

Petro Matad

2019 outlook

Four exploration wells planned for 2019

Petro Matad offers investors exposure to a fully funded 2019 exploration campaign targeting near-field, low-risk prospects as well as basin opening, high-impact potential. 2018's two-well programme in the frontier Blocks IV and V did not yield a discovery, but data from the first ever exploration wells in the region have already highlighted three new structures in Block V. One of the three identified Block V 'Raptor' prospects is a candidate for drilling in 2019, with the alternative 200mmbbl Fox prospect remaining an option. Three wells will also be drilled in the low-risk Block XX analogous to producing fields to the north-east, including the more material 48mmbbl Red Deer prospect in the south-west of the block. Attractive fiscal terms and the scalability of developments enable relatively small oil discoveries to be commercialised in the current oil price environment. Our risked valuation post assumed farm-out value dilution is updated to 20.4p/share (down 34%) at \$70/bbl long-term Brent. Our valuation remains highly sensitive to oil price assumptions and exploration outcomes.

| Year end | Operating cash flow (\$m) | PBT* (\$m) | Net debt/ (cash) (\$m) | Capex (\$m) | EBITDA (\$m) |
|----------|---------------------------|------------|------------------------|-------------|--------------|
| 12/16 | 1.8 | 10.8 | (6.5) | (0.6) | 11.1 |
| 12/17 | (2.5) | (9.9) | (5.1) | (3.1) | (9.7) |
| 12/18e | 0.1 | (4.0) | (23.2) | (15.0) | (4.0) |
| 12/19e | (4.0) | (4.0) | (1.2) | (18.0) | (4.0) |

Note: *PBT is normalised, excluding amortisation of acquired intangibles, exceptional items and share-based payments.

Mongolia onshore prospectivity

Petro Matad's acreage combines high-impact exploration and low-risk targets. One frontier exploration well is planned in Block V in 2019, and will be selected after incorporating data from 2018's Snow Leopard-1 well, which provided good evidence of a working petroleum system in the Taats Basin. Potential early cash flow targets are also planned in 2019, with three Block XX exploration wells, two close to proven and producing fields in the PetroChina-operated Block XIX, and the 48mmbbl Red Deer prospect in the south-west of the block.

Low threshold for commerciality at Block XX

Petro Matad's prospect inventory benefits from low well costs, a simple development concept (using Block XIX as an analogue) and attractive fiscal terms that allow for cost recovery. Despite some uncertainty around offtake options, our analysis suggests an attractive risk/reward incentivising exploration. Even small oil discoveries (c 10mmbbl) generate positive returns at \$70/bbl Brent.

Valuation: High IRRs limit potential dilution

Our updated base case risked valuation of 20.4p/share (-34%) assumes 50% value dilution through farm-out. This decrease is mainly driven by the outcome of the 2018 drilling campaign. While Petro Matad is funded for 2019 and we assume a farm-out to fund future development, further issues of equity at the current share price could be significantly dilutive to our per share NAV valuation.

Oil & gas

28 January 2019

Price **2.8p**
Market cap **£18m**

US\$/£0.77

Net cash (\$m) at 31 December 2018e 23.2

Shares in issue 662m

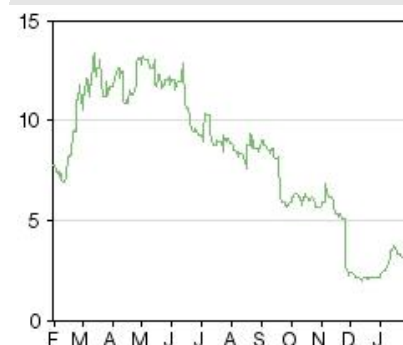
Free float 81%

Code MATD

Primary exchange AIM

Secondary exchange N/A

Share price performance



% 1m 3m 12m

Abs 53.3 (45.0) (60.3)

Rel (local) 49.1 (43.7) (55.7)

52-week high/low 13.4p 2.0p

Business description

Petro Matad is a pure-play Mongolian exploration company with a 100% equity interest in Blocks IV, V and XX. Management plans to drill four exploration wells in 2019, targeting low-risk prospects in Block XX and a high-impact well in Block V.

Next events

Heron spud Q219

Block V well spud Q419

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Investment summary

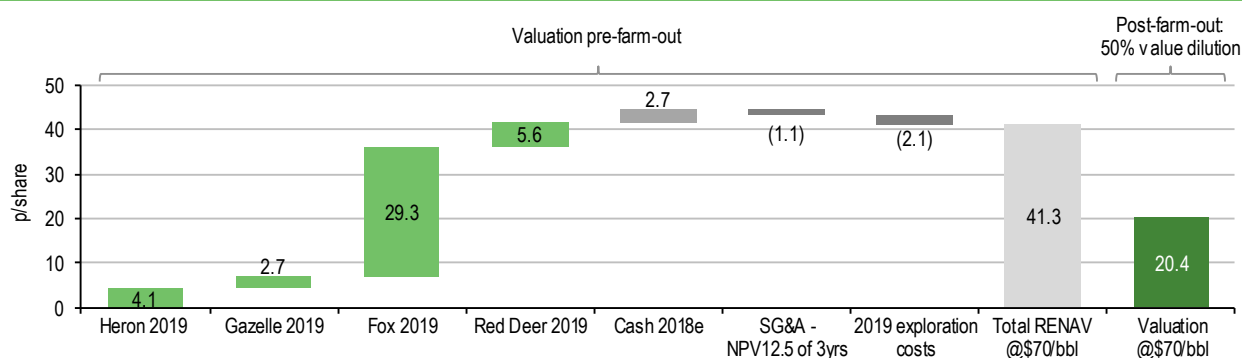
Low-cost, onshore, high-impact frontier exploration

Petro Matad offers investors exposure to an active exploration programme targeting multiple basins and play types onshore Mongolia. A combination of low well costs (just c \$2m for a development well), attractive production sharing contract (PSC) terms that enable cost recovery, and a sizeable prospective resource provide for an attractive risk/reward. PetroChina's current production at c 19kbo/d from Blocks XIX and XXI helps demonstrate that domestic logistical and infrastructure constraints can be overcome, enabling commercial oil production. Petro Matad's conceptual development studies suggest significant flexibility in engineering design such that small discoveries can be commercialised – we estimate a minimum economic volume of c 10mmbbl for Blocks IV/V (less than 1mmbbl for Block XX) based on a long-term Brent oil price of \$70/bbl (2022). 2018's exploration programme did not result in a commercial discovery, but Snow Leopard-1 provided some encouragement of a working petroleum system in the Taats Basin.

Valuation: Risked value of four planned exploration prospects

Our valuation is based on the expected monetary value (EMV) of four prospects: Heron, Gazelle, Red Deer and either a Raptor prospect or Fox in Block V. Applying suitable risking, we reach a risked valuation of 41.3p/share (prior to 50% value dilution through farm-out) at \$70/bbl long-term (NPV_{12.5}) on the assumption that the company's four-well programme (\$18m excluding overhead and PSC costs) is funded through our forecast \$23m year-end 2018 cash balance. We estimate development project IRRs in the 50–120% range depending on discovery size, which we believe should attract farminer interest considering the exploration running room. Our updated base case valuation of 20.4p/share assumes \$70/bbl Brent (2022) and a conservative 50% value dilution through farm-out (see Appendix A for further details). However, we note that if Petro Matad can debt finance development, this would be potentially less dilutive. Equity funding at the current share price would significantly reduce our per share valuation.

Exhibit 1: RENAV per share waterfall and post-funding risked valuation range (NPV_{12.5})



Source: Edison Investment Research

Risks and sensitivities

Key components of risk include fiscal/country risk given Petro Matad's single country exposure, geological/subsurface risk inherent in an exploration-led strategy in a frontier basin, and funding risk. Key sensitivities include commodity price realisations and differentials, uncertainty over offtake costs/capital costs and the timing of development.

