



**BLOCK**  
**ENERGY** PLC

## Block Energy PLC. Initiation Note

### BUY

#### Stock Data

Share Price:	GBP 0.028
Market Cap:	GBP 7.25 MM
Shares in Issue:	259 MM
Fully Diluted Equity:	285 MM

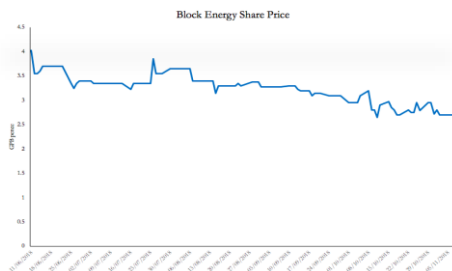
#### Company Profile

Sector:	Oil & Gas
Exchange:	AIM
Ticker:	BLOE

#### Activities

Block is an AIM-listed oil and gas E&P company with a reserve-backed asset base located in Georgia. Net 2P reserves stand at 1.46 MMBbl and substantial low-risk upside exists in the Company's Norio and West Rustavi appraisal projects: with C2 Contingent Resources in excess of 139 MMboe.

#### Performance Data



#### Executive Directors

Paul Haywood – CEO  
 Roger McMechan - Technical Director  
 Niall Tomlinson – Executive Director

#### Research Analyst

Fergus Robson  
 Expand Energy Advisors

Block Energy's investment case represents a low-cost entry point into an early-stage reserve backed producer with significant exploration/appraisal upside.

The fully-funded development and appraisal work programme is seeking to establish early-stage cashflow through a low-cost development programme in its Norio oil field and expose shareholders to the substantial upside contained within the discovered West Rustavi field.

A benign fiscal and operational environment in Georgia allows for low-cost oil and gas operations and substantial netbacks; with the CPR seeing c. USD 15/bbl on an NPV basis.

Strong reserves (of 2.5 MMBbl, gross 2P), and substantial contingent resources (73 MMBbl oil & 626 BCF gas, gross unrisked 2C) provide a strong baseline for the Company's valuation. The presence of Schlumberger in the neighbouring licence area, as well as historically meaningful analogue fields (Samgori and Ninotsminda) within close proximity with the same basin plays, validates the Company's geological concept.

With a current share price<sup>1</sup> of GBP 0.029, and an estimated valuation of GBP 0.092 based upon the 2P reserves, and the Company's fully-funded 2018/9 work programme commencing, we believe this is an inflection point and the activities and near-term news potential should lead to meaningful short and long-term share price appreciation.

In addition to the 2P reserves, upside potential of GBP 0.46 from the relatively low-risk (75% chance of success) contingent resources from the Company's West Rustavi and Norio projects, Block Energy represents an excellent potential investment with compelling upside across its three assets.

<sup>1</sup> On an undiluted basis

## Summary

Block Energy PLC (BLOE:AIM); (“Block”) is an upstream E&P company operating exclusively in Georgia.

The Company’s three assets (the Norio, Satskhenisi and West Rustavi PSCs) have independently audited reserves and resources and represent a strong platform for cashflow growth and share price appreciation.

Block listed on AIM in June 2018 in an oversubscribed entry to market, raising GBP 5 MM (USD 6.6 MM) and is currently trading 30% below the IPO debut price, representing an attractive entry point for new investors as the share price since listing has not reflected the Company’s progress on the ground.

The Company’s fully-funded Phase 1 work programme is targeting a year-end 2019 production rate of 600 – 900 bopd, with further increases planned in 2020. The high-impact West Rustavi gas licence (net 2C Contingent resources of 465 BCF and 28.4 MMbbl<sup>2</sup>) is due to be tested in 2019 and a successful test would markedly increase the value of the Company.

With funding secured for working over and re-entering up to 13 wells, including those on West Rustavi, the Company’s Phase 1 work programme is designed to deliver short-term cashflow as well as exposing investors to meaningful upside.

Since listing, Block has signed contracts for the provision of rigs and equipment in-country, has ordered specialist downhole tools and pumps and well interventions are ongoing. First results from the initial work programme are expected in late December with further newsflow from the initial programme into Q1 and Q2 2019.

Ongoing drilling activity on the nearby Schlumberger owned Samgori (XI<sup>B</sup>) licence, with analogous geology to the West Rustavi field, validates the Company’s geological assessment of the licence areas and demonstrates confidence in Georgia as a jurisdiction from a major oil and gas service company. Schlumberger, a specialist in developing volcanized sandstone reservoirs, are currently drilling an appraisal well into a c. 350 BCF discovery contiguous to Block’s West Rustavi licence with results expected Q4 2018 – Q1 2019.

The October 2018 MOU for gas offtake from West Rustavi, including the potential provision of gas sales infrastructure by the buyer, demonstrates strong local demand for gas as well as immediate potential for commercialisation following successful well re-entries.

With a fully-funded work programme, proven plus probable reserves valued in the CPR at USD 39.3 MM (GBP 30.2 MM) as well as substantial unrisksed gross contingent resources (177 MMboe), Block represents an attractive asset backed pure-play Georgian E&P company with the potential for substantial share price appreciation in the near-term.

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<sup>2</sup> Assuming 75% Equity

## June 2018 IPO

Until May 2017, the Company was known as Goldcrest Resources Limited, a company listed on NEX and focused on copper & gold exploration in Ghana and Mauritania. These assets were later sold by the new management for cash (USD 0.5 MM), before moving the company into oil and gas E&P in Georgia, where management has significant experience.

Following the initial acquisition of the Georgian hydrocarbon assets, the Company changed its name to Block Energy and pursued a listing on AIM which was completed in June 2018.

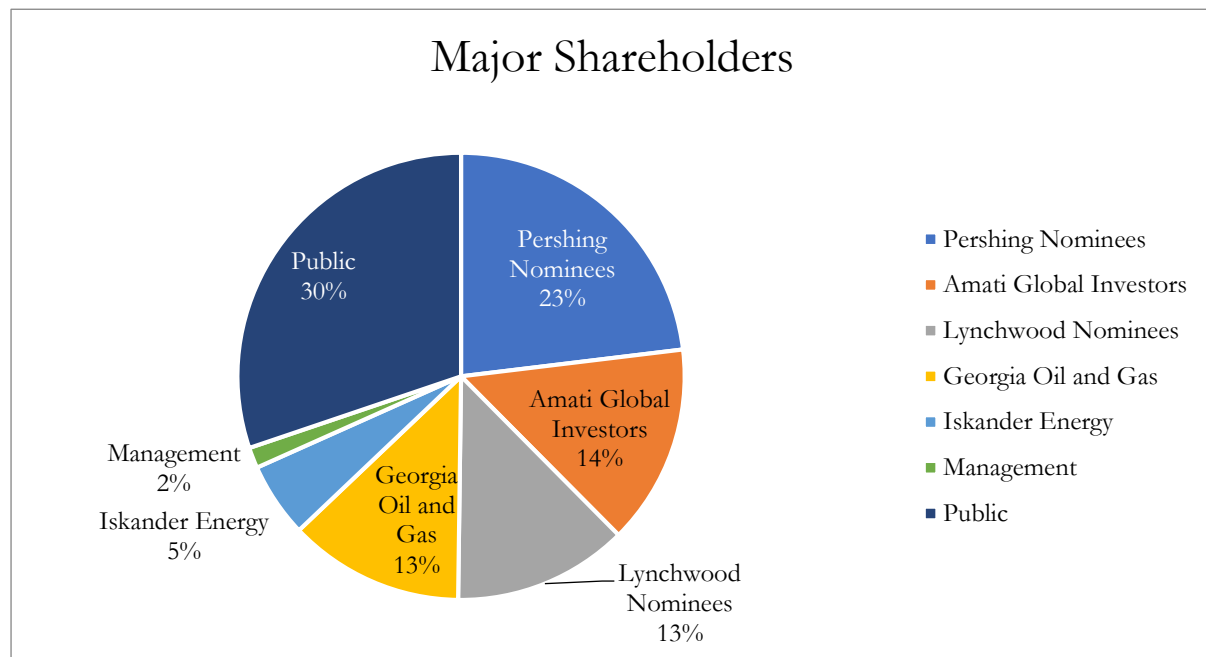
The AIM IPO was completed successfully on the 11<sup>th</sup> June 2018; raising total proceeds of GBP 5 MM (USD 6.6 MM<sup>3</sup>) for a market capitalisation of GBP 10.3 MM (USD 13.6 MM). Places include Amati Global Investors & Miton Asset management. Shares listed at GBP 0.04.

## Capital Structure

Block Energy currently has 259,047,601 shares on issue with a further 26,217,948 warrants/options on issue for a fully diluted share capital figure of 285,265,549.

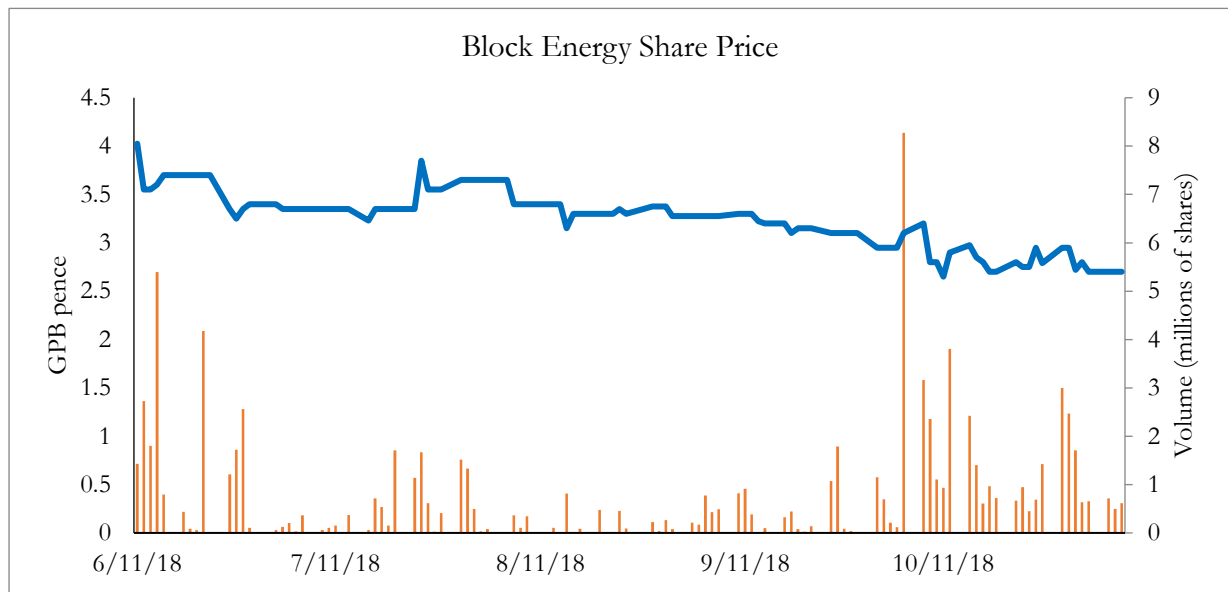
The Company has a clean balance sheet with no debt.

Key shareholders are as follows:



<sup>3</sup> June 2018 average GBP/USD of 1.3208

Share price performance since listing has been as follows:



*(Block Energy Daily Share Price. Source: Novum Securities)*

## Georgia Overview

Georgia is an independent state located in the Caucasus region of eastern Europe. Bordered by Russia to the north, Azerbaijan to the east and Turkey and Armenia to the south, the country occupies a strategic location. Access to international markets is provided by the Black Sea. The country has a population of 3.7 million.



*(Georgia Location)*

Politically, the country is a multi-party democracy operating a unitary semi-presidential system. Formerly a part of the USSR, Georgia achieved independence in 1991. Following a period of instability and unrest, since 1995, the country has operated broadly upon democratic principles and enacted liberal reforms. Post 1995, the country has been pro-market and the current government has continued this stance. The opposition is also pro-business.

Taxation is low by international standards, with income tax at 20% and corporation tax at 20%. The Block Energy assets are governed by the Production Sharing Contract fiscal regime. Energy

and petroleum markets are liberalised and strategic infrastructure such as the Baku-Tbilisi-Ceyhan oil pipeline and the Supsa oil terminal is present.

Georgia contains two disputed regions: Abkhazia and South Ossetia. Both are de jure Georgia but de facto independent, with Russian support. A brief Georgian-Russian war in 2008 (interrelated with the 2<sup>nd</sup> Chechen war) was fought over South Ossetia, lasting 12 days. Relations between Russia and Georgia have significantly improved since, although the war increased Georgia's desire to accede to NATO.

In terms of international agreements, Georgia is a member of the WTO, the Council of Europe, Asian Development Bank, EBRD, OSCE, NATO (applicant) and signed an association agreement with the EU in 2014. Georgia was the third largest contributor of military forces to the ISAF mission in Afghanistan.

Georgia has maintained good relations with Turkey, Armenia and Azerbaijan and worked to improve relations with Russia.

In terms of business environment, Georgia is very well ranked internationally. The Ease of Doing Business Index<sup>4</sup> has Georgia at 9<sup>th</sup> (UK 7<sup>th</sup>, Germany 20<sup>th</sup>, France 31<sup>st</sup>, Italy 46<sup>th</sup>) and the Corruption Perception Index has Georgia at 46<sup>th</sup> (Poland 36<sup>th</sup>, Spain 42<sup>nd</sup>, Malta 46<sup>th</sup>, Italy 54<sup>th</sup>). There are no known cases of expropriation of foreign interests in Georgia.

