

PETRO MATAD

OIL & GAS

18 December 2024

MATD.L

1.5p

Market Cap: £22.3m

SHARE PRICE (p)



12m high/low

4.5p/1.4p

Source: LSE Data (priced as at prior close)

KEY DATA

Net (debt)/cash (e) \$2.5m (at 31/12/24)

Enterprise value £20.2m

Index/market AIM

Next news AGM, April 2025

Shares in issue (m) 1,483.9

Chairman Enkhmaa Davaanyam

Chief Executive Mike Buck

Head of Finance Tamir Battogtokh

COMPANY DESCRIPTION

Petro Matad is a UK-listed exploration company that is focused on Mongolia.

petromatadgroup.com

PETRO MATAD IS A RESEARCH CLIENT OF
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On the way up in 2025

A happier year should lay ahead for Petro Matad in 2025. After numerous bureaucratic delays, in October 2024 the company managed to start production at the Heron oil field, onshore Mongolia, which allows it to start generating cash flow. This cash will be utilised to build up production at the Heron field and to invest in further exploration and its exciting renewables portfolio, all of which should deliver growth in shareholder value.

- Heron – onstream.** Petro Matad brought the Heron oilfield onstream on 24 October 2024. The Heron-1 well achieved flows of over 800 bbl/day but has been choked back to 200-300 bbl/day due to high pressure from associated gas. This is in line with pre-line production expectations. Management will look to optimise the surface equipment to see if production can be raised. The Heron-2 well produced 30 bbl/day, which indicates lower permeability or a downhole issue. Although this is a lower flow than the Heron-1 well, it is in line with some wells drilled in the basin. In 2025, management will look to bring more wells onstream to allow the field production to be ramped up.
- Renewables – building momentum.** Petro Matad continues to make progress on its renewables joint venture, Sunsteppe Renewable Energy (SRE), which has three projects, Choir Battery Storage, Oyu Tolgoi green hydrogen and an export system to China. The cash flows from production at Heron should allow Petro Matad to progress these projects to a bankable stage, and ready to build over the course of 2025. Mongolia, with its desire to move to renewable energy, offers significant potential for additional projects, with SRE ideally positioned to be able to participate.
- New acreage.** Petro Matad is also looking to build up its traditional oil and gas business. The company participated in the most recent licensing rounds and has been told that it will be awarded two new exploration licences. These cover extensions on basins that are producing in China. This is exciting since these licences would give the company additional, low-risk plays are proven across the border. On top of this, management believes that there is further exploration potential around the Heron field.
- Valuation.** We have analysed the potential valuation of the business using RENAV (Risky Exploration Net Asset Value). This looks at the discounted cash flow of the Heron field on the basis of a US\$65/bbl oil price and is adjusted for the net cash. For the sake of conservatism, we do not include any value for exploration upside or for the renewable energy projects. However, as these are progressed, we believe there will be incremental value for investors. We arrive at a RENAV of 12.0p/share (see page 11 for our detailed valuation). This does not represent a target price, and investors should view any valuation in the context of their own assessment of the relevant risks.

Summary & conclusion

Petro Matad is set for a better year in 2025. It has spent the last two years being held up with bureaucracy, with issues such as land access and permitting delaying the start-up of production at the Heron oil discovery. The company has managed to sort out most of this regulation, allowing the start of oil production in October 2024. This will allow the company to start generating cash flow that can be used to accelerate the development of the Heron field and build up production. On the upstream side, the company is eager to increase its portfolio of exploration acreage. The cash flow can also be used in the company's push into developing an exciting portfolio of renewable energy projects.

Heron

After years of delays, Petro Matad finally cleared the way to start production from the Heron oil field in October 2024. The field, where Petro Matad has 100% working interest, was discovered in 2019. The Heron-1 well initially produced at over 800 bbl/day but was reined in to 200-300 bb/day due to high gas pressure, which was in line with management expectations. Over the winter drilling shutdown, management will look to optimise equipment to allow production to be increased. The Heron-2 well has also been drilled, stimulated and tested. Although testing was affected by a surface mechanical fault, the well flowed at 30 bbl/day of oil and stimulation fluid. This is in line with other wells in the basin and suggests that the reservoir here is lower permeability and/or there is a down-hole issue. Over the course of 2025, Petro Matad aims to drill further production wells into the field, which will help to build production. The production will be initially trucked to PetroChina's facilities in the adjacent block where it will be processed, exported and sold. An agreement between the parties has been reached over fees and awaits formal government approval.

Under a base-case scenario, it is believed that the recovery factor (of the oil in place) would be 17%, which is in line with other fields in the basin. This would give Petro Matad recoverable oil reserves of 33 mmbbl. However, management believes that through using better well optimisation and modern techniques the recovery factor could be increased to 30%, which would lead to recoverable reserves increasing to 58 mmbbl. Within the exploitation area there are additional leads and prospects that could be drilled. If successful, these could be tied-in cheaply and quickly (*for further details please see page 5*).

