

# SDX Energy

Company update

## Looking ahead at 2019 work programme

In this note, we revisit SDX's 2017/2018 gas discoveries in Morocco and Egypt and look ahead at the company's plans to leverage this success to deepen its resource base. In 2019, drilling in Egypt will focus on several Ibn Yunus lookalikes with combined unrisked recoverable volume of c 70bcf and a 17bcf Abu Madi structural trap. In addition, SDX will target a 50mmbo unrisked oil prospect in 2019. In Morocco, SDX has a commendable 87% success rate of discovering gas at Sebou based on calibrated 3D seismic; 2019 targets include 20bcf of gross unrisked resource adding gas-behind-pipe in order to meet anticipated demand growth. Our updated valuation includes planned exploration, appraisal and development activity for 2019 and higher short-term oil price expectations, with valuation rising from 65.6p/share to 92.5p/share (+41%).

Year end	Revenue (\$m)	PBT* (\$m)	Operating cash flow (\$m)	Net cash (\$m)	Capex (\$m)
12/16	12.9	(26.7)	(1.9)	4.7	(11.9)
12/17	39.2	32.8	21.6	25.8	(24.9)
12/18e	54.5	25.6	38.0	32.0	(33.3)
12/19e	81.8	47.0	58.6	68.9	(23.8)

Note: \*PBT is normalised, excluding amortisation of acquired intangibles, and share-based payments. Includes Circle acquisition (\$28.1m).

## Leveraging Egypt and Morocco drilling success

Planned 3D seismic shoots in both Egypt and Morocco aim to leverage recent exploration success and mature an inventory of low-risk, drill-ready gas exploration/appraisal prospects that can be promptly monetised. Planned 2019 wells target 87bcf of unrisked gas resource (70bcf Kefr El Sheik and 17bcf Abu Madi prospects), a 50mmbo unrisked oil prospect at South Disouq and 20bcf in Morocco. Low well costs and historical success rates imply high risked IRRs, in particular for Sebou where success rates on calibrated 3D seismic exceed 87%, well costs are c \$2m and unit net-backs surpass \$10/mcf.

## Testing deeper oil potential

SDX believes there is oil potential at South Disouq in Egypt, which is to be tested through drilling the four-way dip, 50mmbo unrisked Young prospect in 2019. Three offset wells have encountered oil shows in Jurassic reservoir that is a prolific oil producer in the Western Desert. Similarly, in the Rharb Basin in Morocco, a thermogenic gas suggests the presence of a liquid-rich source, which could fill mapped sands below the Pre-Rif Nappe that act as a regional seal. Imaging below the Nappe is problematic and potential leads are likely to be identified on SDX's new 3D data across the Gharb Centre.

#### Valuation: Reflects discoveries and 2019 wells

Our updated valuation reflects the movement of prospective resource to core value to reflect recent discoveries and the inclusion of SDX's 2019 drilling programme. Our RENAV rises from 65.6p/share to 92.5p/share (+41%) and core value from 58.3p/share to 79.8p/share (+36%).

3 July 2018

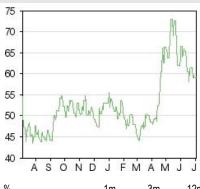
TSX Venture

Oil & gas

Price	<b>59</b> p
Market cap	£121m
	US\$/£0.74
Net cash (\$m) at 31 March 2018	29.3
Shares in issue	204.5m
Free float	86%
Code	SDX
Primary exchange	AIM

#### Share price performance

Secondary exchange



%	1m	3m	12m
Abs	(11.3)	21.7	14.0
Rel (local)	(9.5)	14.0	10.6
52-week high/low		73.0p	43.5p

#### **Business description**

SDX Energy is a North African E&P listed in London and Toronto. It has oil and gas production in Egypt and Moroccan gas production.

Next events	
SD-3X1 well result	Q318
Q2 results	August 2018

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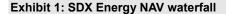
## **Investment summary**

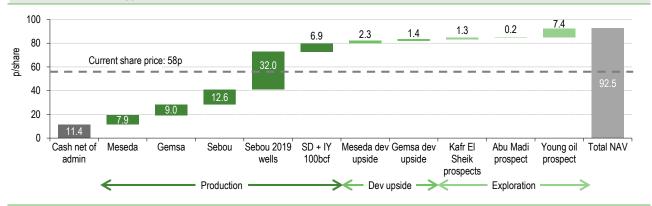
### North African producer

SDX Energy is a North Africa-focused exploration and production company, listed on AIM and TSX Venture. Management has grown the company inorganically, through the 2017 acquisition of Circle Oil's Moroccan assets and organically through an extensive E&A programme over the past 18 months.

### RENAV including 2019 well programme 92.5p/share

We value SDX based on the NPV12.5 of the company's producing assets and risked value of contingent and prospective resource. Recent changes in our valuation include the movement of discovered resource to core value to reflect 2017/2018 discoveries made in Egypt and Morocco, the inclusion of risked value for planned 2019 wells and a higher short-term oil price assumption. We assume realised gas prices of \$2.65/mcf at South Disouq and \$10.5/mcf in Morocco, with a long-term oil price of \$70/bbl Brent. Our short-term oil price assumptions are based on EIA forecasts at \$71.1/bbl in 2018 and \$67.7/bbl in 2019. A breakdown of our RENAV is provided in Exhibit 1.