### Key Infrastructure

Georgia is well-served for hydrocarbon infrastructure. Key trunk pipelines for both oil and gas are present, with the Baku-Tbilisi-Ceyhan ("**BTC**") and Baku-Supsa transporting primarily Azeri crude to the Turkish Mediterranean and the Black Sea. The South Caucasus Pipeline ("**SCP**") transports gas from Azerbaijan to Turkey via Georgia. Major oil export terminals at Supsa and Poti on the Black Sea are operational, and an extensive rail network operates across the country. Road quality is good. Georgia's electrical grid is integrated into the Turkish network and exports of electricity occur.

<b>Pipeline</b>	<b>Route</b>	<b>Capacity</b>	<b>Product</b>	<b>Operator</b>
BTC	Azerbaijan – Georgia - Turkey	1.2 MMbbl/d	Oil	BP
Baku-Supsa	Azerbaijan – Georgia	0.145 MMbbl/d	Oil	BP
SCP	Azerbaijan – Georgia - Turkey	25 BCM/y	Gas	BP

*(Key Trunk Pipelines of Georgia)*

<sup>4</sup> World Bank 2017



(Location of Major Infrastructure and Company Assets. Source: Block Energy)

The availability of major international export routes, combined with access to the Black Sea results in international index pricing for oil and robust gas prices. The liberalised energy market allows for independent commercialisation of both oil and gas.

### Asset Location and Geography

The Company currently holds three assets, all in Georgia:

Asset	Equity Interest	Legal Structure	Partner (s)	Expiry <sup>5</sup>	Area	Minimum Work Programme
Norio (Operator)	100%	PSC	-	2026	22.54 km <sup>2</sup>	Complete
Satskhenisi (Operator)	90%	PSC	GOG <sup>6</sup>	2026	24.38 km <sup>2</sup>	Complete
West Rustavi (XI <sup>I</sup> ) (Operator)	25%*	PSC	GOG <sup>7</sup>	2043	37.75 km <sup>2</sup>	Re-enter one well

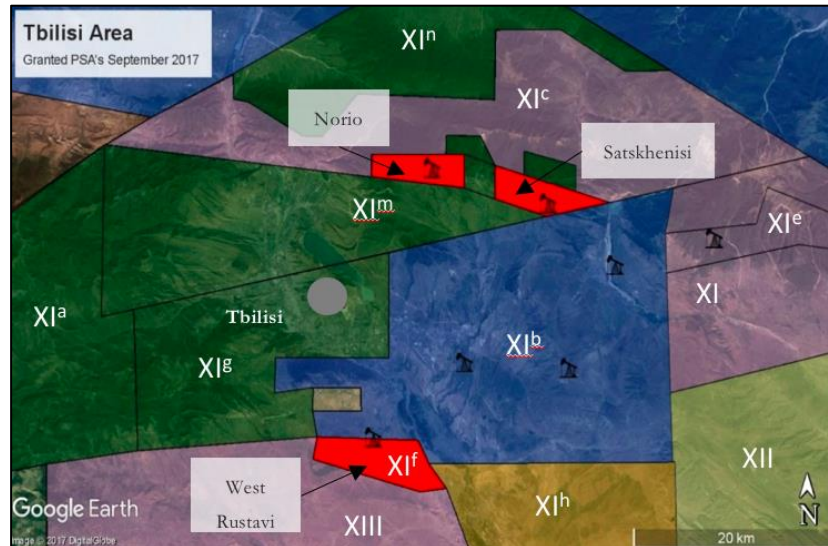
(Block Energy Asset Information)

\* Block has an option to increase equity participation in West Rustavi to 75%. This report assumes that the option will be exercised.

<sup>5</sup> All licences have an optional five-year extension

<sup>6</sup> Georgian Oil and Gas Limited

<sup>7</sup> Georgian Oil and Gas Limited



*(Licence Block Map. Source: Block Energy)*

The licences themselves are located between 10 and 35 km from the capital, Tbilisi. The area is well-served for infrastructure including roads, railways and light industrial facilities. Geographically, the licences are contained within predominantly temperate forest terrain marked by hills and localised valleys.

Oil and gas production has been present in the area since the 1930s.

### Asset Ownership

Block holds the Norio licence 100%.

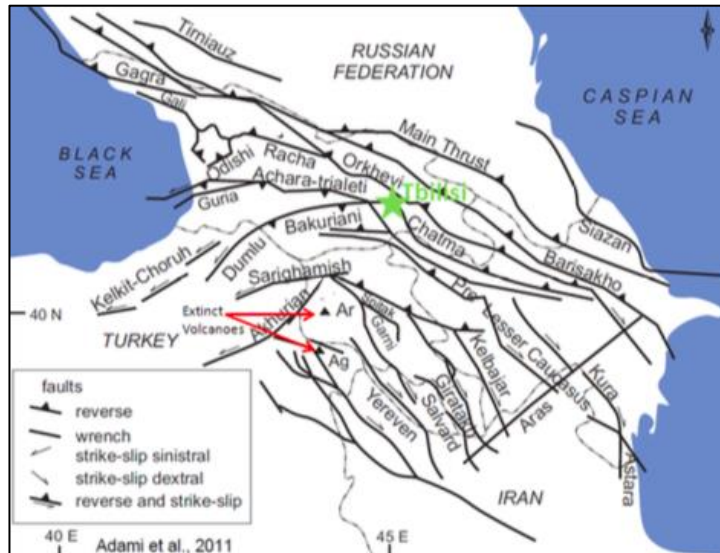
The Satskhenisi licence is held 90% by Block and 10% by Georgian Oil and Gas (“**GOG**”), the market leading local upstream E&P company with a service division. GOG owns a total of 8 PSCs in Georgia, all located in the same portion of the Kura basin as Block’s licences and is a substantial (c. 12.7%) shareholder in Block Energy.

The West Rustavi licence is currently owned 25% by Block and 75% by GOG. Block has options to increase its ownership in West Rustavi to 75% in two stages. Block is preparing to execute these second and third stages of its farm-in to West Rustavi.

Under the terms of the option, Block may acquire an additional 25% (to 50%) if Block has conducted workovers or prepared side-tracks in West Rustavi. A further option to increase equity participation from 50% to 75% is exercisable once Block has completed two sidetracks. The capital works on West Rustavi are fully-funded and this paper therefore assumes that Block will exercise its farm-in option to increase its ownership in West Rustavi to 75%.

### Geology

Block’s assets are located within the Kura basin in central Georgia. The basin is tectonically complex, being flanked by the Greater Caucasus mountain range to the north and the lesser Caucasus to the south.



(Regional Structure Map Showing Major Faults)

Discoveries to date have tended to be within Middle Eocene age volcanic-sedimentary formations or Miocene age marine turbidites and deltaic deposits. Traps tend to be in thrust anticlines, with further potential in sub-thrust structures. To date, 90% of oil produced in Georgia has been from the Middle Eocene.

The geological formation of the basin occurred through the Palaeozoic (deposition of marine carbonates) and into the Cretaceous (deposition of marine sandy limestone and clastics). The Eocene reservoirs are characterised as volcanoclastic tuffs interbedded with siltstones. The reservoir quality of these volcanic-sourced sandstones is variable. Average porosity across the Eocene is seen at 12% with permeability at 15 mD. To date, oil production has been established from volcanized reservoirs in over 100 countries, including the USA, UK and China<sup>8</sup>.

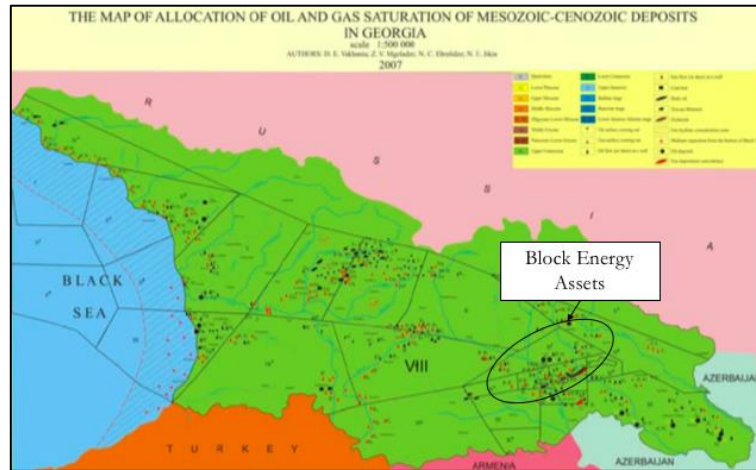
The Oligocene/Lower Miocene (known regionally as “Maikopian”) is characterized by monotonous sedimentation of sands, argillites, gypsum and jarosite. The Maikop contains both source rock as well as reservoir rock and tends to be multi-layered. Maximum thickness is reported within the Kura Basin at 2.5 – 3.0 km, while toward the southern and northern borders of the basin thickness significantly reduces.

In addition to the Eocene and Maikopian reservoirs, hydrocarbons have been produced in Georgia from Cretaceous carbonates, although in general, this sequence has not been adequately explored. Production has been achieved from the Upper Cretaceous in fields in the North Caucasus in Russia with good flow rates as well as in West Rustavi.

To date, approximately 15 commercial discoveries have been made in the Kura basin. The largest discovery, Samgori (currently licenced to Schlumberger as XI<sup>B</sup>), has produced in excess of 200 MMbbl from the Middle Eocene since the middle of 1970s, achieving peak production of 70,000 bopd. The Ninotsminda field (at 58 MMbbl) has seen initial flow rates at 5,000 bopd.

<sup>8</sup> Evaluating Volcanic Reservoirs, *Oilfield Review*, Schlumberger, 2009





*(Oil and Gas presence in Georgia & Block Energy Assets)*

Whilst complex, the geology of the Kura basin is proven with substantial discoveries having been made. Upside exists within the deeper Cretaceous sequence, although to date this is largely untested within Georgia, however gas has been tested from the Upper Cretaceous in West Rustavi.

In terms of Block’s assets, hydrocarbons have been from the following reservoirs:

Asset	Reservoir
Norio	Middle Miocene (Chokrak)
Satskhenisi	Lower Miocene (Maikop)
West Rustavi	Upper Eocene/Middle Eocene/Lower Eocene, Upper Cretaceous

## Fiscal System

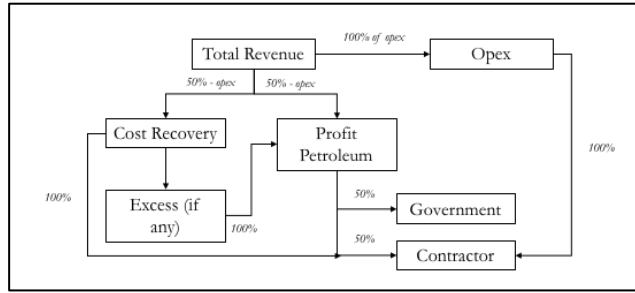
All of Block’s licences are located in Georgia and under standard Georgian Production Sharing Contract (“PSC”) terms. Georgian PSCs are to international standard.

The Norio and Satskhenisi PSCs allow for 100% of opex to be recovered prior to any sharing. After the recovery of opex, gross production flows up to 50% cost recovery petroleum until the cost recovery pool has been exhausted, and 50% profit petroleum. Block receive 100% of cost recovery petroleum and 50% of profit petroleum falling to 40% profit petroleum when  $R$  (cumulative revenue – cumulative costs) > 1.

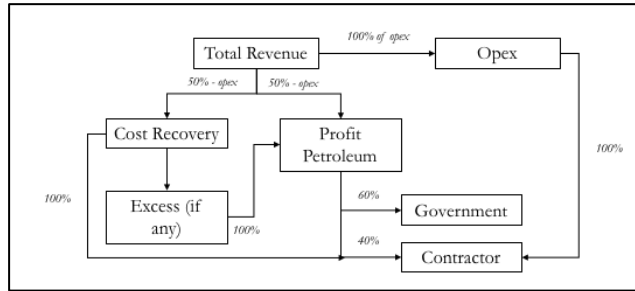
The West Rustavi PSC allows for up to 50% cost recovery petroleum and 50% profit petroleum until the cost recovery pool has been exhausted, and 50% profit petroleum with Block receiving 100% of cost recovery petroleum and 50% of profit petroleum falling to 40% profit petroleum when  $R$  (cumulative revenue – cumulative costs) > 1.

The cost recovery pool includes capex and opex. As of January 2018, the Norio PSC had a historical cost recovery pool of USD 20.0 MM and the Satskhenisi PSC had a historical cost pool of USD 10.3 MM, both of which have been fully audited and approved by the state.

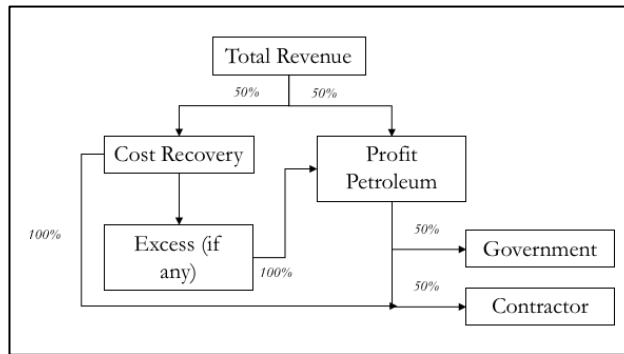
There are no additional taxes, duties, fees, levies or royalties due by Block under the PSCs.