New exploration acreage

Petro Matad is eager to expand its exploration portfolio in the current licensing round within Mongolia. The company has been told that it has been awarded two new licences, which cover extensions of basins that are producing in neighbouring China. This is exciting since it will offer management the opportunity to use its huge expertise in relatively low-risk exploration (*for further details please see page 6*).

Renewables

In February 2023, Petro Matad formed a joint venture with Wolfson Capital, Sunsteppe Renewable Energy (SRE), which will focus on renewable energy projects in Mongolia. Over the last two years, the partners have been ramping up activity, with three major projects being progressed to a bankable stage and ready to build status. These projects are the Choir Battery Storage project, the Oyu Tolgoi green hydrogen plants and an electricity export system to China (*for further details please see page 7*).

Finances

We estimate that, at the end of 2024, Petro Matad will have cash balances of approximately US\$2.5m. Starting to generate free cash flow, we believe that the company will start the year in a relatively strong position and be able to fund its exciting growth out of this *(for further details please see page 9)*.

Valuation

For valuing Petro Matad, we adopt the approach of a RENA (Risky Exploration Net Asset Value), which is derived from a DCF on the Heron oil field. This is based on a conservative Brent oil price assumption of US\$65/bbl. We use the Heron Base Development and add a risky 50% of the incremental value of the upside development case. We do not add any risky exploration given that we believe management is concentrating on building up oil production at the Heron field in 2025. We adjust for the balance sheet, with the company estimated to have net cash of US\$2.5m at the end of 2024. This offers a potential indicative risky valuation for Petro Matad of 12.0p/share, comprising approximately 9.3p/share for the Heron Base Development with a further 2.6p/share for the Heron Target Development upside and the cash balances. This analysis is for information purposes only and does not represent a target price. Investors should view any valuation in the context of their own assessments of the relevant risks *(for further details please see page 10)*.

SWOT Analysis

Strengths

One of Petro Matad's main strengths comes from its operations being located in Mongolia. Being onshore, the costs of exploration, production and development are low, and should therefore allow more protection against weaker oil prices than for many other E&P companies operating in higher-cost arenas such as offshore North Sea. On top of this, Mongolia has a relatively benign fiscal regime, especially for larger discoveries. Coupled with the low costs, this should allow Petro Matad to benefit from high-margin production. This in turn should allow shareholders to benefit substantially from any commercial production and new reserves and resources found.

With the experience gained in the upstream arena of Mongolia, we believe that Petro Matad is ideally positioned to successfully enter the country's renewable energy sector.

Weaknesses

One of Petro Matad's weaknesses is that it has only one major asset, the Heron field. This field has relatively complex geology, as was seen by the performance of the Heron-2 well, so will throw up some uncertainty with the development of this field. To mitigate this, Petro Matad is increasing its exploration portfolio and building up its renewable energy business.

Another weakness is transportation costs of the crude. Until the Mongolian refinery is up and running, crude produced will have to be trucked to a refinery in China, which will prove expensive. The start-up of the new domestic oil refinery in 2026 will allow the company to enjoy a significant reduction in these costs, although they will remain relatively high.

Opportunities

Petro Matad is one of the few international players to be involved in Mongolia. The company has developed strong relationships within the country and is now in a position whereby it could build up its presence further should this be required. To reflect this good reputation, Petro Matad received the 'Leading Explorer' award from the government.

Petro Matad has very significant upstream knowledge within Mongolia, which provides a significant competitive advantage when acquiring additional acreage. Any discovery will have a substantial impact on shareholder value. Once the company has increased production at Heron, much of the cash flow can be channelled into further exploration.

The company also has nearfield exploration around the Heron discovery. Although this may be modest in size, it can be cheaply tied into the development infrastructure that will be put into place, and so have a high unit impact on shareholder value.

Threats

The main threat to the business (as with all E&P companies) comes from the operating environment, especially the oil price. A fall in oil prices will affect the potential cash flows and hence the perceived valuation of the assets.

Another potential threat is that Petro Matad is solely focused on Mongolia and, as such, will be subject to any changes in the political climate within the country. That said, Mongolia has proved to be relatively stable over the last few decades since the 1990 democratic revolution, and we feel that this is currently a minor risk.

Heron

The Heron oil discovery was made in 2019 and lies to the north of Block XX, where Petro Matad is operator and has a 100% working interest. This is close to the PetroChina producing oil fields in Block XIX XXI, which are producing most of the country's 11,000 bbl/day of oil. The original discovery well, Heron-1, reached a peak flow of over 800 bbl/day with no formation water being produced.

