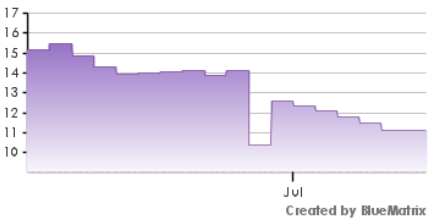
PANTHEON RESOURCES PLC (LON:PANR)

December 18, 2023

Oil & Gas Exploration & Production

52-WEEK HIGH	**£143.90**
52-WEEK LOW	**£10.10**
PRICE	**£11.25**
MARKET CAP MLN	£102.06

Share Price



Major Shareholders

Shares in issue	907,206,399
Avg Three-month trading volume	7,484,098

Company Information

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Pantheon Resources: Unlocking Alaska's oil wealth

Summary

Pantheon Resources engages in the exploration and production of oil and gas in Alaska. Based on management's investment plan, the net present value estimate of Pantheon Resources' main projects yields an expected return on an investment in the company over the next five years of 337%, equating to an annual return of 34%. Thus, an £1,000 investment is projected to yield £3,368 in five years. The shares have an adjusted beta that is 45% below the market (0.55 vs. 1), indicating a 'medium' degree of investment risk. Accordingly, if your desired annual rate of return is 34% or less over the next five years, then an investment in the company is considered to be a 'suitable' one.

Operations

Pantheon Resources has become a significant player in the Alaska North Slope oil sector, with a focus on the Kodiak and Ahpun oil projects. Since acquiring Great Bear Petroleum's assets in 2019, Pantheon has shifted its operations to Alaska, drawn by the region's immense oil potential. These projects, spread across approximately 259,240 acres, represent a substantial opportunity for oil exploration and production, with Pantheon holding a full 100% working interest. The Kodiak Project, with an independently assessed estimate of 1 billion barrels of recoverable oil, and the Ahpun Project, with a potential of 481 million barrels of recoverable oil, are central to the company's strategy for growth and market presence. Pantheon's approach includes sustainable development, strategic financing, and a targeted market value of $5-$10 per barrel by 2028. An estimated $25 billion phased investment underscores their commitment to these projects. The experienced board and management, with a history in the oil and gas sector, particularly in Alaska, guide the company's ambitious plans in a competitive and evolving market.

Market

The total addressable market (TAM) encompasses the global market for oil and gas exploration and production. Based on various assumptions, the estimated market size as of 3rd September 2023 stands at $5.3 trillion in revenue.

Financials

Pantheon Resources has consistently strengthened its financial position, showcasing a significant revenue increase, reduced losses, and a robust asset base. The company's strategic investments and financial decisions highlight a promising path towards future growth.

Risks

For us, currently, the biggest risk to the valuation of the company relates to the ability to adequately source sufficient funding to meet the company's working capital requirements (i.e. liquidity risk).

Valuation

Research suggests that in terms of estimating the expected return of an investment over a period of 12 months or more, the approach that is more/most accurate is the absolute valuation approach, so that's the approach that we suggest using to determine the estimated value of the company. Other key assumptions include: 1) the market value per barrel of recoverable resource is $7.5; the barrels of recoverable resource is 1.5 billion and the probability of success if 25%.