Source: Edison Investment Research

### Financials: Funded exploration and development

SDX maintains a strong balance sheet with net cash at 31 March 2018 at \$29.3m and no debt. 2019's well programme and immediate development plans are fully funded from cash and cash flow, and we believe SDX's assets have the capacity to attract debt to fund inorganic growth.

### Risks and sensitivities: Geopolitical

SDX Energy is exposed to generic sector uncertainties, such as volatile underlying commodity prices and currency movements; however, fixed price, long-term gas contracts provide an element of certainty to cash flow forecasts. Subsurface risks relate to SDX's ability to recover gas and oil volumes in-line with mid-case management/audited estimates. We view key risks as geopolitical, with the company's assets concentrated in North Africa. Nevertheless, we note that Egypt is a mature hydrocarbon province and both Morocco and Egypt have relatively stable energy ministries and supportive fiscal regimes.



## Company description: North Africa consolidation

SDX Energy continues to grow its production and reserve base across Egypt and Morocco, and on our forecasts is well placed to achieve net production of 10kboed in 2019. Management has successfully acquired and organically added to its resources over the past two years, creating value for shareholders. Over this period, our RENAV has grown from 70.0p/share in July 2016 to 92.5p/share today. Material organic growth potential remains, which we expect to be unlocked through further drilling activity and with the prospective resource portfolio augmented by two extensive 3D seismic shoots.

### **Upcoming work programmes**

Planned development and E&A activity focuses on South Disouq (Egypt) and the Rharb Basin (Morocco). Key elements of SDX's budgeted work programme include the development of South Disouq (c \$15m net); six Egypt explorations wells including the Young oil prospect (c \$8.5m net); a 3D survey in South Disouq (\$3.5m net); a 12-well exploration programme (c \$24m payable by SDX during 2019/2020) in Morocco; Lalla Mimouna tie-in (\$4.5m payable by SDX in 2019/2020); and a Gharb Centre 3D survey (\$6.5m payable by SDX). SDX has more than sufficient cash and cash flow to fund this work programme and, we believe, will be generating significant excess free cash flow beyond 2018 based on current production forecasts.

### Production growth – target 30-40kboed

SDX's current production stands at just over 3kboed split across North West Gemsa (1.81kboed), Meseda (0.56kboed) and Morocco (0.66kboed). South Disouq should provide a step-up in group production in late 2018, and SDX remains on track to deliver a target exit rate of 8–10mmscfd (1.3–1.6kboed) in Morocco, which we believe should take group production to c 10kboed in 2019. Longer term, management has an ambition to grow output to c 30-40boed through a combination of organic investment and asset consolidation with the company's core geographies (North Africa).

#### Experienced operational and management team

SDX Energy is led by an experienced senior leadership team and industry professionals with basin specific knowledge. Lessons learnt from prior drilling campaigns and the use of leading service companies facilitated a safe and successful 2017/2018 drilling programme and we expect in-house expertise to aid in further drilling campaigns, as well as in the identification of acquisition opportunities. CEO Paul Welch has over 25 years' industry experience and has held positions at Shell, Hunt Oil, Pioneer Natural Resources, and most recently he was CEO of AIM-listed explorer Chariot Oil and Gas. CFO Mark Reid has over 20 years' experience in numerous sectors, including financial services, investment banking and oil & gas. He has had significant exposure to M&A transactions and the equity and debt capital markets. Most recently, between 2009 and 2015 he was finance director at AIM-listed Aurelian and Chariot.



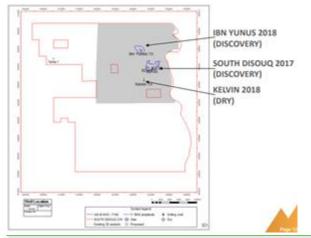
## Egypt - South Disouq

SDX Energy's recent exploration and appraisal success at South Disouq provides visibility of a combined c 100bcf (mid-case) development including the SD-1X and Ibn Yunus-1X discoveries. We take a look at recent drilling success, potential regional resource upside, upcoming exploration plans and development plans for South Disouq below.

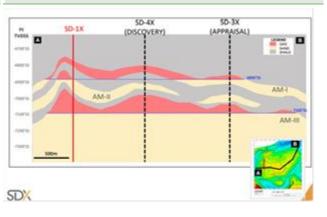
## 2017/2018 drilling campaign review

On the back of 2017 exploration success at South Disouq, SDX has taken a fast-track approach to appraising the discovery, adding additional resource through near-field exploration and engineering a modular development plan that is expected to deliver first gas in late 2018.

Exhibit 2: 2017/2018 drilling locations



**Exhibit 3: South Disouq West East cross section** 



Source: SDX Energy

Source: SDX Energy

The initial SD-1X discovery was made in 2017 and encountered a c 750ft (230m) section of Abu Madi sands. The upper gas-bearing sands were the poorest quality seen across the section (although still averaging 20% porosity) and corresponded to the thinnest seismic reflectors. The company believed that the sands could be of better quality away from the SD-1X location and this was confirmed with the drilling of SD-4X to the east of the discovery well, which found thicker sands with an average porosity of 24%. The SD-4X appraisal well also helped prove a common gas water contact with SD-1X at two distinct reservoir levels across the four-way dip bounded structure. A second and final 2018 appraisal well, SD-3X, is due to be drilled shortly following the completion of operations at SD-4X.