Company description

Petro Matad's acreage is spread across multiple basins with varying risk profiles, from high-impact frontier exploration with near-term drilling in Block V in the west, to low-cost targets close to existing production in Block XX to the east. The company drilled two frontier wells in Block IV and V in 2018. The Snow Leopard-1 well in Block V provided evidence of a working petroleum system in the Taats Basin, and post-well evaluation has highlighted three new prospects on the southern flank of the basin. The Wild Horse-1 well encountered sands with no oil shows. In Block XX, initial work will focus on targeting the extensions of producing trends and fields from the PetroChina-operated Block XIX, and could provide a low-risk route to early cash flow.

Differentiated strategy: Low-cost onshore oil exploration

Petro Matad differentiates itself relative to its small-cap E&P peers through its focus on a low-cost, multi-well exploration strategy with material upside/running room in the event of success. Low costs, attractive fiscal terms and the scalability of development can make Block IV/V discoveries as small as 10mmbbl commercial based on a \$70/bbl long-term oil price. The break-even ($NPV_{12.5} = \text{zero}$) oil price for larger developments (>150mmbbl) stands at sub-\$40/bbl Brent.

Management team and board

The Petro Matad team is chaired by Enkhmaa Davaanyam, the CEO of Petrovis Group, Mongolia's largest fuel supplier. Ms Davaanyam provides a wealth of connections in Mongolia and board oversight. Petro Matad's management team includes CEO Mike Buck and CFO John Henriksen, both of whom worked for oil major Eni and held senior positions at Salamander Energy. Mike Buck has a geological/geophysical background, while John Henriksen is a qualified accountant, and provides experience in financial management and business development.

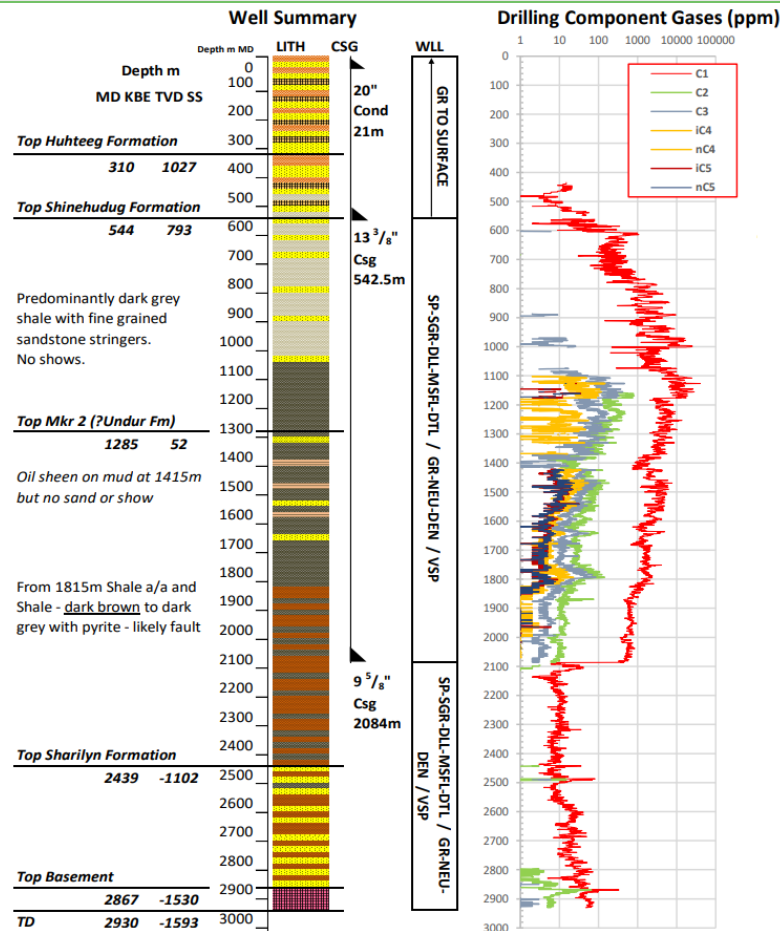
2018 frontier well results in review

During 2018, Petro Matad drilled Snow Leopard-1 and Wild Horse-1, the first ever exploration wells in the frontier Blocks IV and V in Western Mongolia. Neither well resulted in a discovery, but the data gathered are now being used to re-evaluate the prospectivity of these blocks. In particular, the results of Snow Leopard-1 will be incorporated with existing seismic data to determine the drilling target and schedule for drilling in Block V in 2019, where the company has highlighted three new structures with sizeable resource potential in the Taats Basin, in addition to the existing Fox prospect in the neighbouring Tugrug Basin.

Snow Leopard-1 – 2018 well result

Snow Leopard-1 is located in the Taats Basin in the west of Block V and was targeting mid-case recoverable resources of 90mmbbl across two separate reservoirs. Reservoir sands were not encountered in the shallow target, but C_1 to C_5 gases were observed across the interval, together with the presence of an oil sheen in the drilling mud. Petro Matad believes that the gas is indicative of an active petroleum system and that the light oil has migrated from a mature source rock. The deeper target found good sand development, with an interval of over 400m, but the sands here were interpreted as being water bearing. The new data led to the high-grading of three, four-way dip closed structures, the Raptors, with a total prospective resource potential of 400mmbbl, of which 200mmbbl sits in the Velociraptor prospect. A further well is planned in Block V in Q419 and work is ongoing to determine whether to drill one of the Raptor prospects, or to select the 206mmbbl Fox prospect in the Tugrug Basin.

Exhibit 2: Snow Leopard-1 well summary showing gas shows



Source: Petro Matad

Wild Horse-1 – 2018 well result

Wild Horse-1 sits in the Baatsagaan Basin in Block IV, about 450km to the west of Snow Leopard-1. The well was drilled in October and November 2018 and was targeting mid-case recoverable prospective resources of 480mmmbbl across three stacked targets. The first objective encountered c 250m of porous sands and interbedded claystones. C₁ to C₄ background gases were observed across this interval, but there were no oil shows. The second target encountered only thin sands, although the presence of carbonaceous material and thin coals could be indicative of the presence of potential source rock material here. The third and deepest objective was not present due to the shallower than prognosed penetration of basement. As the well was the first well tie to the seismic database in the block, the seismic can now be reinterpreted to better understand the basement configuration. Post well evaluation will now commence and will initially focus on determining the ages of the formations drilled, and the reservoir and source rock potential.

Block V well and three low-risk Block XX wells in 2019

Petro Matad is fully funded for its 2019 drilling programme, which will combine one high-risk, high-impact well in Block V with three low-risk, low-cost exploration wells in Block XX in eastern Mongolia and adjacent to the country's producing oil fields. Work is progressing to identify priority targets for the Block V well and is likely to be one of the Raptor prospects located on the southern flank of the Taats Basin or the Fox prospect in the neighbouring Tugrug Basin. Drilling is planned to commence during Q219 in Block XX followed by the Block V well in Q419. Drilling permits for the

northern Block XX prospects and Fox have been secured, while those for the Raptor trend and Red Deer are progressing.