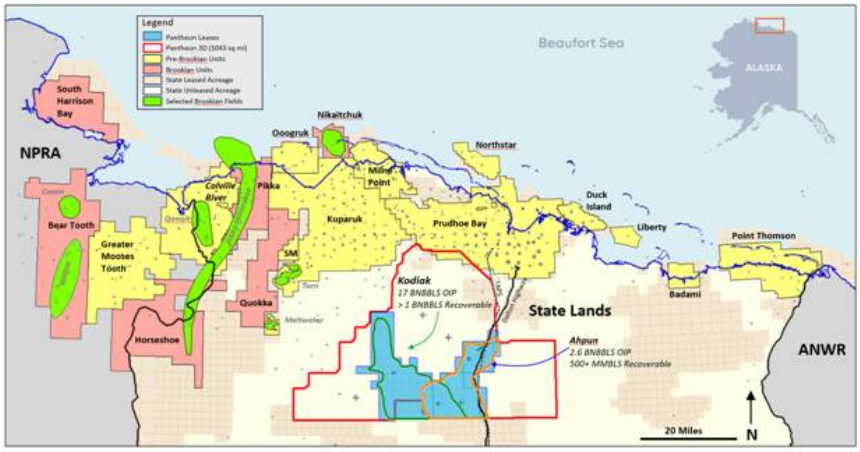
Operations

Pantheon Resources plc, founded in 2005, has evolved significantly from its origins as a UK-based exploration company focusing on onshore US basins, particularly in East Texas. This evolution took a pivotal turn in 2019 with the strategic acquisition of Great Bear Petroleum's assets, shifting the company's primary focus to the Alaska North Slope, a region known for its immense oil potential. The strategic decision to move operations from East Texas to Alaska was driven by the proximity to key Alaskan oil infrastructure and the substantial opportunities present in the region. The company has recently enhanced its position in this region with the successful acquisition of leases over Updip Kodiak and Ahpun's Eastern Potential, spanning an additional 66,240 acres.

Projects

The company's operational portfolio in Alaska is centred around two main projects: Kodiak and Ahpun. These projects are situated in a combined area of approximately 259,240 contiguous acres on the North Slope, offering a significant opportunity for oil exploration and production. Pantheon Resources holds a full 100% working interest in these projects, which collectively promise to yield a substantial amount of oil.

Location of Kodiak and Ahpun Projects

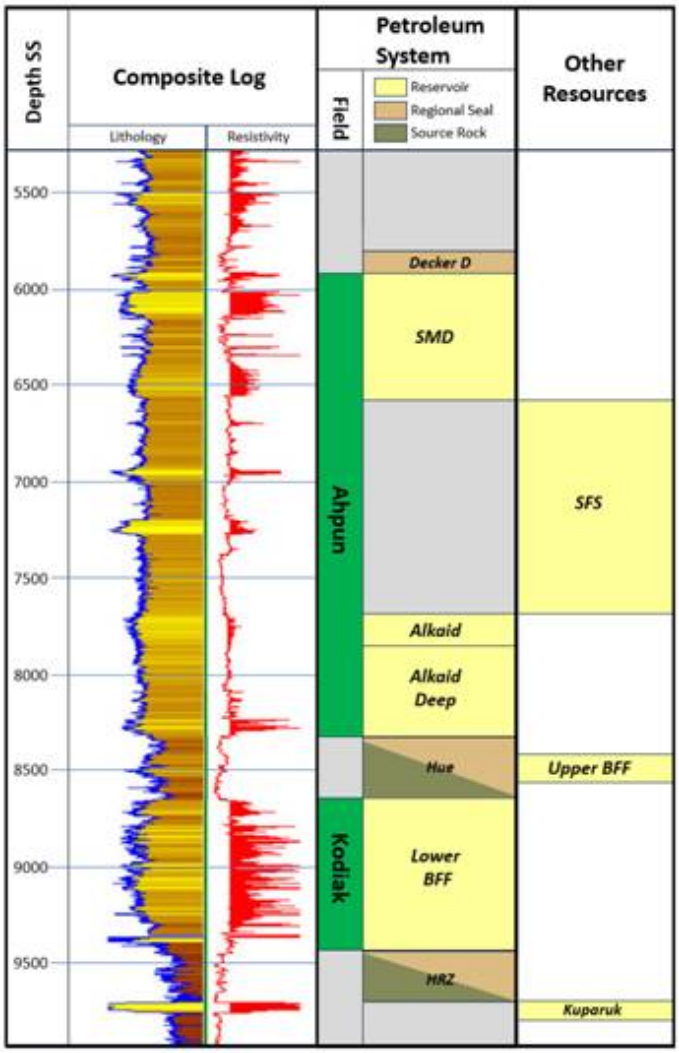


Source: The company.

Kodiak Project

The Kodiak Project, located in the resource-rich Alaska North Slope, is a cornerstone of Pantheon Resources' growth strategy. This project is strategically positioned near vital infrastructure such as pipelines and transportation routes, making it not only an asset of significant potential but also one of convenience and strategic value. The proximity to these infrastructural elements is crucial, as it reduces logistical challenges and enhances the project's overall feasibility. The recent acquisition of substantial additional acreage in the Western Kodiak area further enhances the strategic positioning and potential of the project. With pay zone quality expected to improve in the shallower regions to the north and west, the new leases significantly augment the project's prospects.

Kodiak Project Horizon (illustrative type log)



Source: The company.