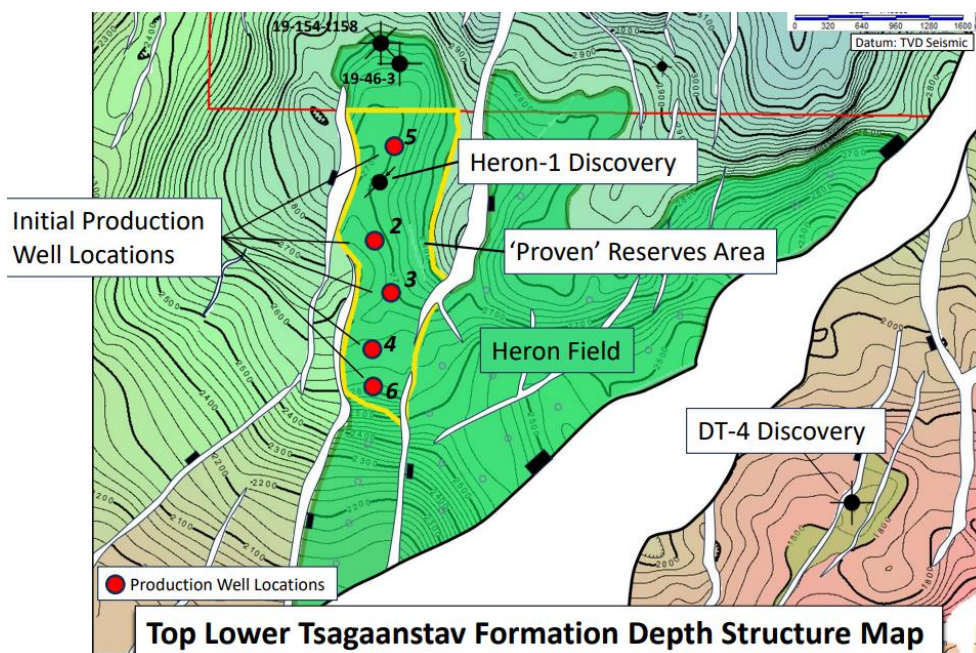
The recoverable reserves associated with this field are significant. If one assumes that the recovery rate is similar to that achieved by adjacent fields, the Heron field could contain recoverable reserves of 33 mmbbl. This is our 'base case' assumption and represents a recovery rate of a mere 17% of the estimated 194 mmbbl in place. This is very low. Management believes that using better well optimisation and with the utilisation of new technology, the recovery rate could get up towards 30%, which would imply recoverable reserves of approximately 58 mmbbl. This represents our 'upside scenario'. As the group establishes a production history, a better idea of the potential recovery factor will emerge.

Petro Matad has spent the last two years being held up with bureaucracy, with issues such as land access and permitting delaying the start-up of production at the Heron oil discovery. The company has managed to sort out most of this regulation, allowing the start of production in October 2024.

Heron-1 is now in production, and flowrates as high as the 821 bbl/day seen at the testing of the original exploration well have been achieved. The well has a higher level of associated gas than originally anticipated, which has led to greater-than-expected pressures, causing some teething problems at the very start. The well has been choked back to a level of 200-300 bbl/day to ensure integrity of the surface equipment and limit potential sand production. These rates are in line with management's pre-production aspirations. However, in light of the higher production rates achieved, the company is now looking at ways of modifying the surface equipment to allow sustained higher rates of production than originally anticipated. This optimisation of the wellhead equipment will be carried out over the winter months. The Heron-2 well was stimulated, but the company then suffered a surface mechanical failure that took seven days to repair. The well then flowed approximately 30 bbl/day and was a mixture of oil and stimulation fluid. Although this is disappointing compared with the Heron-1 well, it is in line with other wells located in the basin. This could suggest that there is low reservoir permeability and/or a down-hole issue. The well has been suspended and the data evaluation will be completed over the operational shutdown.

Over the course of 2025, Petro Matad will look to drill further production wells with the ambition of achieving a field production of 3,000-5,000 bbl/day within a couple of years. This well programme will very much be dependent on the analysis of the well data during the winter shutdown. If management finds that it can achieve 30% recovery, then it is believed that the Heron field could reach peak production of 9,000 bbl/day.

Heron field possible appraisal and development well programme



Source: Petro Matad

The crude oil produced at the field is being transported by truck to PetroChina’s facilities at the adjacent Block XIX, where it is processed, exported and sold. An agreement is close to final form with all the fees agreed. The final wording is being agreed and will be prepared for sign-off from the Mineral Resources and Petroleum Authority of Mongolia (MRPAM). Although it might take some time to get sign-off, it was agreed by all parties (Petro Matad, PetroChina and MRPAM) to start operations at the Heron field. The trucking and processing of crude oil will be relatively expensive (at approximately US\$12/bbl). However, the costs are likely to decline once Mongolia’s new refinery opens and provides a new closer market. This refinery is expected to be completed in Q2 2026. Heron will be linked to this by pipeline, which should allow a 20%-30% reduction in unit costs – although the tariff on the pipeline has not yet been formally agreed.