Exhibit 4: Egypt 2017/2018 drilling campaign							
Permit	Well	Result	Net pay	Rate			
South Disouq	SD-1X	Natural gas discovery	25m	25.8mmscfd			
South Disouq	Ibn Yunus-1	Natural gas discovery	31m	39.3mmscfd			
South Disouq	Kelvin-1	Not commercial	-	-			
South Disouq	SD-4X	Natural gas discovery	27m	Not yet tested			
South Ramadan	SRM-3	Spud	tbc	tbc			
South Disouq	SD-3X	tbc	tbc	tbc			
Source: SDX Energy, Edison Investment Research							

In addition to appraising the original SD-1X structure, SDX also drilled two exploration wells: Kelvin-1X, to the southwest and updip of SD-1X, and Ibn Yunus-1X to the northwest. Kelvin-1X was targeting a stratigraphic trap that the company believed could be connected to SD-1X, but while thick, good quality Abu Madi sands were encountered, demonstrating their lateral continuity, they were found to be water-bearing. SDX believes that the stratigraphic trap was breached at this location and further work is being carried out in order to recognise the false positives as seen in

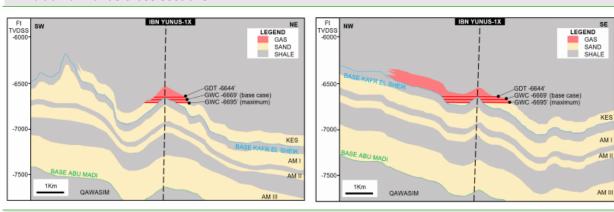


Kelvin-1X. The potential for stratigraphic traps in the Abu Madi remains, but in addition to identifying sand, the company will now work to discriminate between gas and water.

### New play type discovered

The Ibn Yunus exploration well discovered a new play type with over 100ft of net reservoir sand in the Kafr El Sheik sand, sitting above the Abu Madi sands. The structural/stratigraphic feature demonstrated a strong acoustic impedance response easily identified on 3D seismic. Ibn Yunus-1X was tested at 39.3mmscfd gas and 12bbl/mmscf of condensate with pressure data indicating a connected volume in excess of that suggested by the gas down to (GDT). SDX's mean recoverable volume of 52bcf for Ibn Yunus-1 is based on a modelled sand pinch-out to the northwest and gas water contact below the measured GDT; however, if the Ibn Yunus-2 development well planned for 2020/21 confirms gas pay to the northwest, we believe that estimates of mean volume have potential to increase materially (SDX estimates a P10 of c 113bcf).

**Exhibit 5: Ibn Yunus cross sections** 

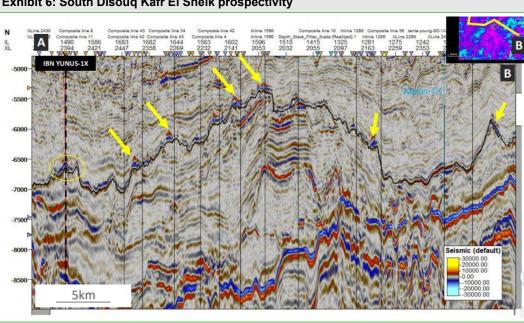


Source: SDX Energy

### 2019 exploration targets

The focus of SDX's follow-on drilling campaign will be on the Ibn Yunus lookalike prospects, stratigraphic features that are identifiable as amplitude highs on 3D seismic. Mean prospective resource attributable to four drill-ready base Kafr El Sheik prospects is estimated at 70bcf unrisked. As shown in Exhibit 6, amplitude highs indicative of reservoir pay in stratigraphic traps are readily visible on 3D seismic above the Kafr El Sheik, shown as a dark black line (Exhibit 6).

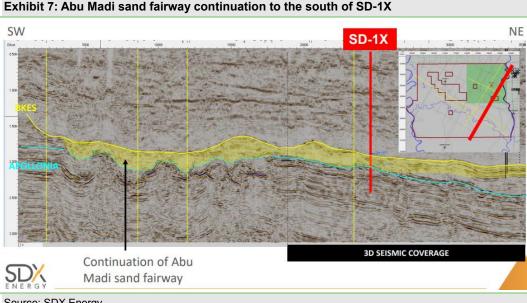




**Exhibit 6: South Disouq Kafr El Sheik prospectivity** 

Source: SDX Energy

In addition to the four Kafr El Sheik prospects, the company has identified another SD-1X analogue; a four-way dip closure with estimated mean recoverable volume of 17bcf. Edison's valuation has been updated to include these five drill-ready prospects, but does not include potential incremental upside, which management estimates at over 1tcf. Further prospects are likely to be worked up as SDX acquires and processes a 170km2 3D seismic survey on acreage to the south of SD-1X that is due to commence in Q418. Current 2D data provide clear indication of an extension of the Abu Madi sand fairway to the south of SD-1X, as shown in Exhibit 7 below.