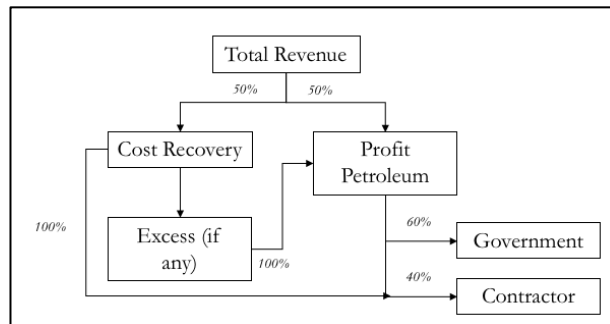
*(PSC Fiscal Flowchart for Norio & Satskhenisi pre-payout)*



*(PSC Fiscal Flowchart for Norio & Satskhenisi post-payout)*



*(PSC Fiscal Flowchart for West Rustavi pre-payout)*



*(PSC Fiscal Flowchart for West Rustavi post-payout)*

As a worked example of the West Rustavi PSC **pre-payout**:

If the gross revenue from the project in a year was USD 1 MM and the cumulative unrecovered costs incurred by Block were USD 2 MM, then:

50% (USD 0.5 MM) would be allocated to profit petroleum and Block would receive 50% (USD 0.25 MM) of this, being the costs still to be recovered;

50% (USD 0.5 MM) would be allocated to cost recovery petroleum and Block would receive 100% (USD 0.5 MM) of this;

In total, Block would receive 75% (USD 0.75 MM) of the gross revenue.

As a worked example of the West Rustavi PSC **post-payout**:

If the gross revenue from the project in a year was USD 1 MM and the cumulative unrecovered costs incurred by Block were USD 0.1 MM, then:

50% (USD 0.5 MM) would be allocated to profit petroleum and Block would receive 40% (USD 0.2 MM) of this;

50% (USD 0.5 MM) would be allocated to cost recovery petroleum and Block would receive 20% (USD 0.1 MM) of this, being the costs incurred by Block in the year;

The additional 80% of cost recovery petroleum (USD 0.4 MM) would then become profit petroleum and allocated 40-60, so Block would receive an additional USD 0.16 MM as profit petroleum;

In total, Block would receive 46% (USD 0.46 MM) of the gross revenue.

As such, for the West Rustavi PSC, the tax rate can be expressed as being between 25% and 60%.

For Norio and Satskhenisi, 100% of operating costs can be recovered before production sharing and the tax rate can be expressed as being between 0% and 60%

However, in reality, tax will never reach the upper limit on any of Norio, Satskhenisi or West Rustavi owing to the recovery of ongoing operational costs.

This fiscal system allows for an accelerated payout for sunk investment costs. In addition, with the exception of the R factor in the Norio and Satskhenisi PSCs, there are no excess profit taxes, rate of return targeting or other upside penalties.

The fiscal system compares very favourably to neighbouring jurisdictions including Russia (where the tax rate can be expressed broadly as a flat 70%), Kazakhstan (where the tax system is designed to limit IRR to c. 20%) and Azerbaijan (where the profit petroleum percentage falls to 10% if R > 4).

As noted, the Georgian system has no additional taxes (including export duty, royalties or corporation taxes) and can be considered favourable in the international context.

## Reserves and Resources

The Company's assets have all been independently assessed by Gustavson Associates in the Competent Person's Report ("CPR"); effective date January 2018<sup>9</sup>.

The CPR gives the following net<sup>10</sup> reserve figures:

	Reserve Classification	Net Oil Reserves (MBbl)		
		1P	2P	3P
<i>Norio</i>	Producing	16.7	21.7	28.5
	Developed Non-Producing	61.6	80.9	133.5
	Undeveloped	603.5	1,005.2	1,334.9
	<b>Total Norio</b>	<b>681.8</b>	<b>1,107.8</b>	<b>1,496.9</b>
<i>Satskhenisi</i>	Producing	2.3	2.3	2.4
	Developed Non-Producing	5.6	7.3	10.3
	Undeveloped	0.0	0.0	0.0
	<b>Total Satskhenisi</b>	<b>7.9</b>	<b>9.6</b>	<b>12.7</b>
<i>West Rustavi</i> <sup>11</sup>	Producing	0.0	0.0	0.0
	Developed Non-Producing	210.7	347.8	565.2
	Undeveloped	0.0	0.0	0.0
	<b>Total West Rustavi</b>	<b>210.7</b>	<b>347.8</b>	<b>565.2</b>
<i>Total</i>	Producing	19.0	24.0	30.9
	Developed Non-Producing	277.9	436.0	709.0
	Undeveloped	603.5	1,005.2	1,334.9
	<b>Total</b>	<b>900.4</b>	<b>1,465.2</b>	<b>2,074.8</b>

Total net 1P reserves are stated at 0.900 MMbbl, total net 2P reserves are 1.465 MMbbl and total net 3P reserves are 2.07 MMbbl.

As can be seen from the table above, the majority of the Company's current reserves are located in Norio and are in the undeveloped category.

In terms of resources, the CPR assigned the following net<sup>12</sup> unrisksed contingent resources to the Company's licences:

	Net Unrisksed Oil/Condensate (MMBbl)			Net Unrisksed Gas (BCF)		
	1C	2C	3C	1C	2C	3C
<i>Norio</i>	3.1	7.2	13.9	0.8	1.9	3.7
<i>Satskhenisi</i>	14.7	25.0	39.3	8.4	14.7	23.9
<i>West Rustavi</i> <sup>13</sup>	13.9	28.4	52.0	235.0	456.0	750.0
<b>Total</b>	<b>31.7</b>	<b>60.6</b>	<b>105.2</b>	<b>244.2</b>	<b>472.6</b>	<b>777.6</b>

<sup>9</sup> The full CPR can be found at: <http://www.blockenergy.co.uk/wp-content/uploads/2018/05/Block-Energy-CPR.Gustavson-Final.051418.pdf>

<sup>10</sup> Net to Block. Net of government share and partner's interest.

<sup>11</sup> The West Rustavi net reserves in the CPR are for a 75% working interest. Current ownership of this licence is 25%.

<sup>12</sup> Net to Block. Net of partner's interest.

<sup>13</sup> The West Rustavi net resources in the CPR are for a 75% working interest. Current ownership of this licence is 25%.

In terms of economic value, the CPR assigns net NPV 10 figures of USD 15.9 MM (1P), USD 39.3 MM (2P) and USD 63.8 MM (3P). An economic evaluation of the contingent resources was not undertaken in the CPR.

### Schlumberger

Schlumberger acquired a 100% interest in three blocks in Georgia in 2017, XI<sup>B</sup> (Samgori field), IX and X. The Schlumberger licences border Block's licences and the geology is continuation of the Eocene play proven in West Rustavi.

The entry of the world's largest service company, and their knowledge of volcanized hydrocarbon reservoirs is a validation of the potential of the Kura basin and the strategy of Block. Schlumberger are currently drilling an appraisal well (on a c. 350 BCF discovery), with a second planned, into the Lower Eocene (the same reservoir as is present in West Rustavi). In addition, Schlumberger's investment demonstrates confidence in Georgia, as well as being of interest to major upstream oil companies.

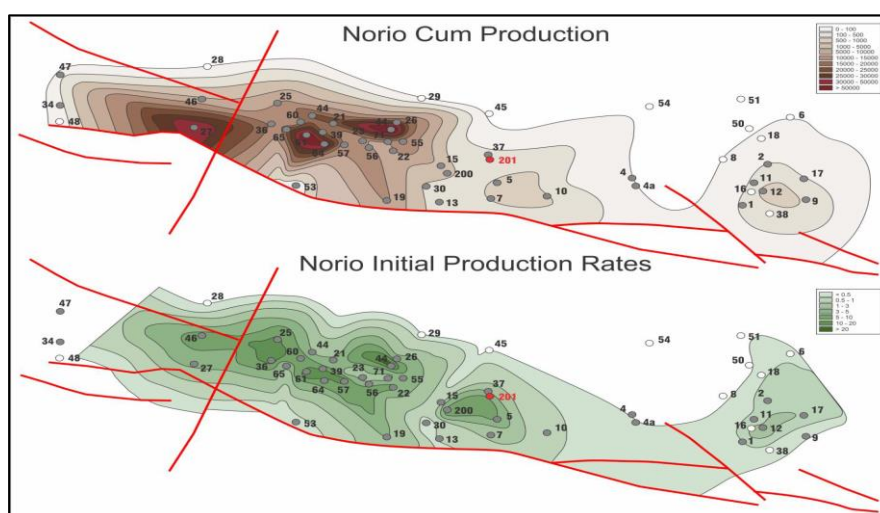
Schlumberger's entry into Georgian upstream follows its experience of working as a service provider in country since 2011, including a GOG commissioned detailed geological analysis of the Tbilisi area of the Kura basin.

The results of the first Schlumberger well are anticipated to be in Q4 2018/Q1 2019 and will offer an immediate read-across to West Rustavi given the analogous nature of the geology.

Both Block and its partner in Georgia, GOG, maintain excellent relationships with Schlumberger.

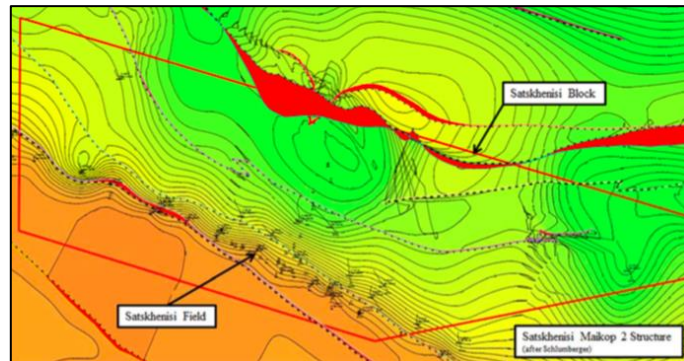
### **Asset History**

The Norio field was discovered in 1938 and has produced near continuously since. A total of 55 wells (the majority being stratigraphic) have been drilled on Norio since 1938, with cumulative production at 1.8 MMbbl. The vast majority of work completed on Norio to date has utilised vintage technology and was undertaken in the Soviet period. Reservoir depth is between 500 and 2,500 m (the field exhibits steeply dipping reservoirs). Current production is approximately 12 bopd from two wells.



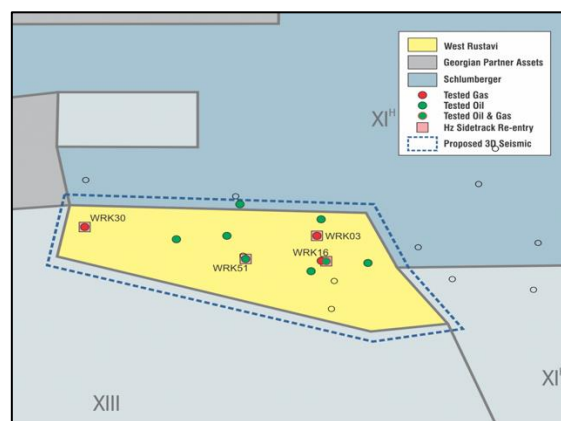
*(Norio Field Initial and Cumulative Production. Source: Gustavson)*

The Satskhenisi field was discovered in 1956 and has produced near continuously since. A total of 19 wells have been drilled on Satskhenisi since 1934, with cumulative production at 0.33 MMbbl. Work was undertaken in 2014 by a Canadian independent (Iskander) on the Satskhenisi field into the Maikop. Current production is approximately 5 bopd. Reservoir depth is between 500 and 2,500 m (the field exhibits steeply dipping reservoirs). Substantial STOIPP exists in Satskhenisi and the challenge in terms of commerciality has been reservoir quality. The application of new technologies is expected to result in substantial volumes (as described in the contingent resource figures, net 2C oil resources 25.0 MMbbl) being recovered; as has been the case in analogous fields in the Russian North Caucasus and Azerbaijan.



(Satskhenisi Maikop Structure Map. Source: Gustavson)

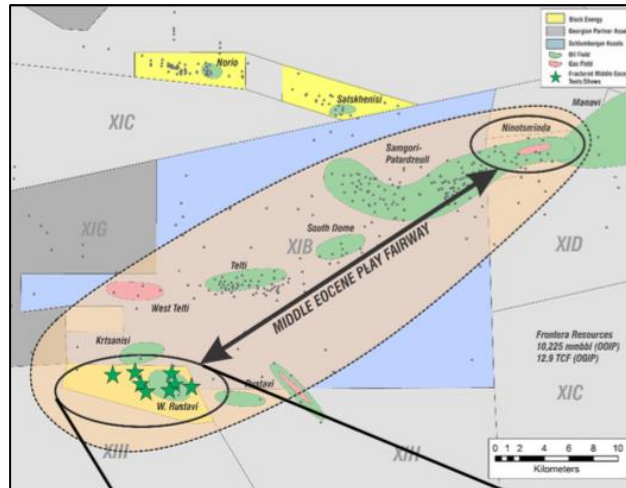
The West Rustavi field was discovered in 1987 and 13 wells were drilled on the structure. Production occurred between 1988 to 1990, with cumulative production at 0.041 MMbbl and 0.041 BCF, primarily from well tests. Production has been established from the Lower, Middle and Upper Eocene as well as the Upper Cretaceous, which exhibited good results (1 MMcf/d; 28.3 MCM/d in the Lower Eocene and 1.5 MMcf/d; 45 MCM/d in the Upper Cretaceous) on test. Current production is nil and work to date on West Rustavi was undertaken in the Soviet period where the focus was on oil production. Reservoir depths are 1,900 – 4,200 m. Substantial contingent resources are seen in the CPR in West Rustavi, with net 2C gas resources of 456.0 BCF and net 2C oil resources of 28.4 MMbbl.



