Holland, Chief Financial Officer, has over 20 years E&P Experience having spent much of his career identifying investment opportunities, M&A and funding small to mid-cap E&P companies, many of which in the Latin America region. Also Dr. Julian Bessa, VP Exploration, has spent much of his career as a geologist exploring for gas and oil in the Latin America region more recently with the BG Group where he was Country Manager for Bolivia. Such a qualified and well diversified top-level team should efficiently guide the Company in accomplishing its strategy and goals.

#### Strategic regional partnerships

As discussed in the Company section, the Company has strategic partnerships with major oil exploration and production companies such as CGC, Pluspetrol, YPFB and Zenith Energy. These partnerships lay a foundation for the Company to build strong regional relationships and explore other potential opportunities in the region. This should also assist the Company in gaining significant asset transactions in the region.

#### **Weakness**

#### **Negative operating cash flow**

Echo Energy has not recorded any revenues from operations till date, since it is in the early stages of technical evaluation. As of June 30, 2017, the Company reported an accumulated deficit of £22.6 million, which is a cause of concern. However, given the active fully funded drilling program, strong regional partnerships and nearby export markets the cash flow is expected to turn positive with the speedy completion of exploration, production and subsequent sale of natural gas.

#### **Opportunities**

### Increasing energy consumption should create significant demand for natural gas

In addition to natural gas' use as a fuel in power generation, have increased its applications in other sectors such as residential, transport, non-energy use and commercial and public services. In 2016, the demand for natural increased 2.7% to 3,648 Bcm, compared to 2015. Increasing concern about clean energy and newfound applications of natural gas should significantly increase demand. Natural gas exploration companies should benefit from such demand.

#### Growing demand for Bolivian natural gas should benefit the Company

According to export.gov, a US government portal handled by Department of Commerce, Bolivia's natural gas production averages to 57.8 MMm³/day. As per the sales agreements, Bolivia currently exports 27.7 MMm³/day and 15.4 MMm³/day to Brazil and Argentina respectively. According to the contract signed with Argentina in October 2006, the Bolivian government is required to increase its natural gas exports from current level to 27.7 MMm³/day. In order to meet this demand, the state-run YPFB has planned to collaborate with multinational companies such as Echo Energy.

#### Improving political environment in both Argentina and Bolivia

The Argentine government headed by President Mauricio Marci reformed and stimulated investments in the mining sector. The Argentinian government has also eliminated 5% tax on mining companies and removed restrictions on profit repatriations. Further, the Argentinian government's de-regulated labor market and unified mining regulations of its provinces through a Federal Mining Agreement. This agreement caps mining royalties at 3% and 1.5% tax on infrastructure fund. In addition, the Bolivian government is also actively attracting investments in the natural gas exploration, as it expects to increase its natural gas reserves by approximately 7 Tcf.

#### **Threats**

#### Competition

The Company competes with global and local oil and gas exploration companies with more experience, better access to resources, labor capacity and technical expertise. Further, a significant demand-supply imbalance along with the global shift towards natural gas for cleaner energy could bring many new entrants into the industry. In addition, increased competition could cause downward pressure on natural gas prices, thereby affecting the Company's ability to compete for funding, development and market share.

#### Regulations

The Company is subject to regulations of the country in which it has its operations. Echo Energy has to abide by all regulations that govern environmental protection, safety, health, pricing and others. Any significant changes in laws and regulations could increase operating costs or even disrupt the Company's operations and thereby affect its financial margins.



# **Financial Performance**

As mentioned earlier, Echo was launched in March 2017, focused on the Latin American natural gas market. As of January 2018, the Company had approximately US\$32 million of cash and does not require any additional funding to undertake its planned drilling programs in 2018. Earlier, the Company has raised capital through issuance of warrants, shares and a fixed rate Euro bond that matures in 2022.

The Company divested its earlier venture's Egyptian assets in April 2017. This divestiture has significant impact on its financial statements, i.e. the 2017 interim report for the six months ended June 30, 2017. We now discuss the financial performance of Echo Energy PLC for these six months ended June 30, 2017. The Company follows January-December as its financial year calendar.