Source: SDX Energy

#### South Disoug oil potential

Encouragement for further oil potential can be found in the producing oil fields in the Western Desert, 100km to the west, together with oil shows in four offset wells close to South Disouq. The prolific Western Desert Bahariya and Kharita reservoir sands were encountered at the SD-1X well location; the unlogged Kharita sands showed elevated gas readings, potentially indicating a sign of

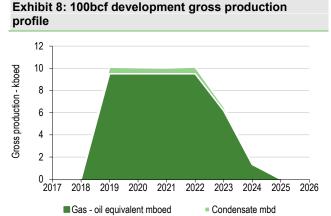


thermogenic source. Vitrinite reflectance analysis suggests that the Jurassic source rock at South Disouq is present in the oil window and SDX has identified a four-way dip structure with multiple mapped reservoir intervals in order to test the basin for liquids potential. The 50mmbo mean unrisked (four reservoir intervals) Young prospect is expected to be drilled in 2019 – we include Young with a 25% geological chance of success in our valuation (risked value of 7.4p/share). The key risks to oil prospectivity at South Disouq are migration and charge.

### South Disouq development plans

The development of discovered resource at South Disouq is relatively straightforward given gas quality, relatively low cost wells and access to state-owned gas export infrastructure. The only downside is realisable gas prices, which are state-controlled and as per company guidance modelled at \$2.65/mcf. Despite the relatively low absolute price, management estimates the threshold for commerciality for a gas development to be c 5bcf.

SDX's planned development for SD-1X and Ibn Yunus based on a combined recoverable volume of 100bcf is expected to cost gross c \$25m (excluding sunk exploration), or \$0.25/mcf based on a modularised central process unit and pipeline connection to existing mid-stream gas infrastructure. Our modelled South Disouq development makes up c 9% of our core valuation at 6.9p/share.



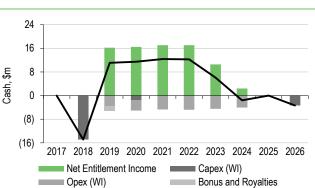


Exhibit 9: 100bcf development net cash flow profile

Source: Edison Investment Research

Source: Edison Investment Research

Cash flow post tax

### Morocco - Sebou and Lalla Mimouna

SDX's nine-well exploration and appraisal programme at Sebou was a success story, with an 87% discovery rate based on calibrated 3D seismic. Management is confident of a highly repeatable appraisal/development plan in order to secure further gas resource. SDX expects to reach an exit gas sales rate of over 8mmscfd in 2018, with further growth driven by the addition of new customers to the Kenitra gas pipeline network. We take a look at recent exploration success, future appraisal well locations and gas sales growth potential below.

#### 2017/2018 exploration review

SDX Energy's ability to locate gas-bearing sands on calibrated 3D seismic has substantially derisked its capacity to supply current contracted gas volumes as well as future demand growth. Anomalies mapped on 3D seismic with strong negative amplitudes have been proven to be gas-filled sands and careful mapping of prospects and locating wells close to areas of maximum amplitude has reduced the risk of locating uncommercial gas saturations/volumes. Typical Sebou discovery volumes per prospect are 0.8–1bcf; small, but at a well cost of c \$2m and a realised gas



price of c \$10/mcf offer attractive returns. Management estimates a minimum economic volume threshold at 0.3-0.5bcf per well, depending on tie-in distance.

Permit	Well	Result	Net pay	Rate
		11000110		
Sebou	KSR-14	Natural gas discovery	20.0m	6.40mmscfd
Sebou	KSR-15	Natural gas discovery	17.2m	7.52mmscfd
Sebou	KSR-16	Natural gas discovery	14.2m	8.43mmscfd
Gharb Centre	ELQ-1	Not commercial	2.0m	Not tested
Sebou	ONZ-7	Natural gas discovery	5.0m	15.34mmscfd
Sebou	KSS-2	Dry hole	-	-
Sebou	SAH-2	Natural gas discovery	5.2m	13.45mmscfd
Lalla Mimouna	LNB-1	Natural gas discovery	2.6m C1 + 300m thermogenic gas shows	Not yet tested
Lalla Mimouna	LMS-1	Natural gas discovery	16.4m	Test to be repeated

Prospects on the Lalla Mimouna licence to the north of Sebou offer greater materiality. The 2018 LNB-1 gas discovery discovered over 300m of biogenic and thermogenic gas intervals in a channel structure and is estimated to hold an unrisked mid-case volume of 10.2bcf and 55,000bbl of condensate. This was followed by a gas discovery at LMS-1, which discovered a smaller sand package in an over-pressured section and, as in LNB-1, heavy gas shows indicate the potential for a deeper thermogenic source. Over-pressure at both Lalla Mimouna well locations meant that well testing was compromised, with LMS-1 suffering from formation damage due to the heavy mudweights required to drill into the over-pressured reservoir. SDX expects to return to Lalla Mimouna in order to re-drill (using a modified well design) or side-track the existing well locations in order to prove up gas deliverability.