Nearfield exploration

Although management is focusing on ramping up production at the Heron field, there are significant nearfield exploration targets. These, if successful, can be easily and cheaply developed through the infrastructure at the Heron field once central facilities are in-place.

Gobi Bear

Petro Matad drilled the Gobi Bear prospect in October 2024. The well found good quality sands, and faint oil shows were seen. Although wireline logs indicated that there may be a hydrocarbon charge in the primary target, the lack of good oil shows has led to some uncertainty. The well has been suspended. Management will review the information from well samples taken and integrate this with data from other wells in the Tamsag basin to refine its interpretation before assessing the forward programme on this well.

Saiga

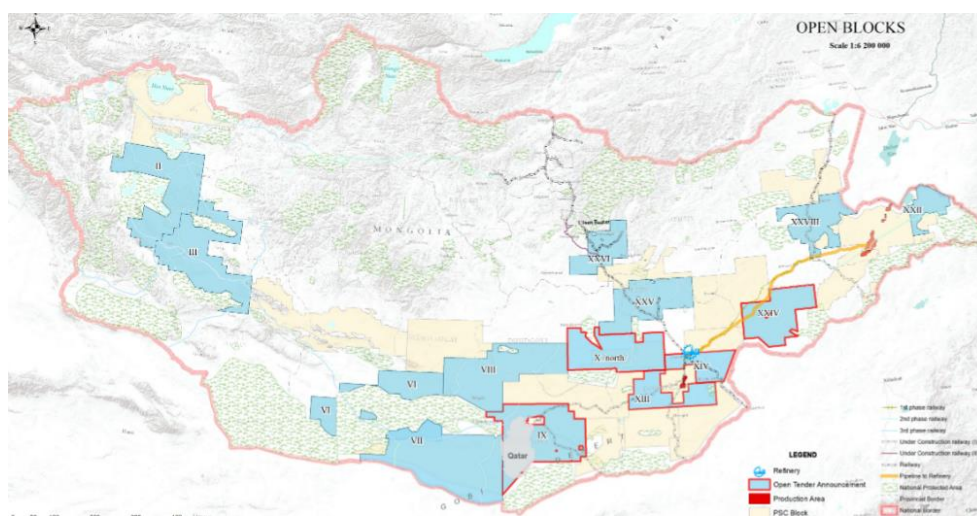
Saiga is a similar prospect to Heron and the well will test if oil from Heron spills over to charge the prospect. Management believes that, if successful, this prospect could have P50 prospective recoverable resources of 14.3 mmbbl. Management believes that the chance of success on this well is 57% given that the play is proven and the main risk is in the trapping mechanism.

New exploration licences

On top of the exploration potential around the Heron field, Petro Matad is eager to expand its exploration portfolio within Mongolia. We believe that the company is well positioned given the expertise that has been built up over the last decade with its operations within the country.

Mongolia had a licensing programme in 2022/23 and awards of the new PSCs (Production Service Contracts) are currently ongoing. The company has already been told that it has been awarded two new PSCs, with licences that cover extensions of basins that are producing in neighbouring China. This is exciting since it will offer management the opportunity to use its expertise in relatively low-risk exploration.