Exhibit 3: Petro Matad 2019 work schedule

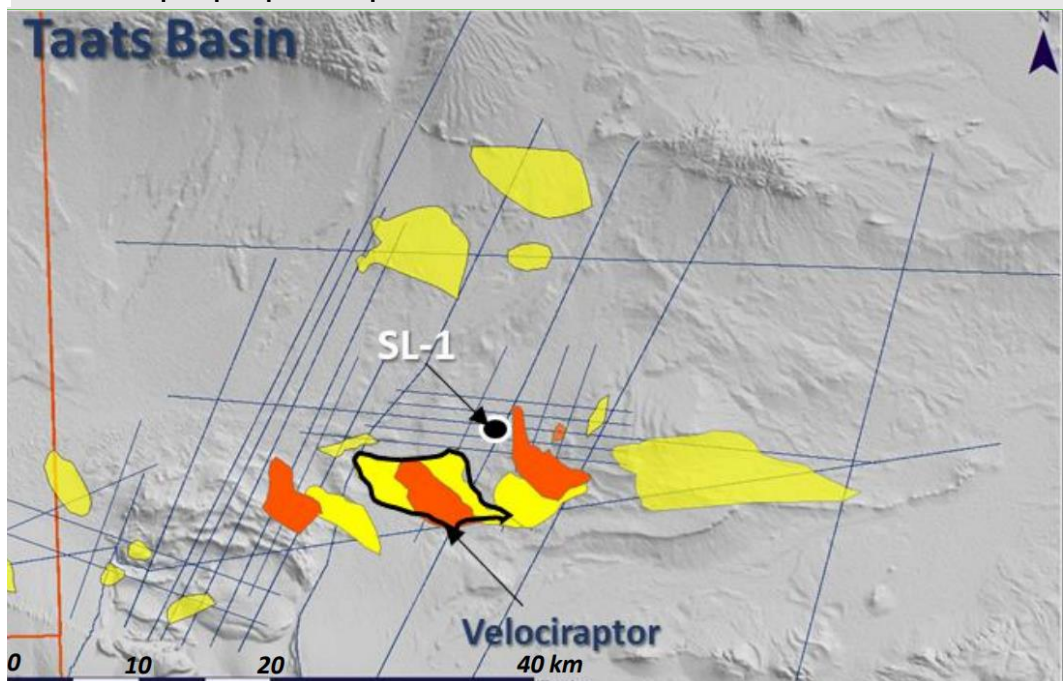
| Block | Activity | 2018 | | | | | | 2019 | | | | | | | | | | | |
|--------------|------------------------------|------|---|---|----|---|---|------|---|---|----|---|---|----|---|---|----|---|---|
| | | Q3 | | | Q4 | | | Q1 | | | Q2 | | | Q3 | | | Q4 | | |
| | | J | A | S | O | N | D | J | F | M | A | M | J | J | A | S | O | N | D |
| XX | Seismic Reprocessing | | | | | | | | | | | | | | | | | | |
| | Re-interpretation/mapping | | | | | | | | | | | | | | | | | | |
| | Drilling Location Definition | | | | | | | | | | | | | | | | | | |
| | Permitting/Contracting | | | | | | | | | | | | | | | | | | |
| | Heron - 1 | | | | | | | | | | | | | | | | | | |
| | Gazelle - 1 | | | | | | | | | | | | | | | | | | |
| Red Deer - 1 | | | | | | | | | | | | | | | | | | | |
| V | Snow Leopard -1 Drilling | | | | | | | | | | | | | | | | | | |
| | Post-Well Studies | | | | | | | | | | | | | | | | | | |
| | Re-interpretation/mapping | | | | | | | | | | | | | | | | | | |
| | Drilling Location Definition | | | | | | | | | | | | | | | | | | |
| | Permitting/Contracting | | | | | | | | | | | | | | | | | | |
| | Well 4 | | | | | | | | | | | | | | | | | | |
| IV | Wild Horse -1 Drilling | | | | | | | | | | | | | | | | | | |
| | Post-Well Studies | | | | | | | | | | | | | | | | | | |

Source: Petro Matad

Velociraptor prospect

The Velociraptor prospect is one of a trend of three four-way dip closed inversion anticlines that sit 6km to the south of Snow Leopard.

Exhibit 4: Raptor prospects map

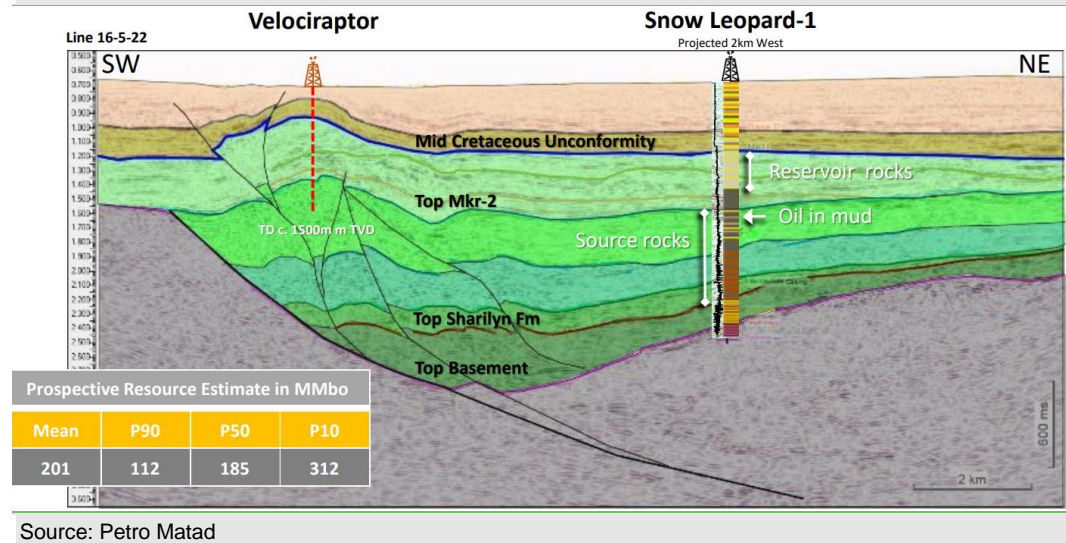


Source: Petro Matad

The prospects are located over a thick depocentre and Petro Matad believes that the source intervals seen in Snow Leopard-1 (SL-1) thicken into this depocentre and there are short vertical migration pathways into the Raptor trend. Management expect the prospects to be well located for the presence of thick reservoir units, based on the shallow, good-quality sandstone reservoirs seen in SL-1 and sourced from basin bounding fault scarp. Velociraptor is the largest of the structural

closures with potential mean prospective resources 201mm bbl, and can be drilled with a low-cost, shallow well. The total resource potential of the Raptor trend is estimated at c 400mm bbl.

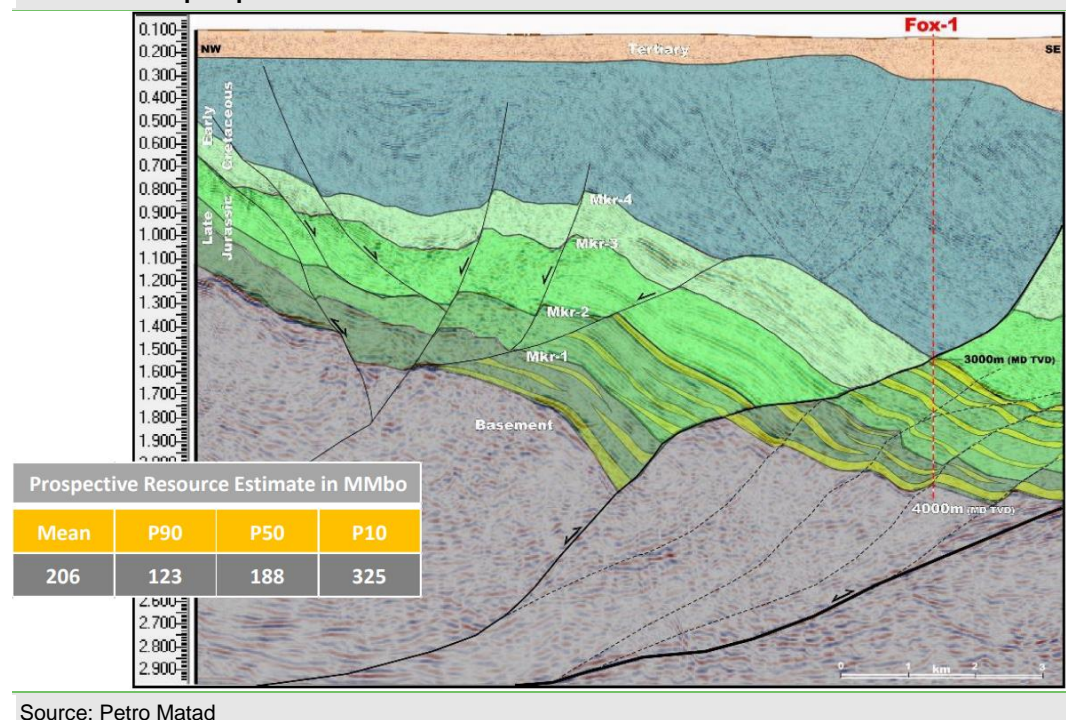
Exhibit 5: Velociraptor 3D seismic schematic