Exhibit 39 shows Echo's income statements for the six months ended June 30, 2017. Echo Energy did not generate revenue from its operating activities for the six months ended June 2017, as the Company is still in the initial stage of exploration. Net loss for the six months ended was £1,676,258 due to higher administration and financial expenses. Meanwhile, during the same period, the Company's administration expenses stood to £1,287,580. This increase was mainly attributable to the higher share-based compensation and other exploration expenditures. Further, financial expenses were (£364,288).

Exhibit 39: Income statements for the 6-months ended June 30, 2017

Exhibit 39: Income statements for the 6-months  Particulars	6-months ended June 30, 2017
Revenue	£-
Cost of sales	
Gross profit	
Administration expenses	(1,287,580)
Other operating income	
Operating loss	(£1,287,580)
Financial income	369
Financial expense	(364,288)
Share of post-tax losses of equity account joint ventures	-
Loss before tax	(£1,651,499)
Taxation	-
Loss from continuing operations	(£1,651,499)
Discontinued operations:	
Loss after taxation for the period from discontinued operations	(24,759)
Loss for the period	(£1,676,258)
Other comprehensive income to be reclassified to profit or loss in subsequent periods (net of tax)	-
Exchange difference on translating foreign operations	2,121
Total comprehensive profit/(loss) for the year	(£1,674,137)
Loss attributable to owners of the parent	(1,676,258)
Total comprehensive loss attributable to owners of the parent	(1,674,137)
Loss per share (pence)	
Basic	(£0.9)
Diluted	(£0.9)
Loss per share (pence) for continuing operations	
Basic	(9.03)
Diluted	(£0.9)
Weighted average number of common shares outstanding - Diluted	186,159,251

Source: Company filings Note: NM represents Not Meaningful



Exhibit 40 shows the Company's balance sheets as of June 30, 2017. As of June 30, 2017, the Company's cash and cash equivalents stood at approximately £25,545,780. This increase was mainly attributable £13.3 million funds raised through the issuance of shares during the six months ended June 2017.

Exhibit 40: Balance sheets as of June 30, 2017				
Particulars ASSETS	As of June 30, 2017			
Non-current assets				
	04.057			
Property, plant and equipment	£1,957			
Other intangible assets	432,486			
Investments in equity-accounted joint ventures  Total non-current assets	-			
	£434,443			
Current assets	110 000			
Other receivables	118,239			
Cash and cash equivalents	25,545,780			
Assets held for distribution	91,808			
Total non-current assets	25,755,827			
Total assets	26,190,270			
LIABILITIES AND SHAREHOLDERS' EQUITY				
Current liabilities				
Trade and other payables	479,890			
Liabilities directly associated with the assets held for distribution	11,864			
Total current liabilities	491,754			
Non-current liabilities:				
Loans due in over one year	10,245,639			
Total liabilities	10,737,393			
Net Assets	£15,452,877			
Equity attributable to equity holders of the parent				
Share capital	3,104,919			
Share premium	25,439,364			
Shares to be issued	277,468			
Shares option reserve	103,058			
Share warrant reserve	8,730,575			
Foreign currency translation reserve	473,801			
Potoined carnings	(22,676,308)			
Retained earnings	(22,010,000)			

Source: Company filings Note: NM represents Not Meaningful



Exhibit 41 shows Echo Energy's cash flow statements for the six months ended June 30, 2017. For the six months ended June 30, 2017, the Company's operating cash outflow was £1,195,661, mainly attributable to higher administration expenses. Further, net cash outflow from investing activities for the six months ended June 30, 2017 was £153,362. In addition, the Company raised £26,712,639 net proceeds through the issuance of shares and debt.