2022/23 MRPAM exploration block tender round

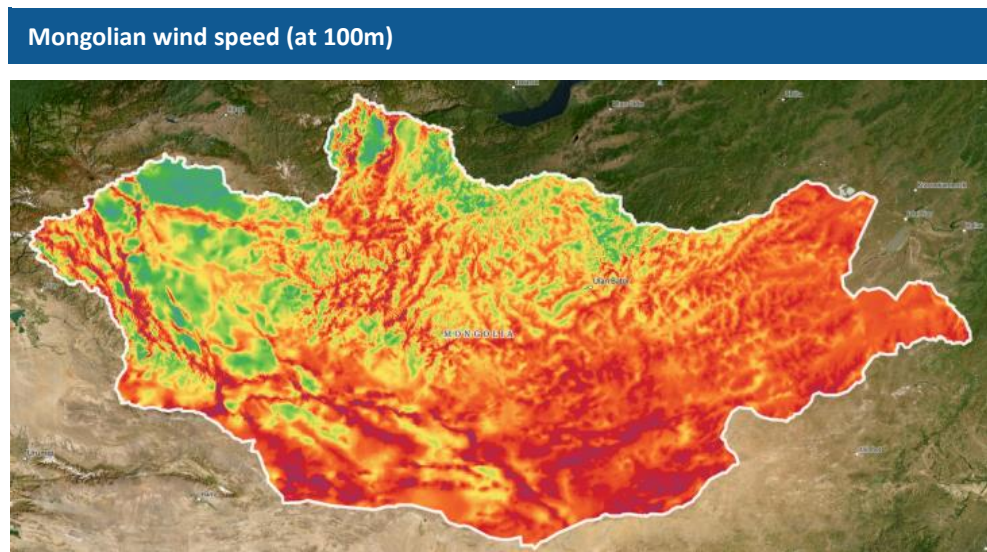


Source: MRPAM

Renewable energy

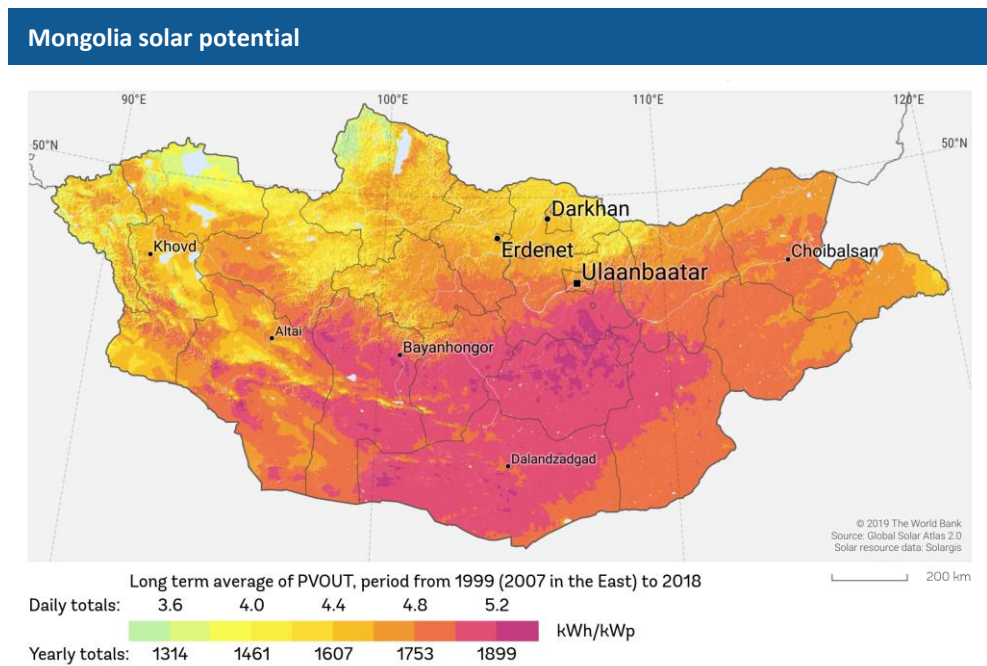
Mongolia is very keen to develop its renewable energy. At COP-26, there was a Presidential pledge to reduce the country’s greenhouse gas emissions by 23% by the end of 2030. The main driver of this is through targeting 30% of domestic power generation being derived from renewable sources. Mongolia is an ideal place for renewables, with huge tranches of flat lands allowing significant solar and wind power generation projects. According to estimates from the World Bank, Mongolia’s combined renewable generation potential in over 7,000 TWh/year – this is just short of the total generation capacity of China, which stands at over 8,300 TWh/year, and highlights the potential to supply the domestic market as well as the export potential.

The chart below shows wind speeds across Mongolia. The World Bank estimates the generating potential from wind is 2,550 TWh/year.



Source: World Bank Global Wind Atlas

The chart below shows the solar potential in Mongolia. The World Bank estimates the generating potential from solar is 4,774 TWh/year.



Source: World Bank Global Wind Atlas

In early 2023, Petro Matad announced that it had formed a joint venture, Sunsteppe Renewable Energy (SRE), with Wolfson Capital, a Mongolian focused renewable energy developer. Wolfson is an investment management company focusing on the Mongolian market and provides renewable experience, expertise and government contacts, while Petro Matad provides skills in project execution capability and in-country infrastructure. Over the course of the last two years, the partners have been ramping up activity. The joint venture has three main projects that it hopes to progress to a bankable stage and ready to build status over the course of 2025. With this significant momentum, we believe that SRE has the ability to continue to build its portfolio of projects.

Choir Battery Storage

The first potential project is a battery energy storage system, which is designed to help improve the stability of the electricity grid through the storage of energy at periods of high production (sunny and/or windy days) and the release back into the grid at peak demand. This will reduce the reliance of the country on importing high-cost electricity from China and Russia.