Fox prospect

The Fox prospect sits in the Tugrug Basin in the east of Block V and is estimated to hold mean recoverable resources of 206mm bbl (P50 188mm bbl) across interbedded Jurassic and Cretaceous reservoir and shale source rock. The prospect is a tilted fault block (a proven model in the region) and is a three-way dip closure against a fault. The structure is defined on new, high-quality 3D seismic (from 2017) and the prospect is located in the centre of the basin, making it ideally located to receive charge from the Tugrug source kitchen. The well will target a stacked reservoir system consisting of six pay intervals and there is a large offset on the bounding faults, which the company believes will promote sealing (the key geological risk has been identified as trap effectiveness).

Exhibit 6: Fox prospect 3D seismic schematic



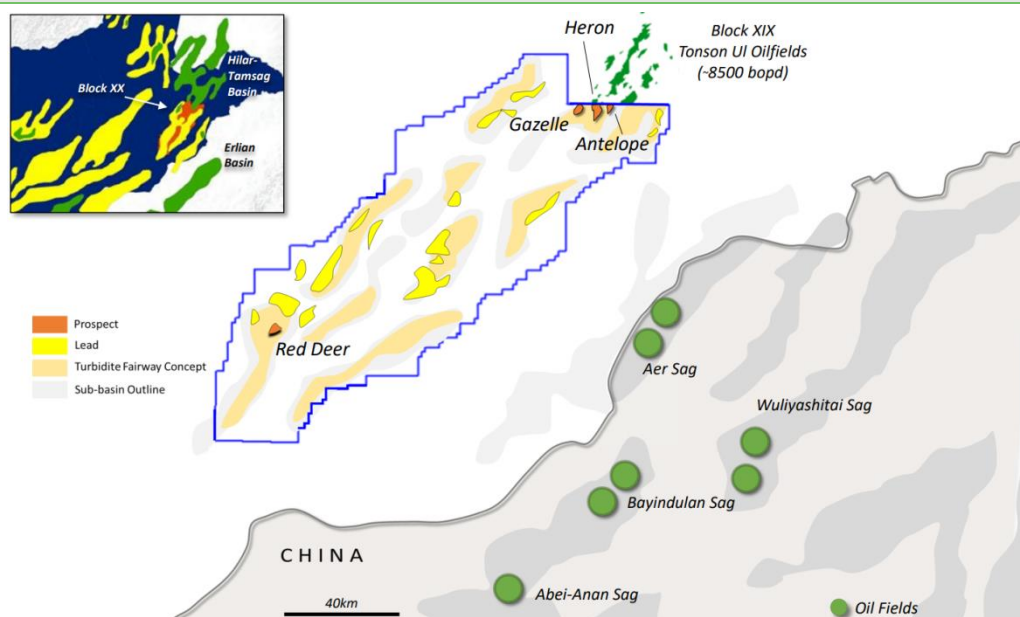
The prospect is located 8km south-east of a stratigraphic core hole drilled to 1,600m, which encountered live oil staining in the reservoir section, porous sands (10–30% porosity), good permeability and source rock with total organic content of 2–5%. Tests on extracted oil showed that it was not biodegraded and was lacustrine source derived. In the success case, Petro Matad has identified seven prospects and leads within a 10km radius of Fox that would be partially de-risked by success in the Fox-1 well. We recognise that there will be geological risk interdependency between mapped reservoir sections/targets at Fox, thereby increasing the probability of either a highly successful (multiple discoveries) or low success outcome (no discoveries).

The well is expected to cost c \$7–8m and will be drilled to a depth of 4,000m, making it one of the deepest wells to be drilled in Mongolia. Management is currently reviewing Snow Leopard-1 vertical seismic profile (VSP) data to formulate a view on reservoir development at Fox and expects to have taken a view on Block V well location by the middle of 2019. The current exploration phase for the blocks expires in mid-2019, although a further two-year exploration extension is available.

Block XX

A three-well programme is planned in Block XX in 2019, consisting of two near-field exploration and appraisal targets close to the PetroChina-producing fields in Block XIX, and one play opening well, Red Deer 1, in the south of the block and around 140km from the Block XIX facilities. Located in basins that are either a continuation of proven producing areas or adjacent to proven basins provides the targets with a good chance of success and the possibility of rapid commercialisation if successful.

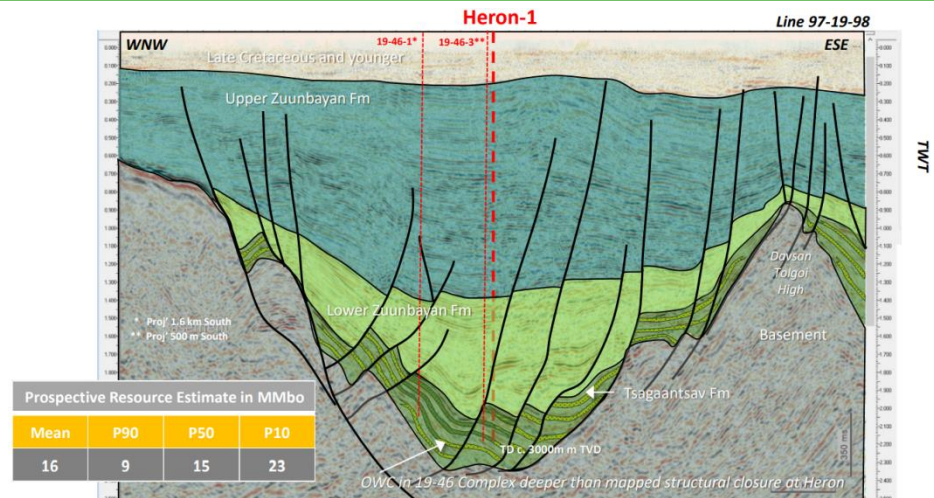
Exhibit 7: Block XX prospect map



Source: Petro Matad

The first well will be Heron-1, less than 1km south of the PetroChina L19/46-3 discovery. Petro Matad has mapped Heron as an extension of the L19/46 structure that spills updip into Block XX and so Heron-1 will be an appraisal well. The well will target mean prospective resources of 16mmbbl. In the case of success, the proximity of existing infrastructure will facilitate quick development. In addition, the company estimates an upside STOOIP in the greater Heron trap of 75mmbbl and plans to follow any success quickly with additional wells. Management estimate a high chance of geological success at c 75%, with key risks being closure up-dip, sand thickness and porosity.