**Exhibit 11: Example Sebou prospect** 

Source: SDX Energy

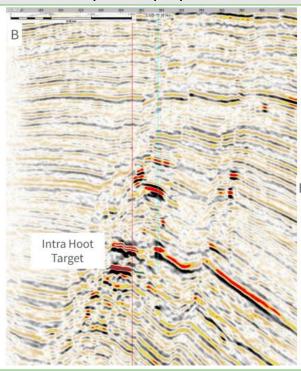
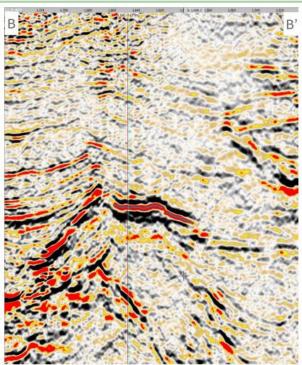


Exhibit 12: Example Lalla Mimouna area lead



Source: SDX Energy

### 2019 exploration programme

More than 60 leads have been identified across the basin, targeting unrisked potential in excess of 60bcf. The majority of these leads will be de-risked by existing or upcoming 3D seismic data coverage. A 240km2 3D seismic survey (named the Guebbas 3D) is planned across the Gharb



basin and is due to commence in July 2018, with first data expected to be delivered in October 2018. Should this dataset highlight better targets, up to three wells from the 12-well 2019 drilling campaign could be drilled across the area covered by this upcoming survey (these wells will be drilled towards the end of the campaign to ensure sufficient time for seismic interpretation).

We include 12 drill-ready prospects in our valuation, targeting 20bcf of mid-case unrisked resource. We view the Sebou/Gharb centre wells as appraisal/development wells, given the company's ability to locate gas-bearing sands on calibrated 3D seismic with more than an 80% chance of success. We include this upcoming, 12-well programme and the yet-to-be-tested Lalla Mimouna discoveries in our core value, albeit with an 80% chance of success to reflect the potential for the discovery of some sand packages that fall below the minimum economic threshold for commerciality.

The discovery of thermogenic gas at Lalla Mimouna provides further confidence that deeper oil or gas potential exists within the pre-Nappe. Existing oil discoveries in the onshore Rharb Basin are small and of poor quality in the carbonate/fractured basement reservoir, but SDX would be targeting larger prospects in the Jurassic/Miocene sandstones below the Nappe. Exploration of deeper potential remains at an early stage and is not included in our valuation at this point in time.

### Gas market development and demand expectations

SDX's current gas production in Morocco matches the requirements of its current customer base, with existing producing wells being choked back to match demand and to ensure prudent reservoir management.

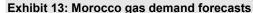
SDX's current gas customer base is dominated by two large customers: Super Cerame, and CMCP, which combined are forecast to consume approximately 6mmscfd of natural gas. Incremental demand is set to come from Peugeot (located within the AFZ), GPC an affiliate of Super Cerame and smaller offtakers with the potential for a significant step-up in demand if SDX were to enter the power-generation market and supply the Kenitra-based, state-owned ONEE power plant.

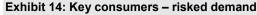
We base our market demand forecasts on company analysis of identified natural gas customers and SDX's connection goals for 2018. Combined, these act as the basis for the company's 2018 Moroccan sales guidance of an 8–10mmscfd exit rate. Demand analysis suggests that piped gas sales have the potential to increase dramatically over the next two to three years.

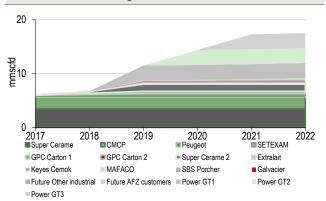
We see risk around this step-up in gas demand, as it is unlikely that every identified customer would necessarily switch to gas, while some may already have existing long-term fuel supply arrangements. In addition, negotiating with large-scale state-owned entities adds additional risks and complexity. We have risked SDX's projected market demand forecasts using a simplistic approach applying a 90% chance of success for existing customer Super Cerame's second plant, a 50% chance of success for new thermal customers and a 20% chance of success for power plant consumers. Our risked demand profile is shown in Exhibit 14, which implies a 2018 exit rate of just over 6mmscfd, growing to 17.8mmscfd over the medium term.

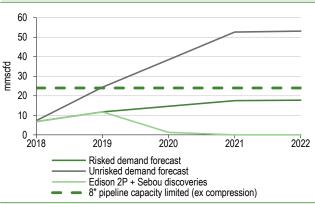
We constrain our valuation of SDX's Moroccan booked gas reserves and contingent resource by our expectations of market demand with inclusion of the risk factors mentioned above.









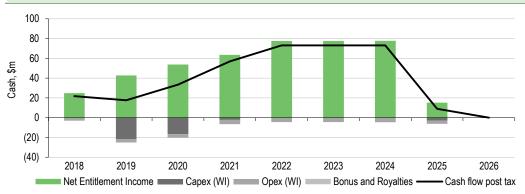


Source: Edison Investment Research, SDX Energy

Source: Edison Investment Research, SDX Energy

Our modelled Rharb Basin (Sebou and Lalla Mimouna) gross cash flow profile is shown in Exhibit 15 below. Management expects operating costs to be largely fixed, with the asset showing significant operational leverage as production rates increase.