Exhibit 41: Cash flow statements for the 6-months ended June 30, 2017

Exhibit 41: Cash flow statements for the 6-months ended June 30, 2017  Particulars  For the 6-months ended June 30, 2017				
Cash flows from operating activities	For the 6-months ended June 30, 2017			
	(51 651 400)			
Loss from continuing operations	(£1,651,499)			
Loss from discontinued operations	(24,759)			
Sub total	(1,676,258)			
Adjustments for:				
Depreciation of property, plant and equipment	1,690			
Share of post-tax loss of equity accounted joint ventures	-			
Share-based payments	85,282			
Warrants issued				
Financial income	(369)			
Financial expense	364,288			
Sub total	(1,225,367)			
(Increase)/decrease in other receivables	119,099			
(Increase)/decrease in assets held for distribution	(2,121)			
(Decrease)/increase in trade and other payables	(87,272)			
Net cash outflow from operating activities	(£1,195,661)			
Investing activities				
Interest received	369			
Interest paid	(153,731)			
Purchases of property, plant and equipment	-			
Net cash used in investing activities	(£153,362)			
Financing activities				
Net proceeds from debt	13,346,750			
Issue of share capital	13,365,889			
Share issue costs	10,000,009			
	000 740 000			
Net cash provided by financing activities	£26,712,639			
Net increase in cash and cash equivalents	£25,363,616			
Cash and cash equivalents at beginning of the period	182,164			
Cash and cash equivalents at end of the period	£25,545,780			

Source: Company filings Note: NM represents Not Meaningful



# **Key Risk Factors**

#### Ability to raise additional capital for business operations/construction

The Company is in the initial stage of exploration and needs significant capital to grow. Moreover, the Company depends on capital and debt markets to fund its future exploration activities. Therefore, if the Company fails to raise sufficient funds to meet its working capital needs, it could have a significant impact on its operations. It is worthwhile noting, however, that Greenberry (a Continental Partners subsidiary) has been very supportive of providing Echo with the funds it needs in order to advance its assets as planned. Echo currently has a cash position of approximately US\$32 million as of January 2018, mainly due to the issuance of shares and bonds. The Company issued a EUR 20 million bond at 8% maturing 2022.

#### Political risks

The Company has its operations in Argentina and Bolivia. Bolivia has a history of nationalizing natural gas reserves held by private players (Bolivian gas conflict – 2005). However, the current Bolivian government under Mr. Juan Evo Morales Ayma is in favor of multinational corporations and private players. On the other hand, the protests against Mr. Evo Morales' decision to run for the presidential election in 2019, is seen as a threat to private players and MNCs. In Argentina, regulations vary between provinces due to the nation's federal structure. Favorable policies in one province may not be applicable in another.

#### Market risk

Macroeconomic factors such as global economic scenarios, foreign exchange rates, inflation, consumption pattern and others pose considerable risk to the Company's operations. Unfavorable factors could affect the Company's sales and return on investments.

#### **Commercial viability risks**

The exploration process involves a high level of risk and there is no guarantee of its future success. In Bolivia the Company is still in preliminary stages and has not completed scoping and feasibility studies. Though the Company successfully has signed various operating interests' agreements with critical players in this field, there is considerable risk ahead.

#### Operations are subject to environmental laws and regulations

Governments' regulations and environmental laws play a critical role, especially for exploration and production companies. In addition, the oil and gas industry is subject to regulations related to taxes, labor standards, waste management and protection of natural and historic sites. Non-compliance with these laws and regulations may significantly impose enforcement actions resulting in increased liabilities and delays in project completion.



# **Profile of Directors and Management**

#### Fiona MacAulay, Chief Executive Officer

Ms. Fiona MacAulay currently serves as the Chief Executive Officer of the Company. She has more than 30 years of experience in the oil and gas industry. Prior to joining Echo Energy in July 2017, she worked as the Chief Operating Officer and Technical Director at Rockhopper Exploration PLC. She has held various senior management and board roles in oil and gas companies, including BG, Amerada Hess and Mobil. She also acts as the President of the American Association of Petroleum Geologists (AAPG). She holds a Bsc (Geology) degree from University College London (UCL) and MSc (Sedimentology) degree from the University of Reading, United Kingdom.