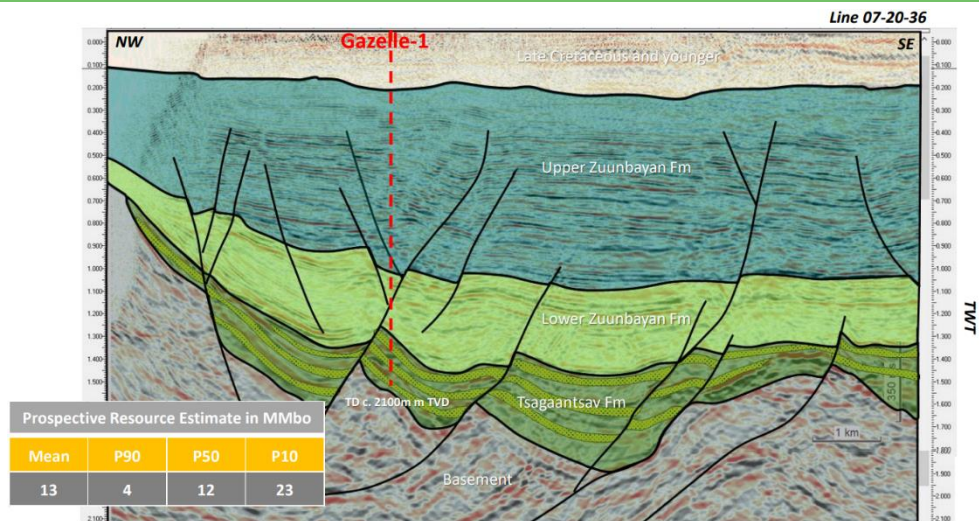
Exhibit 8: Heron seismic schematic



Source: Petro Matad

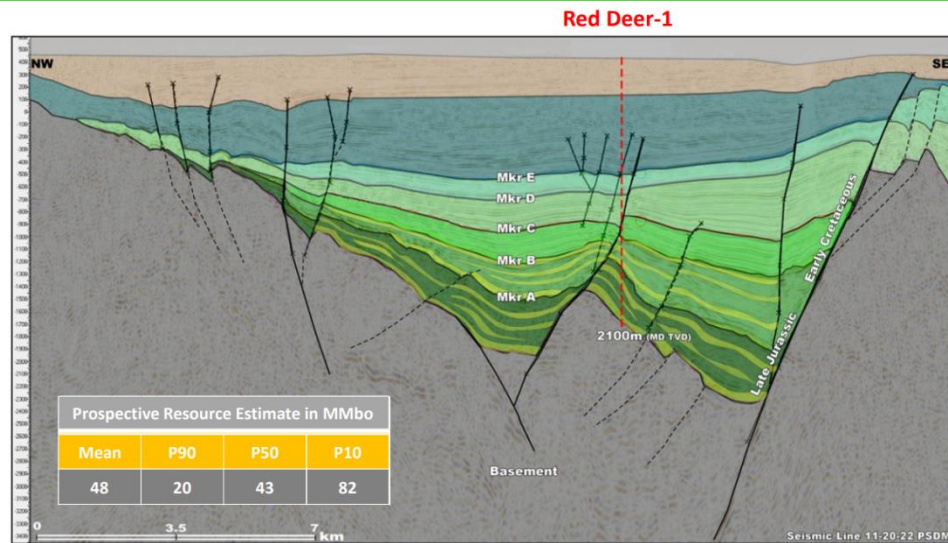
Gazelle-1 will target a lookalike structure to PetroChina's best producing field, L19-30, 12km to the north-east in Block XIX. Gazelle-1 sits in the west of the block where reservoir quality and well productivity is observed to improve in the producing fields, and is estimated to contain mid-case recoverable resources of 13mmbbl. The Gazelle-1 well will be drilled to a total depth of c 2,100m, at an estimated cost of c \$2.5–3m. Due to the proximity to existing discoveries, Petro Matad estimates a high chance of geological success.

Exhibit 9: Gazelle seismic schematic



Source: Petro Matad

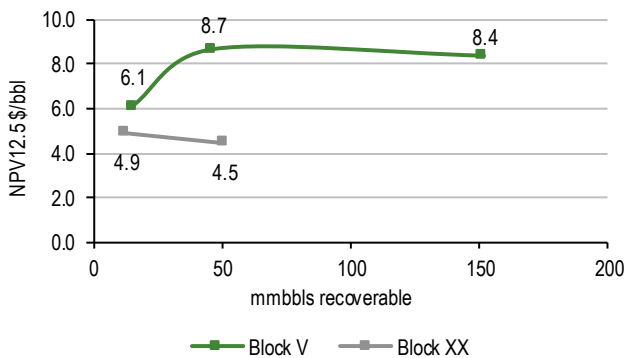
Red Deer-1 is located 100km from Block XIX in the south-west area of the licence and will be a basin opening well in Asgat Sag. The well is targeting a three-way dip fault bounded closure in the basin centre, which is analogous to proven Cretaceous structures in the Tamsag Basin in Block XIX and is predicted to encounter stacked pay potential. Outcrop and shallow borehole data confirm the presence of oil-prone source rocks in the area. Management estimates the prospect to contain mean-case prospective resources of 48mmbbls and expects it to be drilled at a cost of c \$3m. In the event of success, the well is located around 1km from the existing east-to-west trucking route. The exploration licence for Block XX has been extended and expires in July 2020. Success here would open up further potential in the same and surrounding basins. We view Red Deer as slightly higher risk than Heron and Gazelle as it is located over 100km from known oil.

Exhibit 10: Red Deer seismic schematic


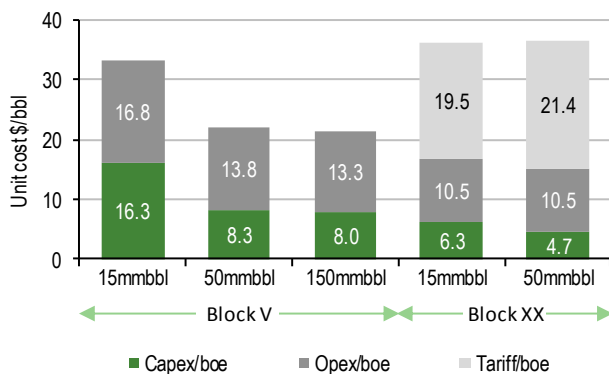
Source: Petro Matad

Valuation

Our valuation of Petro Matad is on the basis of risk-adjusted value for the company's drill-ready and committed prospects in Block V, and Block XX (Gazelle, Heron and Red Deer). Details of these prospects are provided above. We calculate economics per unit volume (\$/boe) using modelled company development plans for Block V and Block XX. Our Block V unit values are shown below and are driven by discovery size (more details are available in our [initiation report](#)).

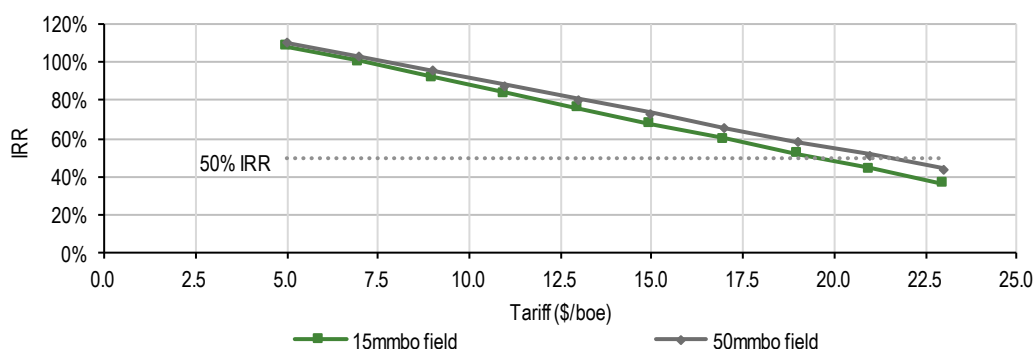
Exhibit 11: Block V and Block XX unit NPVs at 70\$/bbl


Source: Edison Investment Research

Exhibit 12: Modelled capex, opex and tariff costs


Source: Edison Investment Research

For Block XX, we believe that economics will to some extent be driven by opex sharing or tariff agreements with PetroChina for the processing, storage and onward transport of crude. In our base case, we now assume Petro Matad generates a 50% IRR at \$70/bbl, which implies a relatively high absolute tariff, as can be seen in Exhibit 12. This could prove to be conservative, but the cost recovery of tariff suggests that Petro Matad can absorb relatively high operational/tariff costs while continuing to generate a high IRR. Exhibit 13 shows the IRR sensitivities to different tariffs in Block XX economics, ranging from \$5/bbl to \$22/bbl.