An independent 2C contingent resource estimate from Netherland, Sewell & Associates, Inc. (NSAI) underscores the richness of the Kodiak Field, with close to 1 billion barrels of oil, condensates, and NGLs. This estimate is a beacon of the project's potential and a significant indicator of its capacity to contribute meaningfully to the oil market. The latest volumetric estimates for the newly acquired Western Kodiak leases, with a high estimate of 11,508 mmbbls of Gross OIP and 1,726 mmbbls of Gross Recoverable resources, further validate the richness of the field. These new estimates, combined with existing projections, point to an even more optimistic future for the Kodiak Project, with an increased total expected ultimate recovery (EUR). These substantial figures reflect not just the resource base but also Pantheon's ability to identify and capitalise on high-potential projects. The current resource estimate for Kodiak is based on sparse well locations in sub-optimal locations. Additional drilling in structurally higher locations targeting thicker and better reservoirs has the potential to significantly increase the resource size.

The development strategy for the Kodiak Project draws inspiration from the best practices in the Permian Basin, focusing on year-round operations facilitated by well pads connected by gravel roads. This approach reflects a commitment to operational efficiency and sustainability. The recent acquisition of additional leases enhances the scope of the development strategy, affirming Pantheon's commitment to creating a robust and resilient operational framework. With these acquisitions, the Final Investment Decision (FID) anticipated in 2028 is poised to be a critical milestone, setting the trajectory for the expanded project and its increased contribution to the company's growth.

Ahpun Project

The Ahpun Project, sharing the strategic geographic advantage with the Kodiak Project, is another key venture for Pantheon Resources. Its proximity to the Dalton Highway and the Trans Alaska Pipeline System (TAPS) provides significant logistical benefits, crucial for the efficient development and operation of oil projects. This advantageous positioning is expected to play a critical role in the project's

success and its contribution to the company's overall objectives. The recent acquisition of the eastern Ahpun leases, covering an additional 23,040 acres, further strengthens the project's strategic positioning and potential. These new leases open up prospects for higher quality, shallower reservoirs, with a Geological Chance of Success rated at 70%.

Pantheon's approach to resource categorisation for the Ahpun Project is marked by simplification and efficiency. By grouping all leases under two fields, Ahpun and Kodiak, and focusing on geologically younger reservoirs above the Hue Shale for Ahpun, the company has streamlined its operations. The new leases significantly augment the estimated resource potential of the Ahpun field, with preliminary estimates suggesting a high of 2,470 mmbbls of Gross OIP and 478 mmbbls of Gross Recoverable resources in these areas. This figure is dynamic and may evolve as more data becomes available from ongoing appraisals and evaluations, including the anticipated contributions from the newly acquired leases. This adaptable and data-driven approach to resource estimation reflects Pantheon's commitment to precision and responsiveness in its operations.

The strategic development plan for Ahpun is characterised by a two-stage process. The first stage aims to exploit reserves accessible from the Dalton Highway and TAPS, with an estimated yield of 200-300 million barrels. The acquisition of the new leases is expected to significantly impact the scope and yield of this initial phase. This phase, bolstered by the new leases, sets a solid foundation for the project's long-term success and revenue generation. The subsequent phase will extend the scope of operations to reserves located further south and west. With the addition of the new leases, the target to reach the Final Investment Decision by the end of 2025 and commence production in 2026 is poised to have an even more significant impact on Pantheon's growth and the energy sector at large.

Operational excellence and long-term vision

Pantheon Resources' operational approach for both the Kodiak and Ahpun projects is reflective of its commitment to excellence and sustainability. Inspired by the successful practices in the Permian Basin, the company plans to conduct year-round operations from well pads connected by gravel roads. This approach is designed to optimise operational efficiency and ensure the sustainability of the projects. The recent acquisition of additional leases in both Kodiak and Ahpun fields further solidifies the scope and potential of these projects. With the addition of approximately 66,240 acres, the development now involves a broader area, offering more opportunities for extraction, gas, and water injection.

The comprehensive development of both fields, involving over 2,000 wells for extraction, gas, and water injection, represents a massive undertaking. The estimated cost of approximately $25 billion for this development highlights the scale and ambition of Pantheon's vision. This figure is expected to be refined in light of the recent expansions, emphasising the company's strategic financial planning and its focus on creating value through sustainable growth.

The development of the Kodiak and Ahpun projects is not just a business venture for Pantheon Resources; it is a reflection of the company's broader vision for the oil industry. These projects symbolise the company's commitment to exploring and developing resources in a manner that is both economically viable and environmentally responsible. The latest lease acquisitions are a testament to this commitment, as they represent a significant step in Pantheon's strategy to maximize the value of its assets while adhering to principles of environmental responsibility. Both projects are located in a defined area of petroleum development on the North Slope of Alaska hence not subjected to environmental objections and interference by Federal regulators.