(West Rustavi, Wells Drilled to Date. Source: Block Energy)

All three assets exhibit complex geology underlaid by good hydrocarbon potential. High STOIPP and GIIP (400.1 MMbbl and 772.0 BCF) figures generate excellent upside and proven production gives confidence in the existence of recoverable reserves. As noted, the primary challenge is reservoir quality which is determined by the presence of naturally occurring fractures within the

reservoirs. Improved drilling technology and the application of modern 2D seismic reprocessing techniques as well as 3D seismic should substantially increase the efficiency of drilling and sidetracking on the assets. In the 1990s, CanArgo Energy Corporation established long-term production of between 1,200 – 1,500 bopd from 5 wells on the Ninotsminda field; a field with substantially the same geological conditions.



(Middle Eocene Fairway. Source: Block Energy)

All fields produce medium-light (Brent equivalent) oil with minimum sulphur. No H<sub>2</sub>S has been observed on any of the licences.

### Forward Work Programme

The Company’s IPO on AIM was designed to deliver development capital to the Norio, Satskhenisi and West Rustavi fields. Georgia’s low-cost operating environment has allowed the Company to develop a substantial work programme on each of the fields for a relatively limited capital outlay. The first and second wells of the 8 well workover programme on Norio has commenced and work on West Rustavi is expected in Q1-Q2 2019.

The Company maintains good relations with both GOG and Schlumberger and has access to substantial quantities of seismic, wellbore and geological data.

The Company plans to take a phased approach to development and appraisal of the assets, with the phases broadly described as:

- Phase 1: Up to 10 workovers/recompletions and 3 horizontal sidetracks;
- Phase 2: 3D seismic survey on West Rustavi plus new horizontal well;
- Phase 3: Additional drilling on Norio & West Rustavi and the installation of gas processing facilities.

As of October 2018, the Company is fully-funded for the Phase 1 programme.

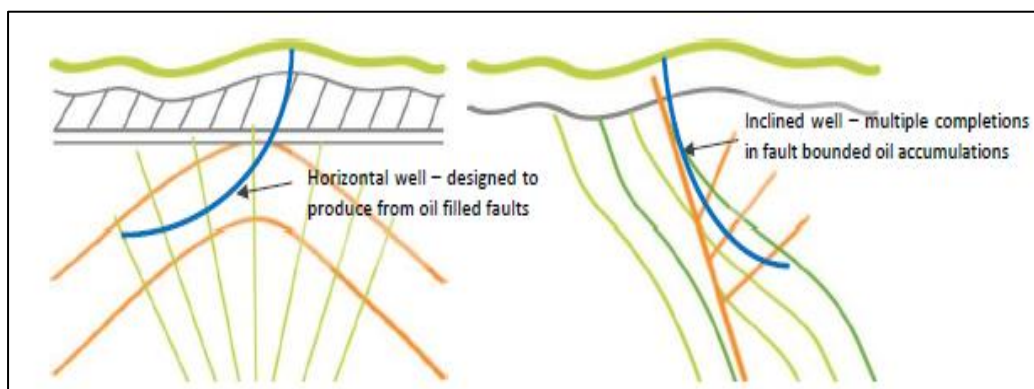
The Phase 1 programme is targeting an aggregate increase in production from the current c. 17 bopd to c. 900 bopd within 24 months. The Phase 1 work programme is described in more detail below:

Field	Workover/Recompletion	Sidetrack
Norio	5	1
Satskhenisi	3	-
West Rustavi	5	2
<b>Total</b>	<b>13</b>	<b>3</b>

The Phase 1 programme will focus on the recompletion and cleanout of old wells. The Company plans to run new wireline (PNN and casing inspection) logs to affirm horizons of interest, to penetrate virgin reservoir zones, to bypass skin damage around the well bore through horizontal micro drilling followed by the installation of new downhole pumps (in Norio and Satskhenisi) and the drilling of horizontal sidetracks (at West Rustavi). Horizontal sidetracks have had proven success in the nearby Ninotsminda field by intersecting reservoir fractures. The Phase 1 work programme should see a meaningful increase in production net to the Company as well as immediate news flow.

Based upon the Company’s guidance, workovers/recompletions should on average each add 10 – 15 bopd gross production and sidetracks/new horizontals approximately 100 - 250 bopd (Norio) and c. 300 bbl/d (West Rustavi). The economic analysis in this report has assumed slightly lower initial production rates from sidetracks/new horizontals at 200 bopd (Norio) and 275 bopd (West Rustavi); although owing to the nature of the fractured volcanized reservoirs, it is possible that rates in excess of 1,000 bopd (in line with performance from Ninotsminda) will be achieved. Company guidance is seen as realistic and is validated by the CPR.

It is important to note that, given the nature of the fields and their history, that not all well interventions will be successful; with some interventions below average (or establishing nil production) and some above average. The data from the Ninotsminda sidetrack programme in the 1990s demonstrated a one-year average production rate of 380 bopd per well from a 5 well horizontal sidetrack programme (for a total annual average of 1,900 bopd). The N4 well in particular demonstrated excellent results, increasing from 50 bopd to 850 bopd. N100Z sidetrack increased production from nil to 590 bopd. The Company’s approach will be to assess the results of each well following interventions and to reorient its geological and operational approach if results are below expectation.



*(Horizontal Sidetrack Design. Source: Block Energy)*

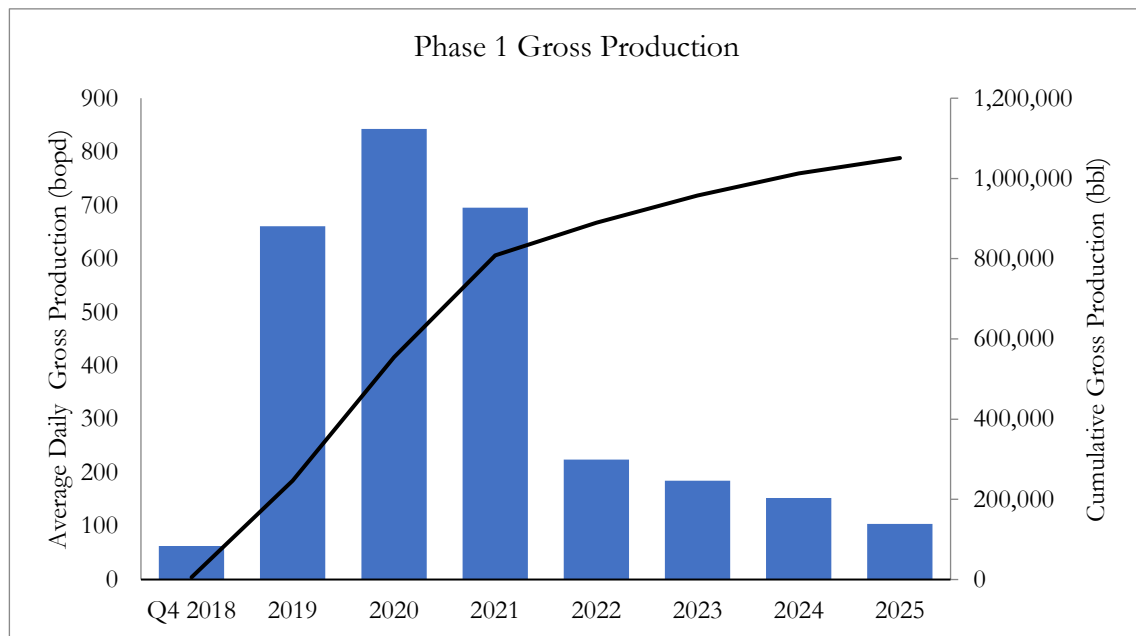


In terms of capital expenditure, the programme is low cost, with the following Phase 1 capital expenditure expected to be as follows:

Field	Phase 1 Capital Expenditure (USD '000)
Norio	2,120
Satskhenisi	30
West Rustavi	3,200
General Production Facilities	700
<b>Total Phase 1</b>	<b>6,050</b>

Workovers are expected to cost between USD 10K and USD 250K each with sidetracks on Norio expected at c. USD 800K and West Rustavi USD 1.5 MM. New horizontal wells for Phase 2 are expected to cost c. USD 3 MM each.

In terms of anticipated gross production from the Phase 1 programme, this is seen as follows:



*(Estimated Phase 1 Production Profile)*

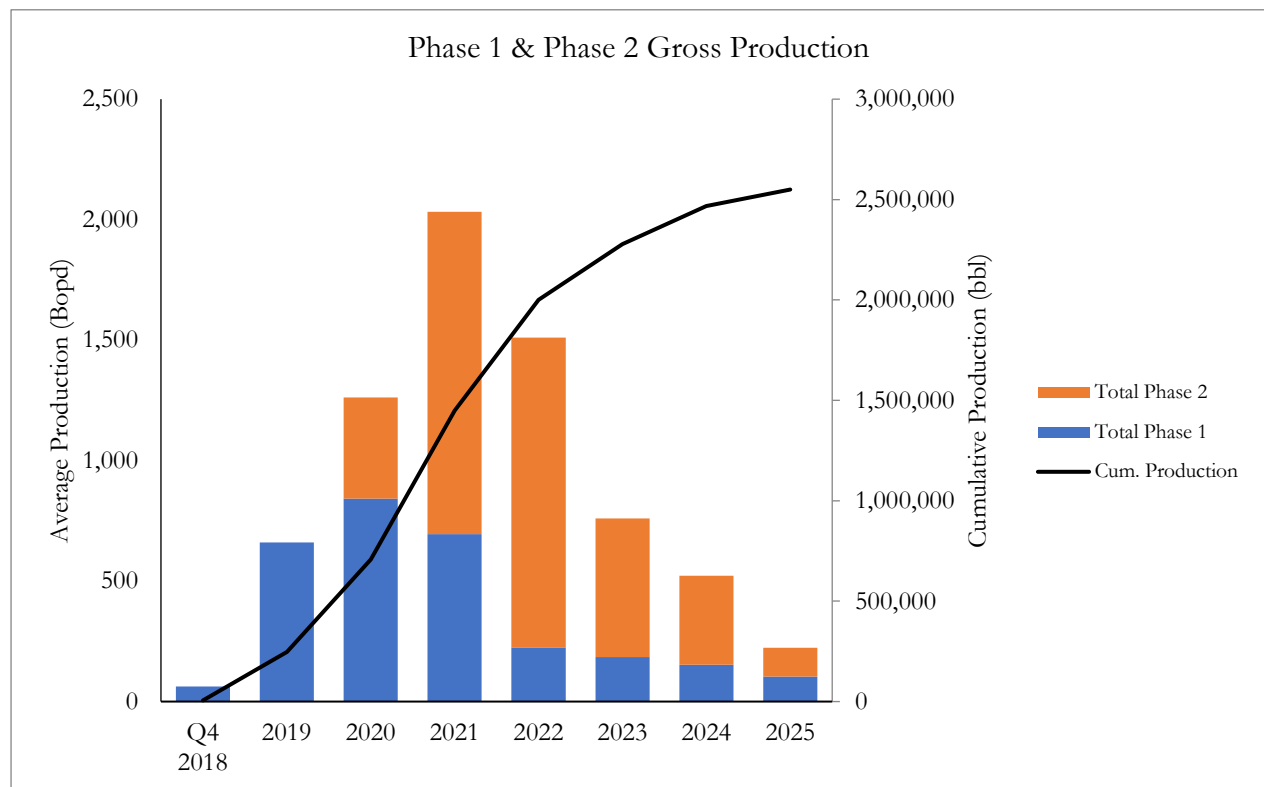
The above Phase 1 profile recovers 1.05 MMbbl gross reserves (verses 1.38 MMbbl 1P gross reserves). Based upon the McDaniel (October 2018) oil price forecast minus USD 9/bbl, a successful Phase 1 programme would deliver a project value of c. NPV 10 USD 16.5 MM. Assuming the above Phase 1 profile, the project is cashflow generative from year-end 2018 and requires **no additional financing**. These figures do not include corporate costs and assume West Rustavi equity interest at 75%.

Following Phase 1, the Company plans to undertake a 3D seismic survey over West Rustavi. Phase 2 and 3 will focus on appraising West Rustavi and developing the potentially significant net<sup>14</sup> contingent resource (456 BCF plus 28.4 MMbbl) as seen in the CPR. The 3D survey will increase

<sup>14</sup> Assuming 75% equity

seismic resolution and allow the Company to optimise its well locations for the new horizontal wells planned.

Capex for Phase 2 is seen at USD 1.6 MM for the 3D seismic survey and USD 3 MM per new horizontal well. Phase 3 is more speculative at this stage and will be informed by the results of Phase 1 and Phase 2 which are designed to establish early cashflow but also to fully appraise the West Rustavi gas discovery. The gas sales MOU signed by Block in October 2018 provides confidence that gas produced from West Rustavi can be monetised rapidly.



*(Estimated Phase 2 Production Profile)*

The above Phase 1 & Phase 2 profile recovers 2.59 MMbbl gross reserves (verses 2.51 MMbbl 2P gross reserves). Based upon the McDaniel (October 2018) oil price forecast minus USD 9/bbl, a successful Phase 1 & Phase 2 programme would deliver a project value of c. NPV 10 USD 35.3 MM (in line with the 2P CPR figure of USD 39.3 MM). Assuming the above Phase 1 & Phase 2 profile, the project is cashflow generative from year-end 2018 and requires no additional financing. These figures do not include corporate costs and assume West Rustavi equity interest at 75%.