Exhibit 13: Block XX processing tariff sensitivity


Source: Edison Investment Research

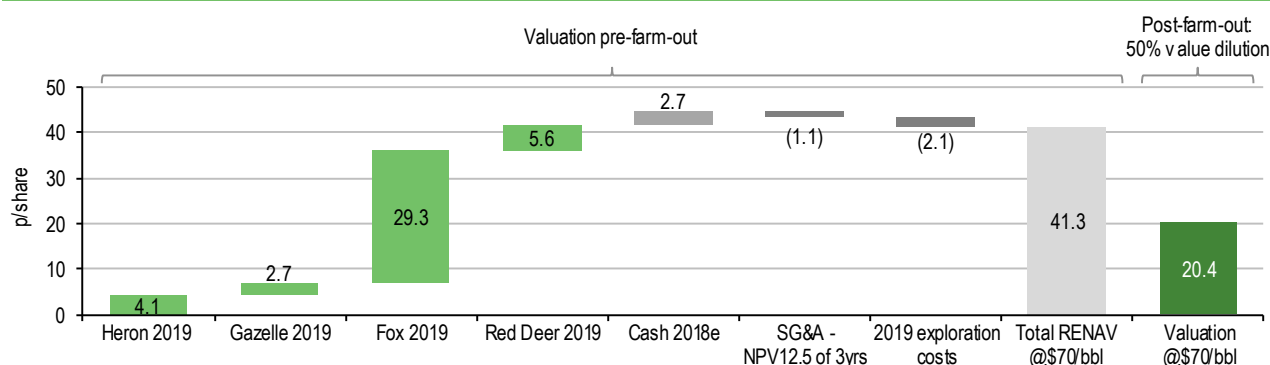
As with many E&Ps, the unfunded risk value for prospects can be significant, and this is also the case for Petro Matad. In our base case valuation, shown in Exhibit 14 below, we typically include elements of dilution, of which investors need to be cognisant when investing in the small-cap E&P sector: 1) while we do not currently include equity dilution through a future fund-raise, this has potential to be significantly dilutive to our per-share NAV valuation; and 2) asset-level working interest dilution through the farm-out of discoveries made during the exploration phase. We include the \$23m estimated year-end 2018 cash balance to fund the company's 2019 exploration campaign, contingency and SG&A. We also assume at this stage that Petro Matad retains 50% of asset value post farm-out (please see Appendix A for further details on our farm-out framework).

Exhibit 14: Petro Matad base case valuation

| Asset | Country | Diluted WI | Pc** | Recoverable reserves | | Net risk value | | Risk value p/share at | | |
|------------------------------------|----------|------------|------|----------------------|--------------|--------------------------|--------------|-----------------------|--------------|--------------|
| | | | | Gross | Net | NPV _{12.5} /boe | | 12.5% | 10.0% | 15.0% |
| | | % | % | mmboe | mmboe | \$/boe | \$m | p/share | p/share | p/share |
| Net cash at end 2018e | | | | | | | 23.2 | 2.7 | 2.7 | 2.7 |
| SG&A - NPV _{12.5} of 3yrs | | | | | | | (9.5) | (1.1) | (1.1) | (1.1) |
| 2019 - committed prospects | | | | | | | (18.0) | (2.1) | (2.1) | (2.1) |
| Core NAV | | | | | | | (4.3) | (0.5) | (0.5) | (0.5) |
| Exploration | | | | | | | | | | |
| Block XX – Heron | Mongolia | 50%* | 45% | 16.0 | 8.0 | 4.9 | 17.7 | 2.1 | 2.5 | 1.7 |
| Block XX – Gazelle | Mongolia | 50%* | 36% | 13.0 | 6.5 | 4.9 | 11.5 | 1.3 | 1.6 | 1.1 |
| Block XX – Red Deer | Mongolia | 50%* | 23% | 48.0 | 24.0 | 4.5 | 24.2 | 2.8 | 3.6 | 2.2 |
| Block V – Fox / Raptor | Mongolia | 50%* | 15% | 200.0 | 100.0 | 8.4 | 125.7 | 14.7 | 18.0 | 12.0 |
| Exploration NAV | | | | 277.0 | 138.5 | | 179.1 | 20.9 | 25.8 | 17.0 |
| RENAV | | | | | | | 174.7 | 20.4 | 25.3 | 16.5 |

Source: Edison Investment Research. Note: *Reflects value retained after assumed development farm-down. **Pc = Pg x Pe. Pg assumed at 50% for Heron, 40% for Gazelle, 25% for Red Deer, 20% for Fox/Raptor. Pe assumed to be 90% for Block XX and 75% for Block V; Number of shares = 662m, FX: US\$/£0.77

Our valuation is sensitive to several key assumptions such as oil price, WACC, farm-out dilution and development costs. The valuation waterfall below, Exhibit 15, provides a breakdown of our risk value prior to farm-down at 41.3p/share, followed by what this could look like post farm-down at a range of oil prices, Exhibit 16. Our updated base case valuation of 20.4p/share (-34%) is on the basis of a \$70/bbl Brent long-term oil price and 50% asset-level value dilution. The main reason for the decrease in our valuation is the result of the 2018 drilling campaign, which was targeting a high resource base with Snow Leopard and Wild Horse, but did not result in a commercial discovery. We note that the market is currently assuming a lower oil price assumption and/or a higher risk/asset-level dilution than our base case valuation.

Exhibit 15: RENAV waterfall and post-funding risked valuation range (NPV_{12.5})


Source: Edison Investment Research

We note that Petro Matad benefits from high IRR development projects based on our long-term oil price assumption of \$70/bbl Brent (2022) and as such our base case assumption of 50% value dilution through farm-out is conservative. Actual farm-out terms will depend on several factors, including farminee risk appetite, planning assumptions and internal analysis of development returns. Alternatively, if Petro Matad was to fund development through equity, a fund-raise at the current share price would be significantly dilutive to our per-share valuation.

Below we provide a RENAV valuation sensitivity to our long-term Brent oil price assumption and value dilution through farm-out.

Exhibit 16: RENAV sensitivity to long-term oil price assumption and farm-out value dilution

| Value dilution % | Brent oil price \$/bbl | | | | |
|------------------|------------------------|------|------|------|------|
| | 50 | 60 | 70 | 80 | 90 |
| 20% | 10.0 | 20.3 | 32.9 | 45.4 | 57.7 |
| 30% | 8.7 | 17.7 | 28.7 | 39.6 | 50.4 |
| 40% | 7.4 | 15.1 | 24.6 | 33.9 | 43.1 |
| 50% | 6.1 | 12.5 | 20.4 | 28.2 | 35.8 |
| 60% | 4.8 | 9.9 | 16.2 | 22.4 | 28.6 |

Source: Edison Investment Research

Risks and sensitivities

We see the risks below as representative of all of the independent E&Ps focused on exploration and appraisal.