The partners are in consultation with the Ministry of Energy over the construction of a plant in Central Mongolia with storage of 50MW and delivery of 150MWh. The feasibility and grid connection studies have been completed, submitted to, and accepted by, the National Technology Committee of the Ministry of Energy. Once the committee's formal approval is on hand, this project could be onstream in 2025 and generating a double-digit rate of return. There is believed to be significant follow-up potential if this project proves to be viable.

Oyu Tolgoi green hydrogen

The second potential SRE project is looking at using a utility-scale wind farm to generate electricity to be used to manufacture green hydrogen that would be used to heat the facilities at the Oyu Tolgoi mine in the South Gobi. This one of the largest copper and gold accumulations in the world, and one of Rio Tinto's flagship developments. This initiative has the strong support of the Mongolian Government. An exclusive MOU (Memorandum of Understanding) has been signed between the mine and the Japanese Overseas Environmental Cooperation Centre (OECC) to develop this project. On the back of this, the partnership has been able to access Japanese Government grant funding for the project, with the potential of additional grants in due course. The project could also be up and running in 2025.

Electricity export to China

SunSteppe has signed a MOU with a major Chinese utility for the potential of exporting 1.5GW of electricity to China

Finances

At the interim stage (for the six months ending June 2024), Petro Matad had cash balances of US\$1.93m. However, in July the company completed a successful fundraising that raised gross proceeds of US\$9.4m, which was to fund the commencement of production at the Heron field and to move its renewables portfolio forward. We estimate that at the end of the year, cash balances will be approximately US\$2.5m. With the generation of free cash flow, we believe that the company will start the year in a relatively strong position.

Valuation

Methodology

For valuing E&P companies, we take the traditional approach of asset valuation that is used by the industry. Investors should therefore view any valuation in the context of their own assessments of the relevant risks. Valuation is derived through using a DCF (discounted cash flow) methodology to value the known fields and discoveries of the company. The field production profiles, capital expenditure and operating costs are modelled under the appropriate fiscal regime to give a cash flow profile, which is discounted to provide a net present value for each asset. We usually add an element of value for the risked exploration upside to give an indication of how this asset value may change over the next 12 months. The risk that we take is based on the play chances (reservoir, source and seal) coupled with the local chances (seal, migration and trap). There is also an adjustment for the balance sheet. Adding these together, we derive a RENAV (Risked Exploration Net Asset Value)

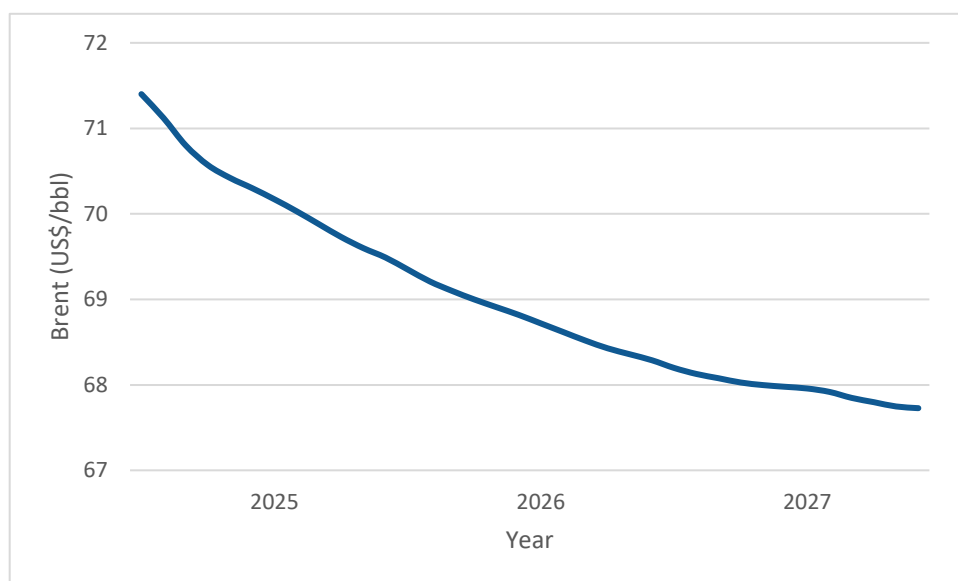
Commodity prices

Oil

We assume a flat oil price. In our base case, we use a conservative Brent oil price of US\$65/bbl. This is below the current level of approximately US\$73/bbl but is the level that the forward futures curve tends to gravitate to over the next few years. We provide a sensitivity analysis at the end of this section to allow investors to see the changes in the value of the assets under various oil price assumptions.

The crude oil discovered at Heron is a light crude (API 43.7), low sulphur (0.03%) but has a high wax content. We assume that initially this crude is likely to trade at a 5% discount to the Brent crude marker – a more accurate level will be seen once we have production history in 2025. This could also change further once the Mongolian refinery is up and running.