Exhibit 15: Rharb Basin net cash flow profile\*



Source: Edison Investment Research. Note: \*includes resource from 2019 12-well programme

## Valuation - includes 2019 exploration programme

Our updated valuation includes a 100bcf gas development at South Disouq and drill-ready gas prospects targeting 87bcf of mean unrisked prospective resource. We also include the Young oil prospect, drilling for which is planned in 2019. In Morocco, we include our estimates of current discovered resource (following the 2017/2018 E&A programme – excluding Lalla Mimouna until well tested). We also include Lalla Mimouna discoveries and 12 planned 2019 appraisal/development wells in our core valuation, as risks are only around individual wells meeting the minimum threshold for commerciality – we include these at a 75% chance of success.

Other key changes include an increase in our short-term oil price assumptions, which move to \$71.1/bbl and \$67.7/bbl for 2018 and 2019, respectively. Our long-term oil price assumption remains at \$70/bbl Brent (2022).

As a result, our RENAV rises from 65.6p/share to 92.5p/share (+41%), with our core value standing at 79.8p/share. We note that our valuation has a significant core value component at 86% of our RENAV.

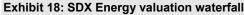


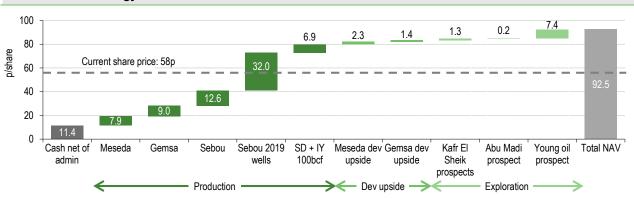
Exhibit 16: Changes to our valuation									
	Old (p/share)	New (p/share)	Change (%)	Comment					
Core NAV	58.3	79.8	37%	Includes 100bcf Egypt gas development and development wells at Sebou					
Development NAV	2.1	3.7	75%	Higher short-term oil price LT remains \$70/bbl Brent					
Exploration risked upside	5.2	9.0	73%	Egypt gas discoveries move in to core; includes drill-ready 2019 prospects					
Group RENAV	65.6	92.5	41%						
Source: Edison Investment Research									

A full breakdown of our risked valuation is provided in the table below. We split our valuation between core value, which includes booked 2P reserves, recent discoveries and low risk development upside in Morocco. We include risked development upside at Meseda and Gemsa and risked exploration potential at South Disouq in our risked exploration NAV (RENAV).

Number of shares: 204.5m				Recoverable reserves			Net risked value			
Asset	Country	Diluted WI	CoS	Gross	Net WI	Net	NPV	Absolute	GBp/ share	C\$/ share
		%	%	mmboe	mmboe	mmboe	\$/boe	\$m	12.5%	
Net (debt) cash – December 2017e		100%	100%					25.8	9.3	0.2
SG&A - NPV12.5 of 3 years		100%	100%					(11.9)	(4.3)	(0.1)
E&A expense for exploration prospects		100%	100%					(18.5)	(6.7)	(0.1)
NPV of net receivable recovery		100%	100%					19.9	7.2	0.1
Sebou pipeline residual value (50% cost)		100%	100%					16.4	5.9	0.1
Production										
Meseda base + workovers + Rabul	Egypt	50%	90%	9.9	4.9	1.9	4.9	22.0	7.9	0.1
Gemsa 2P	Egypt	50%	100%	4.5	2.3	2.3	11.1	24.9	9.0	0.2
Sebou 2P volumes + discoveries to be booked	Morocco	75%	100%	1.2	0.9	0.9	38.5	34.9	12.6	0.2
Sebou 12-well 2019 programme	Morocco	75%	75%	5.3	4.0	4.0	29.6	88.8	32.0	0.6
South Disouq / Ibn Yunus	Egypt	55%	100%	17.6	9.7	9.7	2.0	19.3	6.9	0.1
Core NAV				38.5	21.8	18.7	8.7	221.7	79.8	1.4
Development upside										
Meseda Waterflood upside	Egypt	50%	50%	6.3	3.1	1.2	4.1	6.4	2.3	0.0
Gemsa – Edison modelling on full field	Egypt	50%	75%	0.9	0.5	0.5	10.9	3.8	1.4	0.0
Exploration (known)										
Kafr El Sheik prospects	Egypt	55%	36%	11.7	6.4	6.4	1.6	3.7	1.3	0.0
Abu Madi prospect	Egypt	55%	27%	2.8	1.6	1.6	1.6	0.7	0.2	0.0
Young oil prospect	Egypt	55%	19%	50.0	27.5	27.5	4.0	20.6	7.4	0.1
Group RENAV				110.2	60.9	55.9		256.9	92.5	1.6

The waterfall diagram below shows our valuation relative to the current share price.





Source: Edison Investment Research



## **Management**

**Non-executive chairman: Michael Doyle** is a professional geophysicist with more than 35 years' industry experience and was a founding director and chairman of Madison PetroGas from its inception in 2003. Mr Doyle is a principal of privately held CanPetro International. Mr Doyle was previously a principal and chief executive officer of Petrel Robertson, where he was responsible for providing advice and project management to clients throughout the world. Prior to that, he held a variety of exploration positions at Dome Petroleum and Amoco Canada.