Company-specific risks

- **Fiscal/country risk** – Petro Matad's operations are geographically concentrated. On a standalone basis, the company is exposed to changes in fiscal terms and perceived country risk. Fiscal terms are viewed as compelling relative to other frontier basins. The Petroleum Law of Mongolia was adopted in 1981 and later revised in 2014, providing a clear and transparent environment for investment. The natural resources sector in Mongolia accounts for more than half of the country's GDP, providing incentive for the state to maintain a consistent approach to licensing and taxation.
- **Geological** – Petro Matad is focused on a number of independent basins with varying play types across Blocks IV, V and XX. Geological risk is typical of an exploration-biased, independent E&P, but reduced through the company's multi well programme targeting independent basins. Petro Matad's 2018 campaign highlighted the high-risk nature of exploration, especially in undrilled basins. The company's 2019 campaign has a lower geological risk with Block XX drilling in a proven basin.

- Development/third-party risk – a key risk/uncertainty in our view is the lack of firm information on the timing and scale of a potential domestic refinery. We assume domestic refining capacity is available from 2022 in our economic analysis, but without this Petro Matad would be exposed to the additional costs involved with selling crude to Chinese refineries.
- Financial – as with most capital-constrained independent E&Ps, Petro Matad is reliant on a wide range of sources of capital to progress exploration activity and to monetise assets in the event of exploration success. The cost of capital will depend on source, but expensive sources of capital including farm-outs and equity can lead to material asset/shareholder dilution.

Generic sector risks

- Commodity price – as with all companies operating in the upstream oil and gas sector, returns are driven by underlying commodity prices. Petro Matad is not immune to this, with the bulk of the company's prospects leveraged to the price of Brent crude.
- Supply chain – upstream project returns are driven by a combination of commodity price, project operating and capital costs and fiscal regimes. An important consideration is the availability and cost of equipment and personnel. Costs for both human and physical assets tend to be positively correlated to the oil price.
- Political – risks are largely specific to the country of operation. Moody's provides a Caa1 stable credit rating for Mongolia, citing the country's strong growth potential and abundant mineral resources, but also flags a narrowly diversified economy exposed to commodity price swings. Moody's estimates real GDP growth of 4.2% in 2017 and 4.3% in 2018 from just 1% in 2016.

Management

Enkhmaa Davaanyam (non-executive chairperson): Ms Davaanyam is the CEO of Petrovis Group, Mongolia's largest fuel supplier. She has over 19 years' international experience in financing and risk management of mining, infrastructure and energy projects and commodities trading. She has served as deputy chair of the board of directors of Petrovis Group since 2011 and was appointed as the CEO in August 2013. Prior to joining Petrovis Group, Ms Davaanyam worked as a managing director at Macquarie Group for over 10 years, responsible for risk management in the energy sector in the US. She was appointed as Petro Matad's chairperson in 2015.

Michael Buck (CEO): Mike Buck is an explorer by background and spent the first 20 years of his career with UK independent E&P company, LASMO, rising from graduate geophysicist to exploration manager and to managing director of overseas business units. Following the acquisition of LASMO by Eni he was appointed managing director of Eni's Pakistan geographic unit and thereafter of the Iran geographic unit. Mr Buck has been directly involved in the discovery of over 1bnboe of recoverable reserves, including Indonesia – Kurau, Selatan, W. Kerendan, MDBD; Colombia – Juncal, El Palmar, Los Trompillos, Guepaje, Venganza, Purificacion; and Libya – Elephant.

Mr Buck joined Salamander Energy in August 2006, was appointed to the board as an executive director in October 2006 and was Salamander's chief operating officer until March 2015 when Salamander was acquired by Ophir Energy. He was retained by Ophir until end 2015 to help with the integration of the two businesses. He subsequently worked as a consultant to numerous operating E&P companies in Asia before joining Petro Matad in October 2017.

John Henriksen (CFO): Mr Henriksen has 35 years' experience in the international oil industry and in April 2012 assumed the role of CFO for the Petro Matad group, based in Ulaanbaatar. Prior to this, he was the country manager for Salamander Energy's Indonesian operations. Before Salamander, Mr Henriksen worked in senior financial roles for VICO, Eni, LASMO and Hudson's

Bay Oil and Gas, ultimately being responsible for all aspects of financial management, reporting and internal control. A substantial portion of Mr Henriksen's career has been spent overseas in developing countries, and as a result he has a full understanding of cultural sensitivities and working with local governments and partners. He is a qualified accountant and holds a Bachelor of Commerce degree from the University of Alberta in Canada.

Tim Bushell (technical non-executive director): Tim Bushell is a geologist by training with over 35 years' experience in the international upstream oil and gas industry. For 10 years he was CEO of Falkland Oil and Gas. During his career he has been directly involved in the discovery of over 700mmboe of recoverable reserves. These include Falklands – Zebedee, Elaine/Isobel; and Norway – Hyme, Snilehorn, Brasse and others. Mr Bushell joined the board of Petro Matad in April 2017. He is also on the boards of Rockhopper, Genel and Wentworth Resources, and is a founder and advisor to Point Resources, a private equity-backed, Norway-focused E&P company.

Shinezaya Batbold (non-executive director): Ms Shinezaya is the CEO of Petrovis Venture Capital LLC, one of the first local venture capital funds investing in multiple SME sectors in Mongolia. She was a VP of Petrovis from 2010 to 2012, and currently holds a number of board and chair positions in diversified business sectors in Mongolia, including as board member of Petrovis and chairperson of UNIGAS, a gas distribution company in Ulaanbaatar. She is a graduate of Northeastern University, Boston, MA.

Financials

Petro Matad is an early-stage E&P, hence current earnings and short-term P&L projections have little relevance. The company's income statement as it stands simply reflects the ongoing cost of running the company's Mongolian operations and corporate functions. The positive cash flow impact of an oil development is unlikely to be a material driver of earnings and cash flow until 2021 at the earliest, in our view.

There is potential for earlier cash flows if Petro Matad can unitise oil fields that straddle Block XX and Block XIX with PetroChina, or if the company pursues an early production system based on discoveries made in Block IV/V. We intend to update our forecasts if and when there is more visibility on short-term production and cash flow.

Key elements of short-term cash flow include:

- Petro Matad closed 2018 with an estimated c \$23m of cash and is funded for the company's four-well 2019 exploration programme; additional funding would be required to commit to an exploration programme and to support group G&A beyond 2019. We assume a short-term debt facility for the first years of development to support pre-development costs.
- We assume a capex cost of \$12–18m for the 2019 well programme including contingency but excluding overheads and PSC costs, with a cost of \$3m for Heron, \$3m for Gazelle, \$3m for Red Deer and \$3m for Raptor (or \$7–8m for Fox).