In conclusion, the Kodiak and Ahpun projects are pivotal to Pantheon Resources' strategy and future in the oil industry. They represent the company's ambition, capability, and commitment to leveraging its assets for maximum output and sustainable growth. The recent expansions in the Kodiak and Ahpun projects, marked by the significant acquisition of new leases, have enhanced the scale and potential of these ventures. With substantial resource estimates, a strategic operational approach, and well-defined development plans, these projects are set to play a critical role in shaping Pantheon's future and its position in the global oil market. As Pantheon Resources continues to navigate the complexities of oil exploration and production, the Kodiak and Ahpun projects stand as beacons of its ambition and capability to make a lasting impact in the sector.

Strategy

Pantheon Resources' strategy, as outlined in their latest updates and reports, reflects a comprehensive and evolving approach to their oil and gas projects in Alaska, particularly focusing on the Ahpun and Kodiak fields.

1. **Strategic goals and financial targets:** Pantheon aims for sustainable market recognition, targeting a value of $5-$10 per barrel of recoverable resource by 2028. Their strategy has shifted from initially seeking to attract a buyer or partner to a more diversified approach, considering various financing alternatives like debt, equity, and joint ventures. The recent lease acquisitions in Kodiak and Ahpun fields are a key part of this diversified strategy, expanding the potential for resource recovery and enhancing the company's market position.
2. **Field development and production plans:** The company's refreshed strategy involves bringing the Ahpun field online in 2026, with a Final Investment Decision (FID) planned by the end of 2025. The development of Ahpun is expected to occur in two stages, with the first stage targeting the recovery of 200-300 million barrels of oil. The addition of the eastern Ahpun leases is expected to significantly influence these development plans. The company also plans to complete the appraisal of the Kodiak field, requiring an additional three wells, ahead of its planned FID in 2028. The recent acquisition of additional Kodiak leases is integral to this appraisal and development plan.
3. **Resource estimation and field definitions:** Pantheon has streamlined its resource estimation process by implementing a new naming convention, consolidating its leases into two fields: Ahpun and Kodiak. The inclusion of the new leases into these field definitions will further refine the resource estimation and simplify operational management.
4. **Capital investment and funding:** The development of Ahpun and Kodiak is a significant undertaking, expected to require over 2,000 wells and cost approximately $25 billion. This figure may be revised in light of the recent lease acquisitions, which broaden the scope of development. Pantheon plans to cover these costs through production revenues, debt, and three main pillars of equity capital reduction: vendor financing, off-taker financing, and reserves-based lending.
5. **Sarbanes-Oxley compliance and US listing:** Pantheon is working on a transition program to achieve Sarbanes-Oxley compliance in preparation for a potential US stock market listing in 2025. This compliance is even more crucial given the expanded scope of the company's operations and its increased asset base.
6. **Development approach:** The development of discovered resources will mirror practices in the Permian Basin, with year-round operations from well pads connected by gravel roads. The transition from Ahpun to Kodiak development will be based on economic considerations, with capital allocation focusing on the highest-value wells or clusters of wells.
7. **Continued analysis and appraisal:** Pantheon is actively analysing and appraising its resources, with Netherland, Sewell & Associates, Inc. (NSAI) developing resource estimates for Ahpun and delivering an independent contingent resource estimate for the Kodiak Field. The addition of new lease areas will be an important factor in these ongoing analyses and appraisals.

In summary, Pantheon Resources' strategy is characterised by a focus on achieving sustainable market value, meticulous field development and resource estimation, strategic financing, compliance and listing preparation, and thorough resource analysis and appraisal. The recent lease acquisitions in the Kodiak and Ahpun fields represent a significant stride in this strategy, underlining the company's commitment to maximising the value of its assets while adapting to the evolving market landscape.

Team

Pantheon boasts a seasoned board and a robust advisory group, all of whom are shareholders with established track records in the oil and gas sector. They have a rich history of building profitable companies for acquisition. Additionally, Pantheon's board and management team have extensive experience with oil and gas operations in Alaska.

David Hobbs, executive chairman

- **Experience:** Graduated as a Petroleum Engineer from Imperial College in 1984. Worked at British Gas, Monument Oil & Gas, and Hardy Oil and Gas. Former Chief Energy Strategist at Cambridge Energy Research Associates (CERA) and part of the leadership team at King Abdullah Petroleum Studies and Research Center (KAPSARC) in Riyadh, Saudi Arabia.
- **Education:** Petroleum Engineer from Imperial College.
- **Prominent roles:** Drilling engineer at British Gas; commercial and business development roles at Monument Oil & Gas and Hardy Oil and Gas; Chief Energy Strategist at CERA; leadership role at KAPSARC.
- **Pantheon committees:** Details to be confirmed.
- **Current directorships:** SV-Pleione Limited, Polar Energy LLC.