**CEO:** Paul Welch has over 25 years' industry experience and has held positions at Shell, Hunt Oil, Pioneer Natural Resources, and most recently he was CEO of AIM-listed explorer Chariot Oil and Gas. Mr Welch graduated from the Colorado School of Mines with a master's degree in Petroleum Engineering. He also holds an MBA in Finance from the Southern Methodist University in Dallas.

**CFO: Mark Reid** has over 20 years' experience in numerous sectors including financial services, investment banking and oil & gas. He has had significant exposure to M&A transactions and the equity and debt capital markets. Most recently, between 2009 and 2015 he was finance director at AIM-listed Aurelian and Chariot. Prior to this, he worked at BNP Paribas Fortis and Ernst & Young Corporate Finance advising on M&A, IPO and other fund-raising transactions. Mr Reid has an MBA and is a member of the Institute of Chartered Accountants of Scotland.

Country manager – Egypt: Albert Gress has over 30 years' experience, primarily in the oil & gas industry, having recently been VP business development for TransGlobe Energy after running TransGlobe's Egyptian Operations. Previously, Mr Gress led Egyptian operations for Cepsa and Devon Energy subsequent to starting his upstream career with Apache in Egypt. He has considerable experience in acquiring oil & gas assets in Egypt. Mr Gress is certified as a public accountant, having spent 10 years with PwC, mostly serving energy clients, in the US and the Middle East, after graduating from a private university in Buffalo, NY.

**Country manager – Morocco: Lonny Baumgardner** has over 25 years' experience in oil & gas. His career commenced as a drilling engineer in Canada. Mr Baumgardner started his international experience in Saudi Arabia, and has since worked in Tanzania, Greece, Australia and Egypt. Mr Baumgardner has a broad spectrum of technical, operational and general management experience.

#### Risks and sensitivities

#### Company specific risks and sensitivities

- North Africa SDX's assets are concentrated in North Africa, and while Morocco and Egypt have mature hydrocarbon sectors and stable fiscal regimes, changes in leadership can drive uncertainty.
- Egyptian receivables SDX continues to reduce its Egyptian receivables and does not seem
  to have issues in collecting payments, possibly because it is prepared to accept Egyptian
  pounds (rather than US\$).
- Partner risk SDX is reliant on its Egyptian partner supporting technical work programmes and development plans such that cash calls are met. SDX's partner has been supportive of late and, assuming future development plans deliver a strong risked return on investment, we expect this support to continue.



#### Generic sector risks and sensitivities

- Commodity price volatility; SDX has exposure to long-term fixed price gas price contracts that somewhat mitigate this risk.
- Geological risk and uncertainty and reservoir performance uncertainty.
- Recent studies on project execution in the upstream oil and gas sector suggest that up to 60% of projects incur delays and capex overruns versus FID expectations.
- Small-/mid-cap availability of funding.
- Financials annual earning forecasts can fluctuate significantly depend on the timing and execution of key projects. Our NAV-based valuation incorporates cash flows over field life, such that project execution delays that may have a significant impact on earnings during a short-term forecast period have much less of an impact on group valuation.

#### **Financials**

Based on current forecasts of production and capex, SDX is highly FCF-generative – largely driven by high-margin production growth in Morocco but also from the development of South Disouq. Meanwhile, Egyptian oil assets are benefiting from relatively high oil prices in the short term.

SDX remains debt-free, and current forecasts of cash movements suggest significant capacity to increase the pace of investment, pursue value accretive transactions and/or return cash to shareholders.

80 60 40 20 -20 -40 2018 2019 2020 2021 2022 2023

Capex (in PPE)

FCF (CFO - Capex)