As of September 2018, the Company had secured the rigs and equipment necessary to execute the Phase 1 work programme, including the exclusive use of two A50 workover rigs and a 4,000 m TD capable ZJ-40. The rigs have been leased from Block’s Georgian partner, GOG (a major shareholder in Block and JV partner in the West Rustavi and Norio licences) under a lump sum agreement which was executed on 24<sup>th</sup> September 2018.

The lump sum agreement offers the company low-cost access to the required rigs and equipment to execute the Phase 1 programme. The agreement’s key terms are as follows:

Initial phase (6) months = 500,000

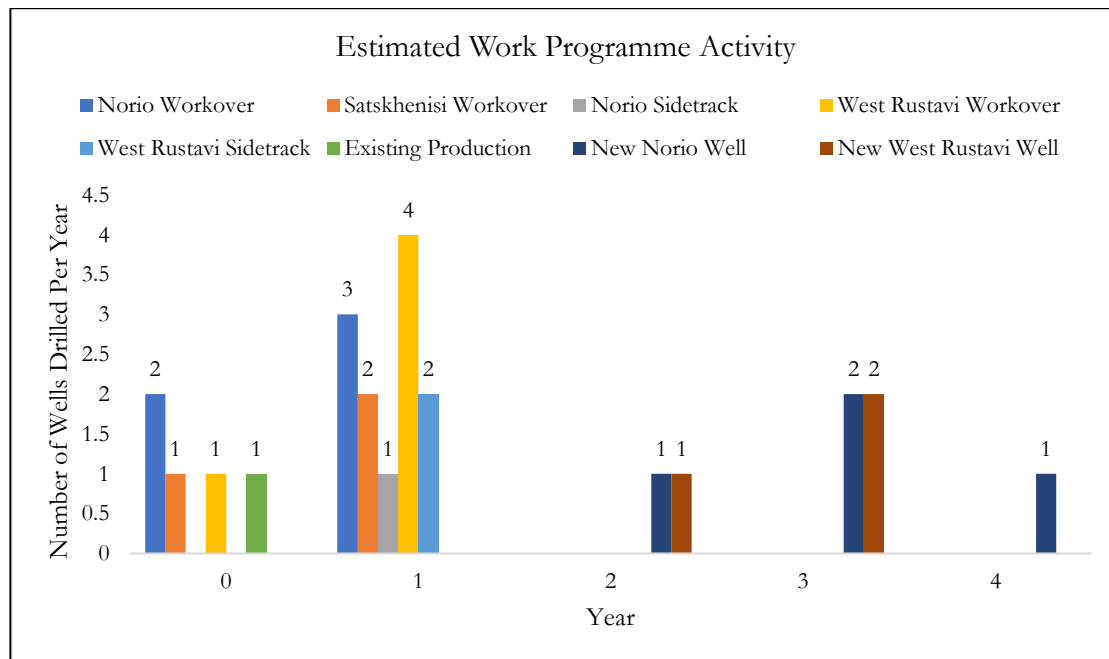
Extended phase (further 6 months) = 250,000

Total Cost 750,000

The Agreement provided significant cost savings when compared to industry standard daily rate cost structures offered by local and regional market participants, at a total cost of approximately half of the standard rate in the region.

GOG will also assist in the application for sidetrack licences and permits. GOG is a highly experienced drilling contractor in the Kura basin and has completed multiple workovers and successful new wells (such as the wells drilled on Ninotsminda, up to 1,000 bopd production).

Initial results from the first workovers should be expected in December. It is important to note that the Company will initially target the simplest well interventions and that initial flow rates will reflect this. The first of the high-impact sidetracks are planned to commence in Q4 2018, with results in early 2019, and further drilling in 2020.



*(Drilling and Well Operations for 2P (Phase 1 and 2) Profile. Analyst Estimate)*

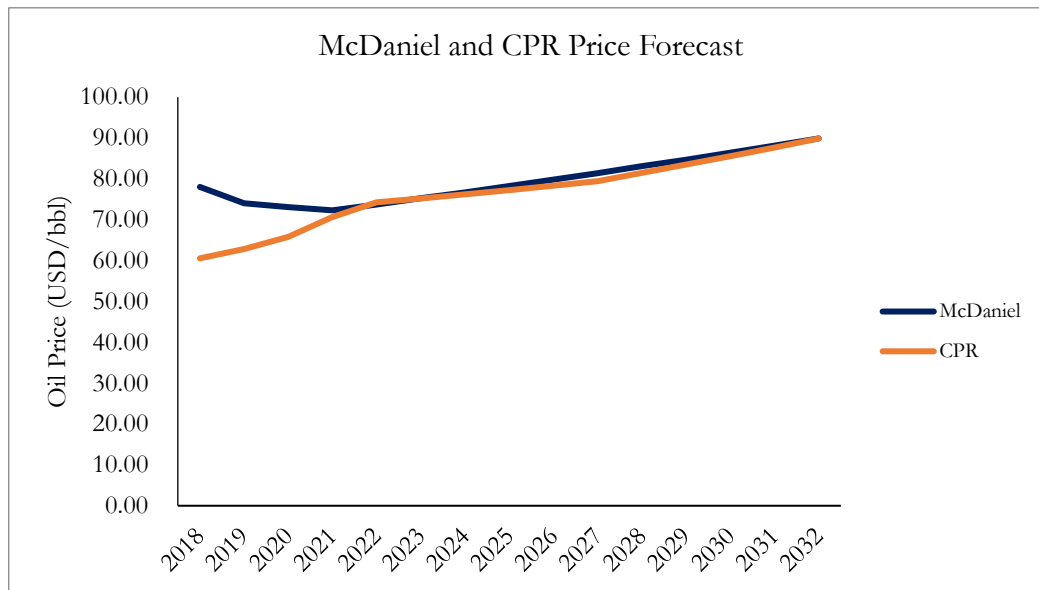
### Economic Analysis – Reserves

The Company's reserve report assigns the following economic values:

Asset	Net Cash Flow (USD MM)			NPV 10 (USD MM)		
	1P	2P	3P	1P	2P	3P
Norio	21.20	45.60	67.40	11.60	29.50	45.10
Satskhenisi	0.22	0.29	0.42	0.18	0.23	0.32
West Rustavi	6.10	13.60	25.60	4.10	9.60	18.40
<b>Total</b>	<b>27.52</b>	<b>59.49</b>	<b>93.42</b>	<b>15.88</b>	<b>39.33</b>	<b>63.82</b>

No economic values for the contingent and prospective resources were given in the CPR due to a lack of information (at the time of the report) regarding further development plans and the marketing of gas. The October MOU relating to gas sales significantly de-risks the commercialisation potential of the West Rustavi contingent resources.

The CPR's oil price forecast was conducted in January 2018 and is substantially below current prices. For the purposes of economic evaluation in this report, oil price forecasts as of McDaniel October 2018<sup>15</sup> have been used. A comparison between the CPR and McDaniel price forecasts is as below:



*(McDaniel and CPR Oil Price Forecasts)*

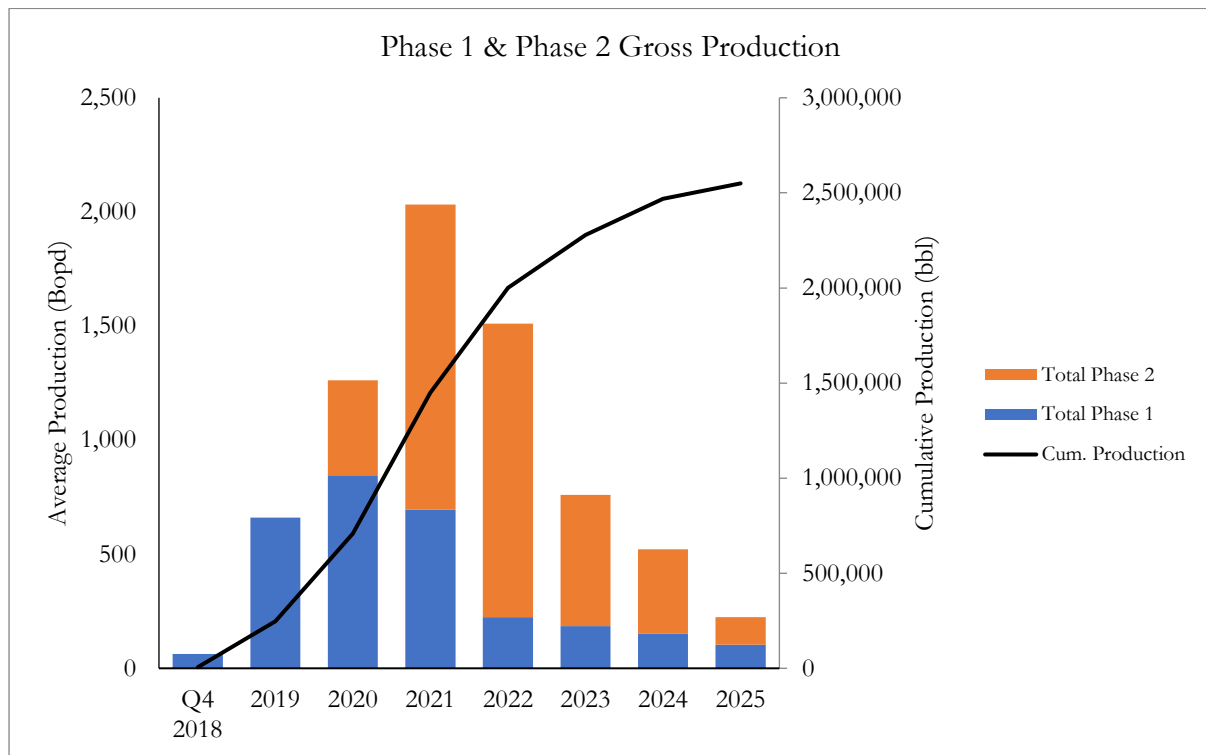
The Company reports that based upon existing commercial arrangements, it receives Brent minus USD 9/bbl at the wellhead and incurs no transport or marketing costs. For the purposes of the PSC, wellhead revenue is the deemed value for production sharing. Given this, the oil prices used in this analysis are McDaniel October 2018 forecast minus USD 9/bbl.

In terms of gas pricing, the demand for gas in Georgia is strong, with country importing 99% of its requirement from the Azeri state company SOCAR. Benchmark import price is currently seen at around USD 5.15/MCF, although the price of gas delivered to Georgia through the SOCAR system is most likely an oil-linked *S* curve on a 12-month time lag (in line with most pipeline pricing in the region). As such, a price range of USD 3 – 8/MCF has been used, with the oil/gas ratio seen at 9.5%. For clarity: the pricing assumed for gas as of 2018 (2017 Brent USD 54.25) is USD 5.15/MCF. For 2019 (average 2018 Brent USD 71.35) is estimated at USD 6.78/MCF. This report assumes a maximum price of gas at USD 8/MCF (oil prices in excess of USD 84.21/bbl no longer increase gas prices) and a minimum gas price of USD 3/MCF (oil prices below USD 31.58 no longer reduce gas prices). Note that the gas supply contract between SOCAR Azerbaijan and Georgia is not public and these gas prices are an assumption.

In October 2018, the Company signed an MoU for gas offtake from West Rustavi. The gas price was undisclosed but the agreement significantly de-risks the commercialisation of the field.