Exhibit 17: Financial summary

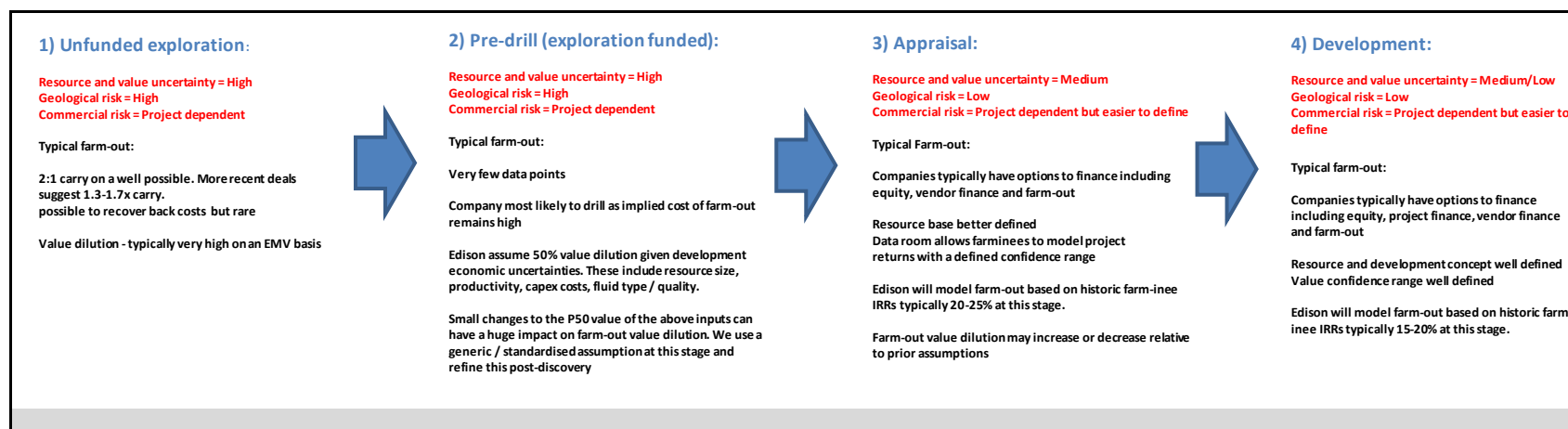
| | \$m | 2016 | 2017 | 2018e | 2019e | 2020e |
|--|-----|-------|-------|--------|--------|-------|
| Year-end Dec | | IFRS | IFRS | IFRS | IFRS | IFRS |
| PROFIT & LOSS | | | | | | |
| Revenue | | 18.9 | 0.2 | 0.0 | 0.0 | 0.0 |
| Cost of Sales | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Gross Profit | | 18.9 | 0.2 | 0.0 | 0.0 | 0.0 |
| EBITDA | | 11.1 | (9.7) | (4.0) | (4.0) | (4.0) |
| Operating Profit (before amort. and except.) | | 10.9 | (9.9) | (4.0) | (4.0) | (4.0) |
| Intangible Amortisation | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Exceptionals | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Other | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Operating Profit | | 10.9 | (9.9) | (4.0) | (4.0) | (4.0) |
| Net Interest | | (0.1) | 0.0 | 0.0 | 0.0 | 0.0 |
| Profit Before Tax (norm) | | 10.8 | (9.9) | (4.0) | (4.0) | (4.0) |
| Profit Before Tax (FRS 3) | | 10.8 | (9.9) | (4.0) | (4.0) | (4.0) |
| Tax | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Profit After Tax (norm) | | 10.8 | (9.9) | (4.0) | (4.0) | (4.0) |
| Profit After Tax (FRS 3) | | 10.8 | (9.9) | (4.0) | (4.0) | (4.0) |
| Average Number of Shares Outstanding (m) | | 287.5 | 308.5 | 631.9 | 662.2 | 662.2 |
| EPS - normalised (c) | | 0.4 | (0.3) | (0.1) | (0.1) | (0.1) |
| EPS - normalised and fully diluted (c) | | 0.4 | (0.3) | (0.1) | (0.1) | (0.1) |
| EPS - (IFRS) (c) | | 0.0 | (0.0) | (0.0) | (0.0) | (0.0) |
| Dividend per share (c) | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Gross Margin (%) | | 100.0 | 100.0 | - | - | - |
| EBITDA Margin (%) | | 58.9 | - | - | - | - |
| Operating Margin (before GW and except.) (%) | | 57.7 | - | - | - | - |
| BALANCE SHEET | | | | | | |
| Fixed Assets | | 16.1 | 15.9 | 30.9 | 48.9 | 48.9 |
| Intangible Assets | | 15.3 | 15.3 | 15.3 | 15.3 | 15.3 |
| Tangible Assets | | 0.8 | 0.6 | 15.6 | 33.6 | 33.6 |
| Investments | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Current Assets | | 12.2 | 8.6 | 24.2 | 2.2 | 1.0 |
| Stocks | | 0.5 | 3.5 | 1.0 | 1.0 | 1.0 |
| Debtors | | 5.2 | 0.0 | 0.0 | 0.0 | 0.0 |
| Cash | | 6.5 | 5.1 | 23.2 | 1.2 | 0.0 |
| Other | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Current Liabilities | | (1.4) | (3.4) | (5.0) | (5.0) | (5.0) |
| Creditors | | (1.4) | (3.4) | (5.0) | (5.0) | (5.0) |
| Short term borrowings | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Long-term Liabilities | | 0.0 | 0.0 | 0.0 | 0.0 | (2.8) |
| Long-term borrowings | | 0.0 | 0.0 | 0.0 | 0.0 | (2.8) |
| Other long-term liabilities | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Net Assets | | 26.9 | 21.1 | 50.1 | 46.1 | 42.1 |
| CASH FLOW | | | | | | |
| Operating Cash Flow | | 1.8 | (2.5) | 0.1 | (4.0) | (4.0) |
| Net Interest | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Tax | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Capex | | (0.6) | (3.1) | (15.0) | (18.0) | 0.0* |
| Acquisitions/disposals | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Financing | | (0.0) | 4.2 | 33.0 | 0.0 | 0.0 |
| Dividends | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Net Cash Flow | | 1.1 | (1.4) | 18.1 | (22.0) | (4.0) |
| Opening net debt/(cash) | | (5.3) | (6.5) | (5.1) | (23.2) | (1.2) |
| HP finance leases initiated | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Other | | (0.0) | 0.0 | 0.0 | 0.0 | 0.0 |
| Closing net debt/(cash) | | (6.5) | (5.1) | (23.2) | (1.2) | 2.8 |

Source: Edison Investment Research, Petro Matad accounts. Note: *Farm-in proceeds to cover capex beyond 2020.

Appendix A

We use a farm-out framework when valuing E&P assets that are not self-funded through to first oil. In general, the extent of value dilution we assume through farm-out decreases as asset certainty and risks decrease, as shown in Exhibit 18. Given the current uncertainty with regard to unrisked resource size, productivity, oil quality and costs, we use a generic assumption of 50% value dilution (stage 2 of our framework) for Petro Matad, which we intend to refine post-drill.

Exhibit 18: Edison E&P farm-out framework



Source: Edison Investment Research

| Contact details | Revenue by geography |
|---|---|
| Victory House Douglas Isle of Man +44 (0) 1624 627 099 www.petromatadgroup.com | N/A |
| Management team | |
| Chairperson: Enkhmaa Davaanyam Ms Enkhmaa is the CEO of Petrovis Group, Mongolia's largest fuel supplier. She has over 19 years of international experience in financing and risk management of mining, infrastructure and energy projects and commodities trading. | CEO: Mike Buck Mr Buck is a geologist/geophysicist with experience across the entire E&P value chain gained while working at LASMO, Eni and Salamander Energy as group COO. After the takeover of Salamander by Ophir Energy he was retained to help the integration process and then worked as a consultant for a number of companies in the South-East Asian region before joining Petro Matad. |
| CFO: John Henriksen Mr Henriksen has 35 years of experience in the international oil industry and joined Petro Matad in April 2012. Previous experience includes Indonesia country manager for Salamander Energy and senior finance roles at VICO, Eni, LASMO and Hudson's Bay Oil and Gas. | |
| Principal shareholders | (%) |
| Dr Oyungerel Janchiv | 23.93 |
| SVM Asset Management/United Kingdom | 3.20 |
| Baillie Gifford & Co | 2.68 |
| Tuya Danzandarjaa | 1.77 |
| FORESTBERRIES LLC | 1.66 |
| Enkhmaa Davaanyam | 0.93 |
| CQS Asset Management | 0.91 |
| City Financial Investment Co | 0.89 |
| Mike Buck | 0.64 |
| Mehmed Ridvan Karpuz | 0.31 |
| Companies named in this report | |
| PetroChina, Petrovis | |

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