Exhibit 19: Significant FCF generation based on current capex forecasts

Source: Edison Investment Research

■ CFO



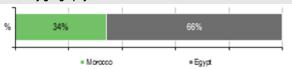
Accounts: IFRS, Yr end: December, USD: Thousands	2014	2015	2016	2017	2018e	2019e	2020
Total revenues	24,533	11,372	12,914	39,166	54,462	81,785	82,15
Cost of sales	(3,639)	(4,973)	(5,282)	(10,254)	(12,209)	(16,260)	(14,33
Gross profit	20,894	6,399	7,632	28,912	42,253	65,524	67,81
SG&A (expenses)	(1,768)	(3,746)	(2,457)	(7,771)	(4,072)	(3,616)	(4,328
Other income/(expense)	0	(3)	479	798	0	0	
Exceptional and adjustments	(3,831)	(7,676)	(29,089)	(725)	(1,000)	(1,000)	(1,000
Depreciation and amortisation	(1,602)	(2,057)	(3,266)	(17,824)	(11,546)	(13,907)	(13,15
Reported EBIT	13,693	(7,083)	(26,701)	3,390	25,635	47,002	49,33
Finance income/(expense)	(1,009)	(96)	4	(129)	0	0	
Other income/(expense)	0	18,289	0	29,558	0	0	
Exceptional and adjustments	0	0	0	0	0	0	
Reported PBT	12,684	11,110	(26,697)	32,819	25,635	47,002	49,33
Income tax expense (includes exceptional)	(4,328)	(1,063)	(1,503)	(4,541)	(1,420)	(2,033)	(1,93
Reported net income	8,356	10,047	(28,200)	28,278	24,214	44,968	47,40
Shares at end of period - basic	376	38	80	204	204	204	20
	***						
Balance sheet							
Property, plant and equipment	9,392	18,401	12,605	54,445	71,135	77,412	77,13
Goodwill	0,002	0	0	0 1,110	0	0	,.
Intangible assets	16,460	23,473	10,623	15,231	20,288	23,904	26,2
Other non-current assets	1,999	2,106	2,503	2,724	2,724	2,724	2,7
Total non-current assets	27,851	43,980	25,731	72,400	94,147	104,040	106,0
Cash and equivalents	17,935	8,170	4,725	25,844	31,967	68,916	118,5
Inventories	0	1,188	1,698	5,157	6,140	8,178	7,2
Trade and other receivables	3,306	6,678	9,463	37,656	30,125	24,100	19,2
Other current assets	0,000	0,070	0,400	07,000	00,120	0	10,2
Total current assets	21,241	16,036	15,886	68,657	68,232	101,194	145,0
Non-current loans and borrowings	0	0	0	00,007	00,232	0	170,0
Other non-current liabilities	608	286	290	4,506	4,506	4,506	4,5
Total non-current liabilities	608	286	290	4,506	4,506	4,506	4,5
Trade and other payables	1,686	3,556	3,674	19,459	15,567	12,454	9,9
Current loans and borrowings	2,207	0,550	0,074	0	0	12,434	3,31
Other current liabilities	5,142	928	389	2,473	2,473	2,473	2,4
Total current liabilities	9,035	4,484	4,063	21,932	18,040	14,927	12,4
	39,449	55,246	37,264	114,619	139,833	185,801	234,2
Equity attributable to company Non-controlling interest	39,449	0 33,240	0	114,619	139,033	100,001	234,2
Non-controlling interest	U	U	- 0	U	U	U	
Cash flow statement							
Profit before tax	12.684	11,110	(26,697)	32,819	25,635	47,002	49,3
Net finance expenses	12,004	0	(20,037)	0	23,033	0	43,5
Depreciation and amortisation	1,602	2,057	3,266	17,824	11,546	13,907	13,1
Share based payments	1,002	761		538	1,000	1,000	1,0
	1,670	(12,281)	(47)	(34,613)	(1,428)		
Other adjustments  Movements in working capital			25,742	_ , ,	. ,	(2,159)	(1,73
<u> </u>	12,941	(2,183)	(3,440)	5,412	2,656	874	3,2
Interest paid / received	(4.420)	(4.070)	(700)	(204)	(4.400)	(0.022)	(4.00
Income taxes paid	(4,430)	(4,678)	(766)	(364)	(1,420)	(2,033)	(1,93
Cash from operations (CFO)	25,531	(5,214)	(1,942)	21,616	37,988	58,590	63,1
Capex	(13,634)	(5,120)	(11,890)	(24,917)	(33,293)	(23,800)	(15,18
Acquisitions & disposals net	0	0	0	(24,948)	0	0 150	4.7
Other investing activities	1,110	4,836	825	760	1,428	2,159	1,7
Cash used in investing activities (CFIA)	(12,524)	(284)	(11,065)	(49,105)	(31,865)	(21,641)	(13,45
Net proceeds from issue of shares	0	(0.700)	10,127	48,510	0	0	
Movements in debt	0	(3,702)	(96)	(43)	0	0	
Other financing activities	0	0 (0.700)	0	0	0	0	
Cash from financing activities (CFF)	0	(3,702)	10,031	48,467	0	0	
ncrease/(decrease) in cash and equivalents	13,007	(9,200)	(2,976)	20,978	6,123	36,949	49,6
Currency translation differences and other	(615)	(565)	(469)	141	0	0	
Cash and equivalents at end of period	17,935	8,170	4,725	25,844	31,967	68,916	118,5
Net (debt) cash	15,728	8,170	4,725	25,844	31,967	68,916	118,5
Movement in net (debt) cash over period	12,392	(7,558)	(3,445)	21,119	6,123	36,949	49,6



#### **Contact details**

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#### Revenue by geography



#### Management team

#### **CEO: Paul Welch**

Mr Welch has over 25 years' industry experience and has held positions at Shell, Hunt Oil and Pioneer Natural Resources, and most recently as CEO of AlM-listed explorer Chariot Oil and Gas. Mr Welch graduated from the Colorado School of Mines with both a Bachelor and Master's degrees in Petroleum Engineering. He also holds an MBA in Finance from the Southern Methodist University in Dallas, Texas

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#### Country manager - Egypt: Albert Gress

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Principal shareholders	(%)
MEA ENERGY	19.5%
Ingalls & Snyder	18.4%
River & Mercantile Asset Management	7.2%
Highclere Investment Management	5.3%
Monoyios Nikolaos D	4.4%
BRACKETT VALERIE A	3.9%
Royal Bank of Canada	3.1%
AXA	2.5%
BMO Financial	2.3%
Newlands David Baxter	2.2%
JPMorgan Chase & Co	1.8%

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