<sup>15</sup> McDaniel Oil Price Forecast, October 2018, <https://www.mcdan.com/download/pdf/181001>

In terms of evaluation of the reserves, the CPR provides reasonable expected economic outputs. Updating for increased oil prices, in terms of anticipated gross production profiles, the CPR broadly shows the following 1P and 2P numbers:



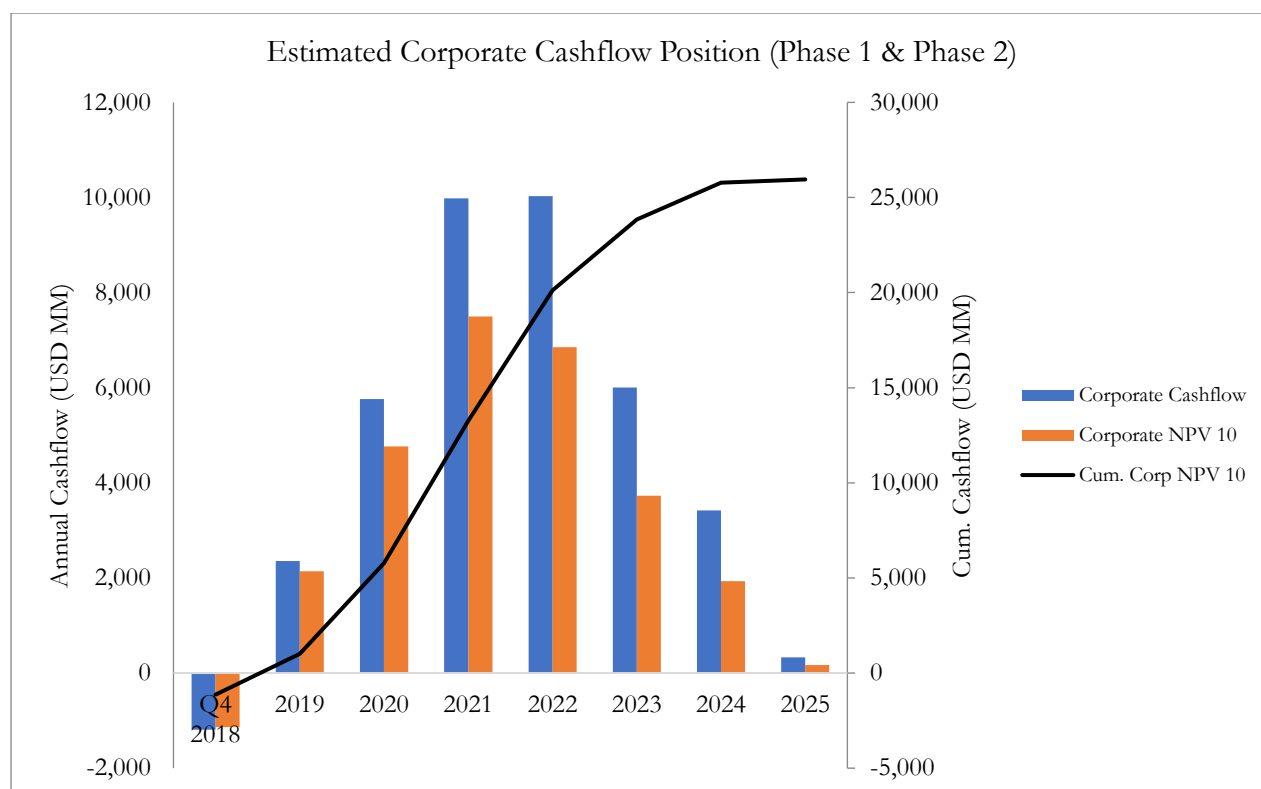
*(Phase 1 and Phase 2 Gross Production. Analyst Estimate)*

The difference between the 1P (Phase 1) and 2P numbers is the addition of 4 new horizontal wells on Norio 2020 – 2022 and 3 new horizontal wells on West Rustavi 2020 – 2021.

In terms of economic value, the analyst’s estimate and CPR are broadly in agreement, with NPV 10 seen at USD 35.3 MM and USD 39.3 MM.

As such, based on the CPR and Block’s post-IPO pre-Phase 1 cash position (estimated at c. USD 5.5 MM<sup>16</sup>), it is considered certain that Block will execute the Phase 1 (1P) programme. Given the high degree of confidence in the reserves, the fully-funded nature of the work programme and Block having secured the necessary rigs and equipment, a 1P and 2P estimated four-year corporate cash position has been generated:

<sup>16</sup> This figure includes a deduction of USD 1 MM for 12 months G&A so is cash available for oil and gas investments



*(Estimated Corporate Cashflow Position Based upon Phase 1 & Phase 2. Includes G&A Costs, Excludes Existing Cash)*

Based upon the above profile, the Company's post-tax, post-corporate costs<sup>17</sup> valuation is USD 25.9 MM. With an existing cash balance of c. USD 5.5 MM<sup>18</sup>, the Company's base valuation should be in the region of USD 31.4 MM based upon the reserves contained in the CPR.

At a current share price of GBP 0.028, the Company's market capitalisation is GBP 7.4 MM; suggesting that the vast majority of the Company's reserve value is not being reflected in the share price.

This analysis suggests substantial upside in the current share price based upon the Company's reserves and cash position.

	<b>Current</b>	<b>NPV 10 Cash + Phase 1 only (including corporate costs)</b>	<b>NPV 10 Cash + Phase 1 + 2 (including corporate costs)</b>
Share Price <sup>19</sup> (GBP/share)	0.028	0.052	0.092
Implied upside	-	86%	228%

When compared to peer Frontera Resources (AIM: FRR), with an operational loss<sup>20</sup> in the 6 months to June 2018 of USD 4.13 MM (annualised USD 8.26 MM), with no independently audited reserves, substantial debt and a market capitalisation of GBP 63.0 MM, Block appears significantly undervalued.

<sup>17</sup> Assuming G&A at USD 1 MM per annum, rising to USD 1.5 MM per annum by 2020 and USD 2 MM per annum by 2024

<sup>18</sup> This figure includes a deduction of USD 1 MM for 12 months G&A so is cash available for oil and gas investments

<sup>19</sup> On an undiluted basis

<sup>20</sup> Revenue minus opex minus G&A minus DD&A

It is important to note that Block's Phase 1 work programmes is fully-funded. To break-even on an NPV 10 basis, and including corporate G&A, the Company's estimated production per well can sustain a c. 60% reduction from the base case in both the P1 (Phase 1) and P2 (Phase 2) cases.

Given the Company's independently audited reserves, its fully-funded two-stage work programme and its clean balance sheet, the Company is undervalued in relation to its 1P reserves. With an estimated NPV 10 netback of USD 10.1/bbl (including corporate costs), the Company's reserve-based valuation is strong.

The Company's near-term operational activity should see a re-rating to at least GBP 0.052/share as early-stage production is established in Q4 2018. The substantial activity planned in 2019 should see further upside being realised in Q1 - Q2 2019. In terms of newsflow, the Company will likely announce the initial results of the early-stage well workover an intervention programme in 1H 2019. Average production per workover of 10 – 15 bopd will be in line with the CPR's reserve assessment. The high-impact sidetracks commence in Q1 2019 and should add meaningful levels of production.

In order to complete the Phase 1 and Phase 2 work programmes, the Company will not require additional funding and it is expected that the Company will report a net profit in 2019.

#### Economic Analysis – Resources

The Company possesses significant resources, primarily contingent resources.

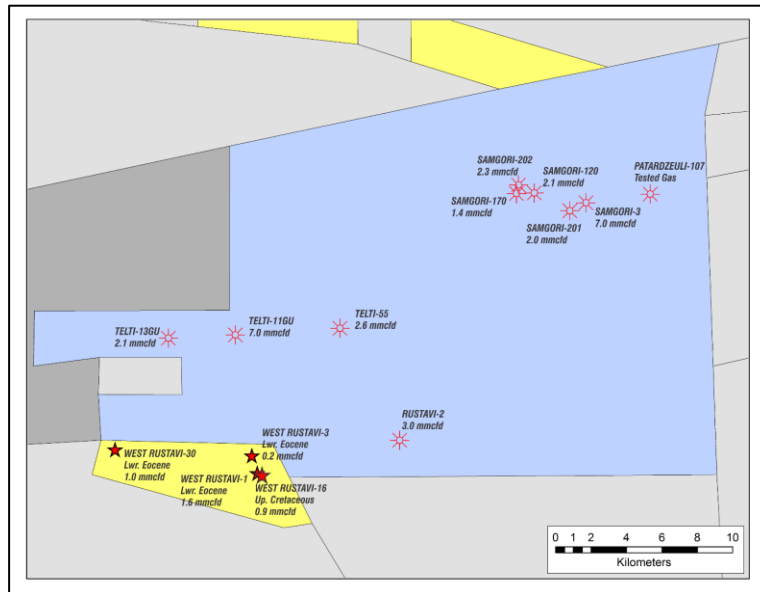
	Net Unrisked Oil/Condensate (MMBbl)			Net Unrisked Gas (BCF)		
	C1	C2	C3	C1	C2	C3
<i>Norio</i>	3.1	7.2	13.9	0.8	1.9	3.7
<i>Satskbenisi</i>	14.7	25.0	39.3	8.4	14.7	23.9
<i>West Rustavi</i> <sup>21</sup>	13.9	28.4	52.0	235.0	456.0	750.0
<b>Total</b>	<b>31.7</b>	<b>60.6</b>	<b>105.2</b>	<b>244.2</b>	<b>472.6</b>	<b>777.6</b>

The CPR assesses the chance of success relative to the contingent resources at 75%.

In addition, prospective resources are assigned by the CPR but do not form part of this analysis.

The primary risk with the contingent resources is seen as reservoir risk (risk of commerciality). As discussed in the geological section, the reservoirs in the Kura basin are complex and marked by the presence of fractures. The Eocene is volcanic and requires intersection of wells with the fractures in the reservoir rock, with excellent per well productivity observed in the Samgori and Ninotsminda fields. The Maikopian/Lower Miocene can broadly be thought of as similar to US shale reservoirs; with reservoir and source rock intermingled and the presence of sweet spots. The Upper Cretaceous is poorly explored regionally but has been tested in West Rustavi at good flow rates of up to 1.6 MMcf/d and in the nearby Schlumberger XI<sup>B</sup> licence at rates of up to 7.0 MMcf/d.

<sup>21</sup> The West Rustavi net resources in the CPR are for a 75% working interest. Current ownership of this licence is 25%.



(West Rustavi & Schlumberger Licence XI<sup>B</sup> Gas Test Results in the Upper Cretaceous. Source: Schlumberger)

The presence of Schlumberger in the analogous XI<sup>B</sup> (Samgori) licence confirms the high-quality of the contingent resources seen in the CPR. A detailed Schlumberger study on the Block Satskhenisi field<sup>22</sup>, utilised all well data in a Petrel project and the report was evaluated in the CPR to assist in the determination of the unrisksed contingent resources.

Proven gas from both the Lower Eocene and Upper Cretaceous has been tested in West Rustavi, as well as oil from the Upper and Middle Eocene.

Subject to the results established from the imminent 16a side track, the Company is planning as part of the Phase 1 programme to re-complete 2 further wells on West Rustavi, another in the Middle Eocene and one in the Lower Eocene/Upper Cretaceous. The Lower Eocene/Upper Cretaceous wells (#3 and #30) tested 0.2 and 1.0 MMCF/d in the 1990s. Flow rates substantially in excess of this have been observed on the Samgori and Teleti fields next door and owing to the nature of the volcanized reservoir and regional tectonic setting, horizontal sidetracks should intersect fractures and allow for substantially improved production rates of 3 - 4x that of a conventional vertical well. Successful flow tests on West Rustavi (expected H1 2019) should see contingent resources converted into reserves and validate the economic value of the gas field.

For C2, the CPR sees gross unrisksed C2 contingent resources of 388 BCF (plus 4.6 MMbbl condensate) in the Lower Eocene and 209 BCF gross unrisksed C2 contingent resources in the Upper Cretaceous on West Rustavi. An additional 10.7 BCF of gross unrisksed C2 contingent resource associated gas is seen in the Middle and Upper Eocene.

For C1, the CPR sees gross unrisksed C1 contingent resources of 217 BCF (plus 1.8 MMbbl condensate) in the Lower Eocene and 92 BCF gross unrisksed C1 contingent resources in the

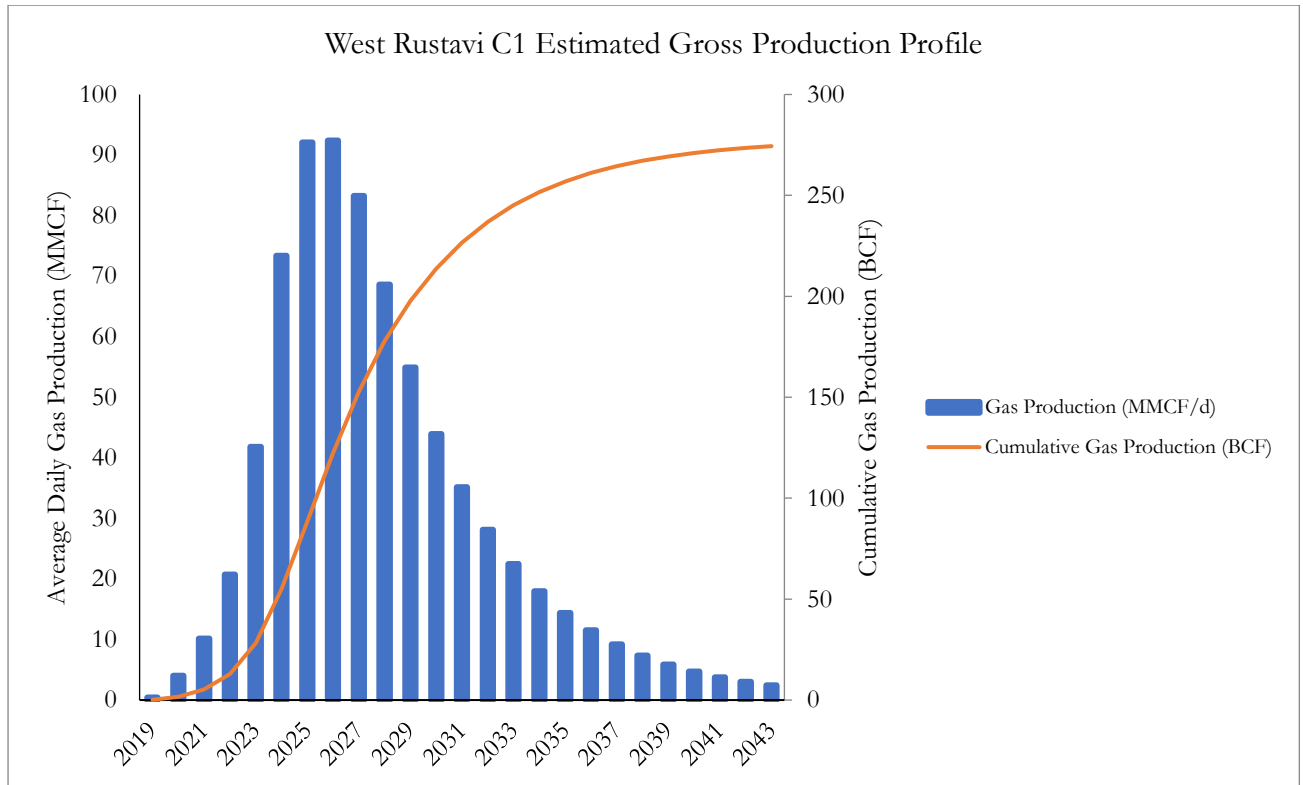
<sup>22</sup> “Geological and Hydrodynamic Modelling of Maikopian Formation and Field Development Plan, Satskhenisi Oilfield, Georgia (Part II: Hydrodynamic Modelling), Schlumberger Data and Consulting Services, 2010.