Forward Brent oil curve (US\$/bbl)



Source: ICE

Gas

It is not anticipated that there will be any commercial quantities of gas associated with the Mongolian oil fields. Even though there has been some associated gas, the lack of infrastructure will not make this commercial. We have therefore not forecast any value from gas.

Discount Rate & Exchange rates

The discount rate that we use in the valuation is the standard 10%. Although it could be argued that this should be adjusted to reflect the company's WACC (weighted average cost of capital), this is the standard rate that is widely used by the industry in making acquisitions. Investors might have differing views of the discount rate, and we provide sensitivities later in this note.

The oil and gas industry very much works in US dollars. Therefore, we have modelled the assets in US dollars and will translate this through at the current exchange rate to allow investors to see a sterling-based valuation. Sterling is currently trading at a USD/GBP level of approximately 1.26. A stronger US Dollar would prove to be beneficial for UK shareholders.

Heron development

We detailed the development plans earlier, and these are unchanged from previous assumptions. For the base-case scenario we have assumed capital expenditure of US\$251m, which covers the drilling of the wells (US\$160m), the facilities (US\$85m) and G & G/Seismic (US\$6m). The operating costs once the field is up and running are expected to be US\$10m per annum. With the target upside development, we have increased the facilities expenditure to US\$135m to leave total capital expenditure at US\$301m. The operating costs on the field are expected to rise to US\$15m. We have also assumed that the company has spent US\$57.7m on the field, which will be paid back through cost recovery.

Asset valuation

For the asset valuation, we take the value of the Heron Base Development, as there is still some uncertainty with the Heron Target Development. Although the reserves are in place, there are questions over the ability to get the recovery rate higher. We assume that there is a 50% chance of achieving this. As such, we add 50% of the incremental value of this development. We do not add any risked exploration given that we believe management is concentrating on building up oil production at the Heron field in 2025. We adjust for the balance sheet, with the company estimated to have net cash of US\$2.5m at the end of 2024.

The following table details the asset value we derive for Petro Matad. For the Heron Base Development, we derive a value of approximately 9.3p/share. The Heron Target Development and the cash balances add a further 2.6p/share. This gives a total risked valuation of 12.0p/share.

Petro Matad RENAV (p/share)

	Risking %	NPV (risky) US\$m	GBP	p/share
Fields				
Heron Base	100%	174.3	138.4	9.3
Exploitation upside				
Heron Target	50%	47.2	37.5	2.5
Cash	100%	2.5	2.0	0.1
Total		224.1	177.8	12.0

Source: Progressive Equity Research estimates

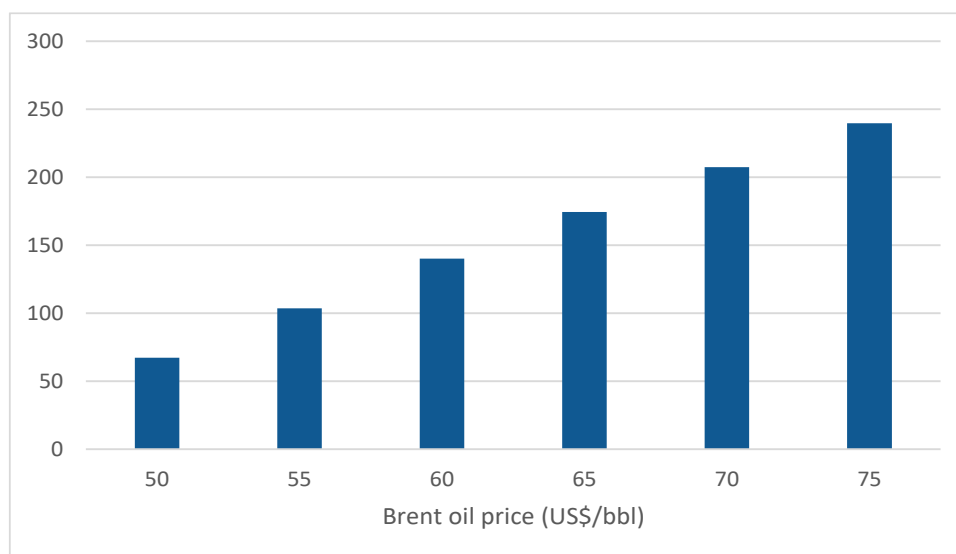
The above analysis is for information purposes only, and does not represent a target price. Investors should view valuation in the context of their own assessment of relevant risks.

Sensitivity

Oil

We base our core valuation on a US\$65/bbl oil price, but are aware that investors will have differing views. As such, we provide the value of the Heron field (Base Development) under differing oil prices. The chart below gives the value of the Heron field under flat oil prices. As can be seen, the field is very sensitive to the oil price. Although field development costs are low and the fiscal regime benign at very low oil prices, the impact of high transportation costs becomes apparent. Investors should also be aware that the improved well recoveries management is targeting in the upside scenario will improve the economics of the field and drive the breakeven oil price of the development substantially lower.