#### Will Holland, Chief Financial Officer

Mr. Will Holland currently serves as the Chief Financial Officer of the Company. He has more than 20 years of experience from operations and finance. He also has significant experience in M&A and growing smaller E&P companies. He holds a BEng (Mechanical) from the University of Warwick and an MBA from the Heriot-Watt University.

#### **Geoff Probert, Chief Operating Officer**

Mr. Geoff Probert serves as the Chief Operating Officer of the Company. He brings over 30 years of operational experience with an upstream career including senior and executive roles around the globe with Shell, BHP Billiton and most recently as North Africa Managing Director for Petroceltic. Geoff is a recognized expert in exploration drilling, field appraisal, field development and field rehabilitation operations and brings with him a wealth of experience in asset monetisation. Geoff has a degree in Chemical Engineering and a Masters degree in Petroleum Engineering from Heriot Watt University.

#### Julian Bessa, Vice President (Exploration)

Dr. Julian Bessa is the Vice President (Exploration) of the Company. He has over 25 years of exploration experience, having worked at leading Latin American companies such as BG Group. He worked as the Bolivian Exploration Manager and VP Exploration Brazil in BG Group. He holds D.Phil. degree from the University of Oxford and an MBA from the Rotterdam School of Management.

#### James Parsons, Non-Executive Chairman

Mr. James Parsons is a non-executive Chairman of the Company. He has more than 20 years of experience in the oil and gas industry. Mr. Parsons also serves as the Chief Executive Officer (CEO) at Sound Energy PLC, an AIM (sub market of London Stock Exchange) listed, European and Mediterranean oil and gas exploration and production company. He grew Sound Energy PLC from at approximately £30M to the FTSE250 scale. He has served in various senior positions in Finance, M&A and General Management in Royal Dutch Shell for approximately 12 years (October 1994 to October 2006).

#### Marco Fumagalli CFA, Non-Executive Director

Mr. Marco Fumagalli is a non-executive director of the Company. Since September 2016, he is also a founding partner at Continental Investment Partners SA. He also serves as a Non-Executive director in Sound Energy PLC and P101 (a venture capital firm). From January 1996 to June 2010, he served as a partner and CEO of 3i Group PLC. Further, he is a leading shareholder in Greenberry PLC, which is a cornerstone shareholder in Echo Energy. He is a qualified accountant and holds the CFA charter.

#### Stephen Whyte, Non-Executive Director

Mr. Stephen Whyte is a non-executive director of the company. He has over 25 years of experience in the oil and gas industry. At present, he is the chairman of Genel Energy PLC and Sound Energy PLC. From September 2012 to September 2014, he served as the Chief Operating Officer and a board member of Galp Energia, the Portuguese exploration and production company. He also held senior positions in BG Group (Senior Vice President), Shell (Vice President) and Clyde (Commercial Director) for more than 20 years. He holds a Bsc Hons (Geophysics) degree from the University of Edinburgh, Scotland.



Shareholding Pattern
As of February 28, 2018, the Company had 402,003,697 million shares outstanding. Exhibit 42 displays the Company's full capitalization structure.

**Exhibit 42: Share Capitalization** 

Particulars	Number of shares	
Ordinary Shares	402,003,697	
Warrants	285,151,093	
Options	81,245,945	
Shares Fully Diluted	768,400,735	

Source: Company filings

Exhibit 43 shows the significant shareholders of the Company as of February 28, 2018.

Exhibit 43: Significant Shareholders as of February 28, 2018

Name	% of existing Ordinary Shares
Greenberry (Continental Partners)	9.98%
Pegasus	4.69%
Kairos Investment Management	3.44%

Source: Company filings



#### Sources

- Company Website, Press Release & Presentations
- LSE Filings
- Export.gov
- U.S. Energy Information Agency
- World Energy Council
- BP energy Outlook K+S Kali GmbH

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