Upper Cretaceous. An additional 5.0 BCF of gross unrisked C2 contingent resource associated gas is seen in the Middle and Upper Eocene.

In barrels of oil equivalent terms, West Rustavi is substantial; at 53.3 MMboe (gross unrisked C1) and 104.1 MMboe (gross unrisked C2).

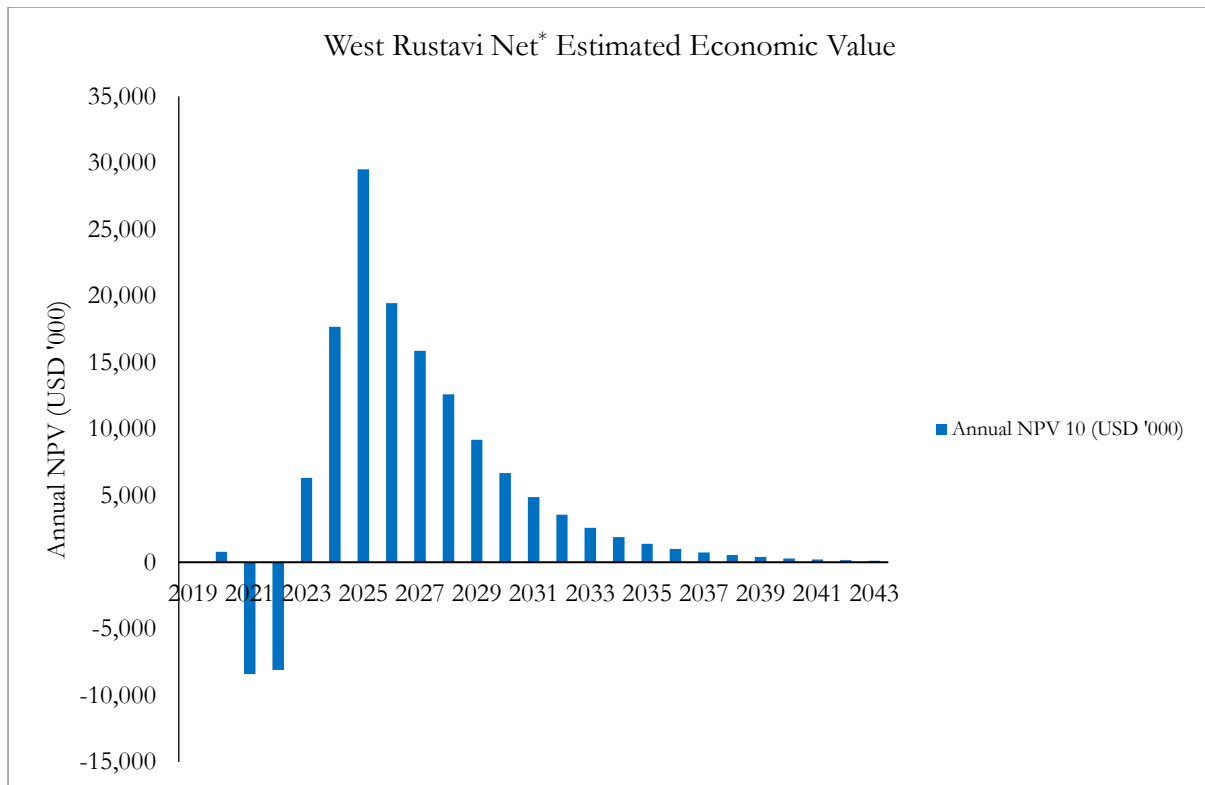
A production profile and estimated monetary value of the West Rustavi gas and condensate resources (in the Lower Eocene and Upper Cretaceous), based upon the CPR gross unrisked C1 contingent resource figures has been prepared:



*(Estimated Gross Gas Production Profile Based upon C1 Gross Unrisked Contingent Resources. Note, 1.63 MMbbl Condensate is Recovered but not Displayed in Above Graph. Analyst Estimate)*

This profile produces gross reserves of 274 BCF (CPR C1 gross unrisked figure of 314 BCF) and 1.63 MMbbl condensate (CPR C1 gross unrisked figure of 1.8 MMbbl).

On an NPV 10 basis, the economic value of developing the C1 gross unrisked gas/condensate resources in West Rustavi is as follows:



*(West Rustavi Net<sup>23</sup> Estimated Economic Value Based Upon Analyst C1 Resource Production Profile)*

This production and field development profile results in an NPV of USD 119 MM net to Block. A total of 40 horizontal gas wells producing at initial rates of 3.5 MMCF/d are drilled plus the installation of a gas processing/condensate strip facility in 2020 – 2021 and additional infrastructure. Capex is seen at c. USD 170 MM. On a C2 basis, West Rustavi field development NPV is c. USD 355 MM.

Converting the contingent gas resources in West Rustavi to reserves should see the Company’s underlying asset value increase substantially. Given that the West Rustavi contingent resource play is appraisal rather than development, and that the Company is fully-funded to execute the initial stage of this appraisal (whilst developing the oil reserves as seen in Phase 1 and Phase 2), the West Rustavi gas field is of significant near-term value.

The CPR assigns a 75% chance of success to the contingent resources in West Rustavi. Given this, the risked, economic value net to Block of the West Rustavi C1 contingent gas resources in the Lower Eocene and Upper Cretaceous is USD 89.25 MM.

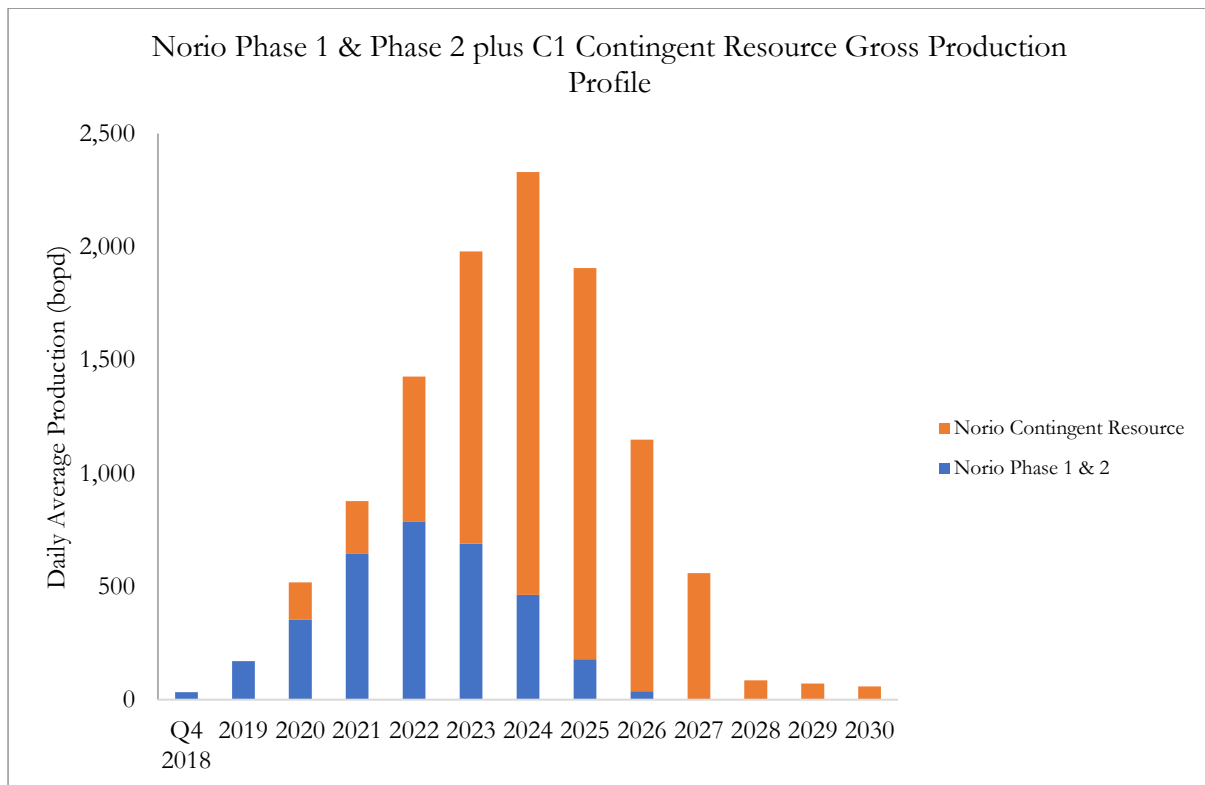
For Norio, the contingent resources are located within the Maikopian sequence, which as discussed is a series of interbedded reservoir and source rock. The reserves in Norio have been proven by drilling testing and past production and the field exhibits very substantial OIIP figures (P90 36.8 MMbbl – P10 104.9 MMbbl); with the uncertainty of commercial production being primarily commercial (establishing commercial flowrates outside the existing reserve areas). The CPR assesses the gross unrisked contingent oil resources in Norio at 3.1 MMbbl (C1) and 7.2 MMbbl (C2). Chance of success is 75%.

<sup>23</sup> The West Rustavi net resources in the CPR are for a 75% working interest. Current ownership of this licence is 25%.

The Company’s approach to developing the contingent resources in Norio will be to execute the Phase 1 and Phase 2 programme in the existing reserve area and to utilise the information gained from petrophysical and production analysis in order to design a secondary development programme. Wells will be horizontally deviated in order to target fractures for increased production, although multilateral completions may be utilised.

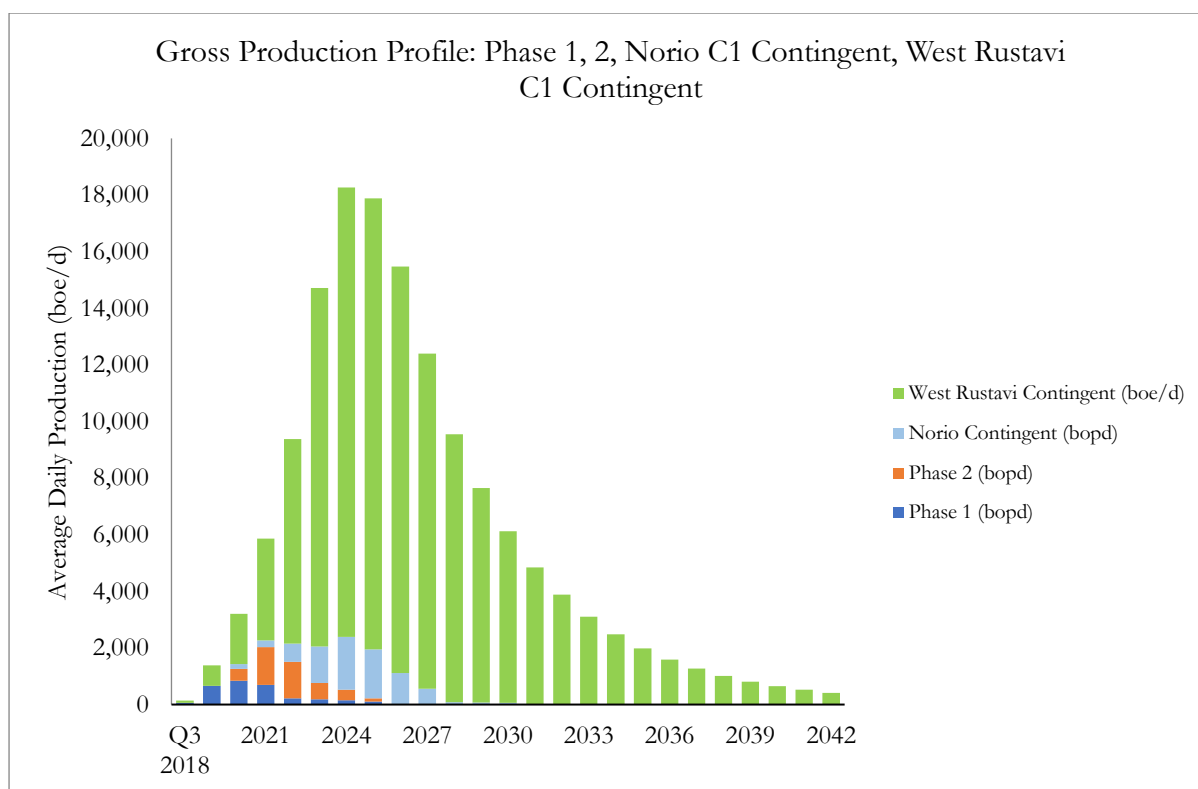
The Norio Phase 1 & Phase 2 (excluding corporate costs) generates an NPV of approximately USD 14.90/bbl (in line with the CPR figures). Applying this figure to the C1 and C2 gross unrisksed contingent resource figures seen in the CPR generates an estimated economic value of c. NPV 10 USD 31.2 MM (net C1) and NPV 10 USD 72.0 MM (net C2).