Heron Oil field NPV at differing flat Brent oil prices (US\$m)

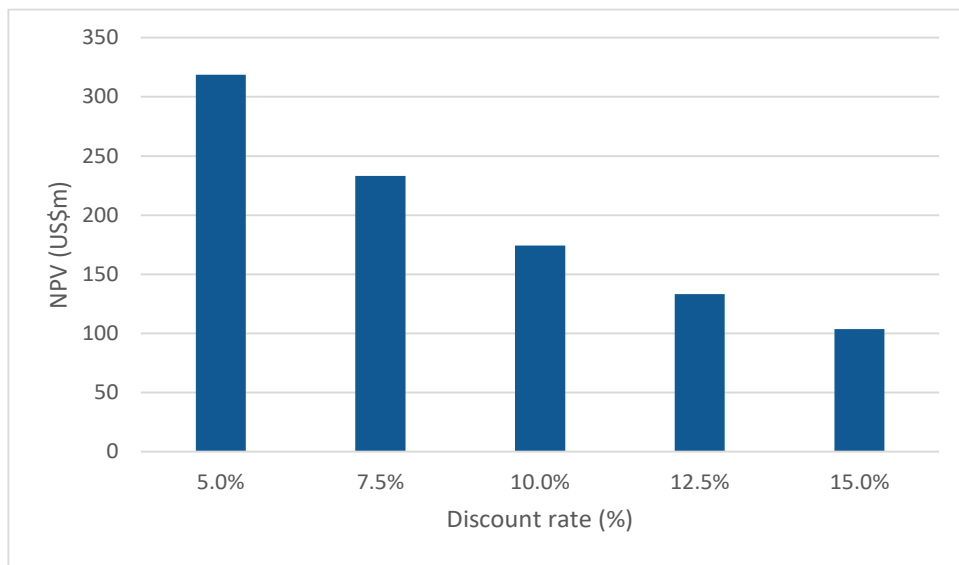


Source: Progressive Equity Research estimates

Discount rate

We base our core valuation on a 10% discount rate, but are aware that investors will have differing thoughts. The chart below gives the value of the base Heron field under differing discount rates. The field is very sensitive to the assumption of the discount rate given that there is significant upfront capital expenditure and a long production profile.

Heron Oil field NPV at differing discount rates (US\$m)



Source: Progressive Equity Research estimates

Disclaimers and Disclosures

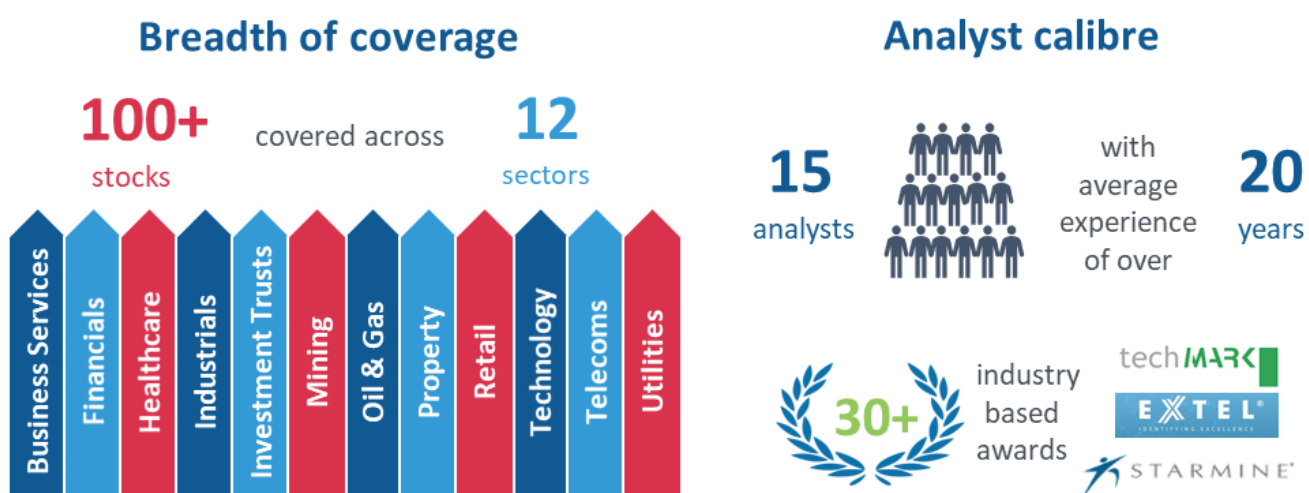
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