On a C1 basis, combined with the Phase 1 and Phase 2 production profile, a successful conversion of the Norio contingent oil resources would generate approximately the following profile:



*(Norio Phase 1 & Phase 2 Production Profile plus C1 Contingent Resource. Analyst Estimate)*

A combined production forecast (Phase 1, Phase 2, Norio Contingent Resources, West Rustavi Contingent Resources) has been prepared:



*(Gross Production for Phase 1, 2, Norio Contingent C1 and West Rustavi Contingent C1. Analyst Estimate. Note, West Rustavi is Gas Converted into Barrels of Oil Equivalent).*

Significant additional contingent resources in Satskhenisi have been identified in the CPR, however, the Company does not currently have plans to develop Satskhenisi (beyond the three Phase 1 workovers) and as such no analysis of the resources in Satskhenisi has been undertaken.

### Company Valuation

The Company's current market capitalisation is GBP 7.4 MM (share price GBP 0.028<sup>24</sup>).

The Company's assets provide the following share prices:

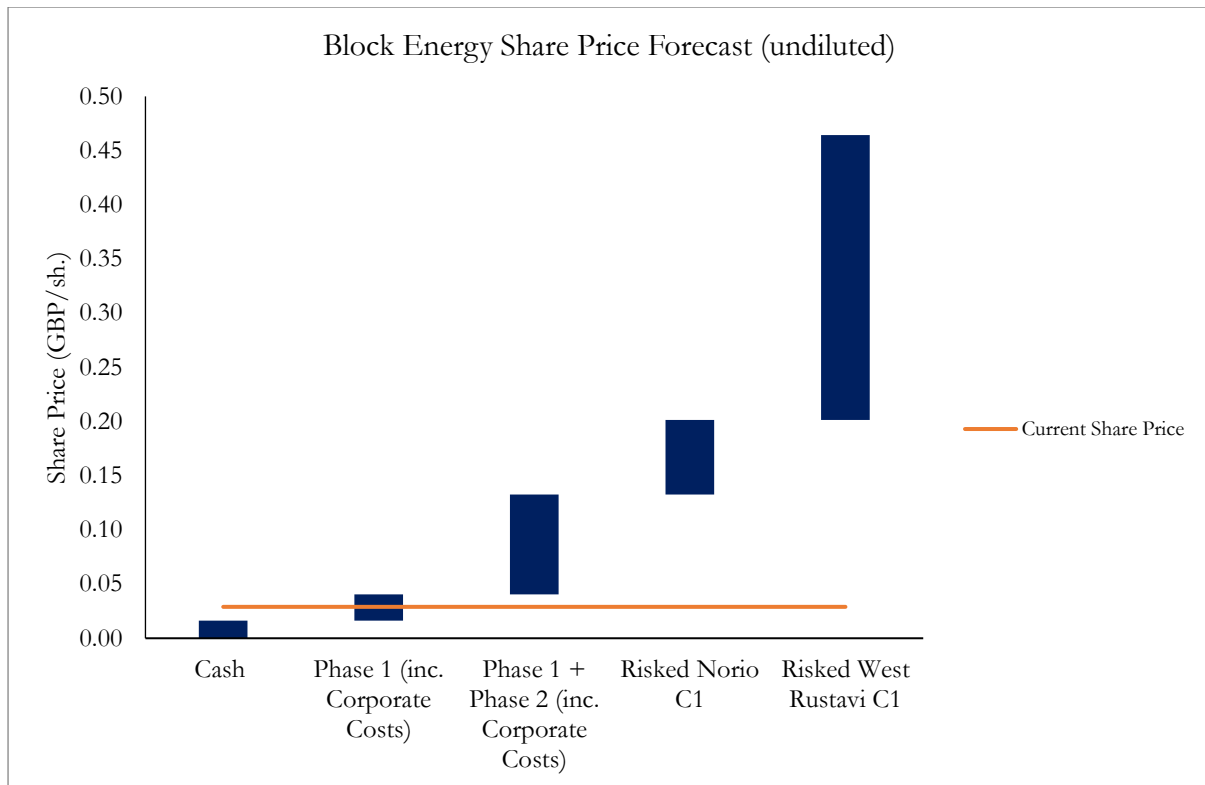
Asset	Undiluted Share Price <sup>25</sup> (GBP/sh.)	Fully Diluted Share Price <sup>26</sup> (GBP/sh.)
Cash <sup>27</sup>	0.016	0.015
Phase 1 (Including Corporate Costs)	0.024	0.022
Phase 1 + Phase 2 (Including Corporate Costs)	0.092	0.084
Norio C1 (Risky)	0.069	0.062
West Rustavi C1 (Risky)	0.26	0.24
<b>Total</b>	<b>0.46</b>	<b>0.42</b>
<b>Total (Implied Upside)</b>	<b>2,775%</b>	<b>2,700%</b>

<sup>24</sup> GBP/USD rate average October 2018 of 1.3029

<sup>25</sup> 259,047,601 shares in issue

<sup>26</sup> 285,265,549 fully diluted share capital

<sup>27</sup> Estimated at USD 5.5 MM



*(Waterfall Chart Illustrating per-share Estimated Value of Block's Existing Assets vs. Current Share Price. On an Undiluted Basis)*

Based upon this analysis, the Company is currently being valued at Cash + half of Phase 1 – estimated G&A. No value is being assigned for the Phase 2 reserves, nor the substantial near-term upside from Norio C1 resources of West Rustavi C1 resources.

Given that the Company has a fully-funded Phase 1 work programme and has secured rigs and equipment to execute this programme, and that it is estimated that the Phase 2 work programme will require no additional funding, the Company seems significantly undervalued. No value is being placed upon the C1 Norio and C1 West Rustavi hydrocarbon resources. This is despite the fact that the Company plans to re-enter and test West Rustavi in early 2019 as part of an initial appraisal programme and that Schlumberger is conducting drilling operations into analogous geology on nearby XI<sup>B</sup>.

A baseline downside of cash + Phase 1 should be considered as a conservative valuation for the Company prior to results from the Q4 work programme (first results expected December 2018). Average production from the initial well workovers should be c. 10 – 15 bopd per well to be in line with the CPR 1P reserve numbers. The initial West Rustavi gas well recompletion in Q1-Q2 2019 should see results of c. 0.5 MMCF/d – 1.0 MMCF/d in order to confirm the commerciality of the gas field. If the West Rustavi gas field can be proven through this recompletion (as well as the Schlumberger appraisal well on XI<sup>B</sup>), it should be expected that a significant re-rating will occur.

The high-impact sidetracks into the oil zones in Norio and West Rustavi, planned for Q1 - Q2 2019 should see flow rates of c. 150 – 350 bopd, but could, as on Ninotsminda, surprise significantly to the upside; converting resources into reserves.

Overall, the Company is currently trading below its P1 reserve value and the current share price represents an excellent entry point. With initial Phase 1 results expected in December 2018,

Schlumberger well results in late 2018 early 2019, West Rustavi gas recompletion in early 2019, and sidetracks in Norio and the West Rustavi oil zone in Q1 - Q2 2019, the Company offers substantial newsflow from a fully-funded work programme. Positive results, particularly from the West Rustavi recompletion/Schlumberger appraisal well, should see a very substantial re-rating of the share.

The news, announced in November 2018, that Exxon has agreed to enter Georgia to perform a regional geological study further validates the attractiveness of Georgia, confirming industry majors have interest in pursuing projects in the country. It is expected that there will be additional opportunity for Block as a result of Exxon's entry.

Unlike the majority of exploration companies, Block has acquired a portfolio of development assets which contain substantial resources which will be appraised and tested in tandem with the reserve development. This programme will allow shareholders to participate in relatively low-risk development projects whilst still being exposed to near-term upside from appraisal/exploration. The West Rustavi gas project in particular represents excellent upside, but substantial volumes of resources are also contained in Norio and Satskhenisi.

Overall, given the Company's fully-funded development programme, its independently audited reserves, substantial contingent resources and the benign fiscal and operating environment in Georgia, the Company is currently significantly undervalued.

## Company Valuation – Peers

The Company's market peer is Frontera Resources Corporation (AIM:FFR). Similar to Block, it is a pure-play Georgian upstream E&P company operating to the east of Block's assets, near the Azeri border.

Frontera Reserves	Nil
Block Reserves	1.46 MMbbl (audited, 2P)
Frontera Resources	1,089 MMboe (gross unrisks perspective)
Block Resources	141 MMboe (net unrisks contingent 2C)
Frontera Current Production	c. 160 boe/d
Block Current Production	c. 12 bopd
Frontera Debt	USD 35.5 MM debt (June 2018)
Block Debt	Nil
Frontera Cash	USD 0.63 MM (June 2018)
Block Cash	c. USD 4.5 MM (Analyst estimate)
Frontera Operating Profit (Loss) (Annualised) <sup>28</sup>	(USD 12.0 MM)
Block Operating Profit (Loss) (Annualised) <sup>29</sup>	(USD 1.1 MM)
Frontera G&A (Annualised) <sup>30</sup>	USD 6.6 MM
Block G&A (Annualised) <sup>31</sup>	USD 1.0 MM
Frontera Other	Significant legal issues with several parties
Block Other	None
<b>Frontera Market Capitalisation</b>	<b>GBP 63.0 MM</b>
<b>Block Market Capitalisation</b>	<b>GBP 7.8 MM</b>

From the above snapshot, Block Energy is very substantially undervalued as compared to Frontera. Whilst Frontera have slightly higher rates of production (c. 160 boe/d as compared to

<sup>28</sup> As of June 2018. On a cash basis. i.e. Revenue – Opex – G&A – Interest repayments. Excludes DD&A

<sup>29</sup> Analyst estimate. On a cash basis. i.e. Revenue – Opex – G&A. Excludes DD&A

<sup>30</sup> As of June 2018

<sup>31</sup> Analyst estimate

c. 12 bopd), the Phase 1 work programme should see Block exceed Frontera production rates by Q1 2019.

Frontera's substantial gross unrisks prospective resources provide excellent blue-sky upside, however, historical operational delivery has been poor and no reserves have been booked. Block's resource base is smaller but is proven geologically through historical well data. In addition, Block has independently audited PRMS<sup>32</sup> reserves with which to assess a base-line valuation of the assets.

Finally, Block has no debt as compared to USD 35.5 MM for Frontera and Block has no outstanding legal issues whereas Frontera are involved in multiple actions.

### Management Information

#### **Philip Dimmock - Non-Executive Chairman**

Philip spent a significant part of his career at BP in a wide variety of senior positions including manager of the Forties oil field, and UK Director of Ranger Oil where he also held the post of vice president of the international division, and served as chairman. Philip was a Non-Executive Director of Nautical Petroleum plc until its acquisition by Cairn Energy in 2012 and presently serves as a senior independent Non-Executive Director of Gulf Keystone Petroleum. Phil graduated from Oxford with a Masters of Art.

#### **Paul Haywood – Chief Executive Officer**

Paul has over 15 years' experience in operational and investment management for a diverse range of private, corporate & institutional clients throughout Europe, Asia and the Middle East. Paul has spent over 8 years in the Georgian oil and gas sector, and has been instrumental in the acquisition, development and sale of multiple assets in country. Paul is currently a Non-Executive Director of Oilex Petroleum Plc and resource focussed advisory firm, Plutus strategies.

#### **Roger McMechan – Technical Director**

35+ years diverse experience in executive and operational roles managing domestic and international oil and gas operations for Petro Canada, Burlington Resources, Winstar Resources and Iskander Energy. Operational experiences include: drilling and completions; production; 2D and 3D seismic; contract negotiations and new country start-up. In addition to Canada, country specific experience includes Algeria, Tunisia, Georgia, Ukraine, Bulgaria, Hungary, Romania and Poland where he has designed and implemented drilling, seismic, completions, new oil/gas production facilities and workover operations working directly with local partners and state regulatory agencies. Roger has a BSc in Mechanical Engineering from University of Waterloo, Canada and is a member of the Association of Professional Engineers and Geoscientists of Alberta, Canada.

#### **Niall Tomlinson – Executive Director**

Niall Tomlinson is an experienced geologist with over ten years' experience across a number of commodities. Previously he was a director of Taoudeni Resources Ltd, which was acquired by Goldcrest, Technical Manager for Alecto Minerals plc and a senior geologist with consultants SRK Exploration and mining major Rio Tinto. Niall holds an MSc in Metals & Energy Finance from Imperial College London, an MSc in Mining Geology from Camborne School of Mines and is a Chartered Geologist of the Geological Society of London.

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<sup>32</sup> Petroleum Resources Management System

**Serina Bierer – Finance Director**

Following graduation with an MSci in Geological Sciences from Imperial college, Serina qualified as a chartered accountant in 2007 with BDO LLP. Her time here saw her work extensively on Middle Eastern Due diligence projects as part of the natural resources team. For over 10 years Serina has specialised in the AIM and ASX upstream oil and gas industry, and prior to joining Block Energy Plc, was Head of Finance at Falkland Oil and Gas Ltd.

**Chris Brown - Non-Executive Director**

Chris Brown has nearly 40 years' experience across the international upstream oil and gas sector. Educated at Exeter University, Imperial College and the INSEAD Management School, he is a founding director of MontBlanc Oil & Gas and Beagle Geoscience, which provide consultancy and management services for the exploration and production sector. During his career Chris has led oil and gas operations in the UK, Europe, North Africa and South America, and has managed seismic and well operations encompassing deep water, shelf, desert, mountain, urban and jungle terrain. He is a regular speaker and presenter at industry conferences.

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