Jay Cheatham, chief executive

- **Experience:** Over five decades encompassing all aspects of the petroleum business.
- **Prominent roles:** Senior Vice President and District Manager for ARCO's eastern District; President of ARCO International; President and CEO of Rolls-Royce Power Ventures.
- **Specialties:** Operational expertise with significant financial acumen; formerly served as CFO for ARCO's Oil & Gas, and CEO of Petrogen Fund.
- **Pantheon committees:** Member of the Remuneration and Nominations, Audit, Conflicts, and Anti-Corruption and Bribery Committees.

Justin Hondris, director of finance and corporate development

- **Experience:** Over 15 years in public company management, specifically in the upstream oil and gas sector.
- **Background:** Corporate finance, private equity, and capital markets in the UK and internationally; previous private equity involvement.
- **Responsibilities:** Manages Pantheon's financial, legal, administrative, and corporate development functions.
- **Pantheon committees:** Chairs the Anti-Corruption and Bribery Committee. Member of the Remuneration and Nominations and Conflicts Committees.

Robert (Bob) Rosenthal, technical director

- **Experience:** Over 40 years globally as an Exploration Geologist and Geophysicist.
- **Key roles:** Senior exploration roles at Exxon and BP, gaining expertise in the geology of North Slope of Alaska and Texas.
- **Current engagement:** Since 1999, he has operated a successful consulting business, leading exploration initiatives for various private and public entities.

Jeremy Brest, non-executive director

- **Experience:** Over 25 years in investment banking and financial advisory.
- **Current & past roles:** Founder of Framework Capital Solutions, a boutique advisory firm; Former head of structuring for Indonesia at Credit Suisse and a derivatives trader at Goldman Sachs.
- **Pantheon committees:** Member of the Audit, Remuneration and Nominations, Conflicts, and Anti-Corruption and Bribery Committees.

Allegra Hosford Scheirer, non-executive director

- **Experience:** Internationally recognised expert in petroleum system analysis with significant experience in basin modelling, organic geochemistry, geophysical techniques, and machine learning. Evaluated numerous oil and gas provinces globally, including the Alaska North Slope.
- **Education:** Ph.D. in marine geology and geophysics from the Massachusetts Institute of Technology.
- **Prominent roles:** Scientist at Stanford University for 15 years; worked with the Energy Resources Program at the U.S. Geological Survey ("USGS"); independent adviser for Great Bear Petroleum.
- **Pantheon committees:** Details to be confirmed. Current Directorships: Geomodelling Solutions LLC.

Linda Havard, non-executive director

- **Experience**: Over 35 years in executive roles across public oil and gas, and entertainment industries. Former CFO at Gensler and various senior roles at ARCO (now BP Amoco).
- **Education**: MBA in Finance from UCLA; PhD (honoris causa) in Business from the Chicago School of Professional Psychology.
- **Other roles**: Board member at Lyondell Petrochemical Company, Federal Reserve Board CFO Panel in Atlanta, and International Women's Forum.
- **Pantheon role**: Chair of the Finance, Audit & Risk Committee.
- **Current trusteeship**: Havard Family Trust.
- **Past directorship (Last five years)**: M. Arthur Gensler & Associates.

Market

Total addressable market

The Total Addressable Market (TAM) encompasses the global market for oil and gas exploration and production. This includes every potential consumer or business that might utilise or purchase oil and gas. Based on various assumptions, the estimated market size as of 22nd November 2023 stands at $5.3 trillion in revenue.

Serviceable available market

The Serviceable Available Market (SAM) focuses on the oil and gas exploration and production market within the Alaskan North Slope. Given certain assumptions, the market size on 22nd November 2023 is quantified as 3.6 billion barrels of oil and 8.9 trillion cubic feet of conventional natural gas resources. This translates to an approximate revenue of $242.7 billion.

Serviceable obtainable market

The Serviceable Obtainable Market (SOM) is specific to the Alaskan North Slope oil and gas exploration and production sectors where the company has lease licences.

Assuming the company has a significant but not dominant presence in the region, a reasonable estimate might be that they could capture somewhere between 10% to 20% of the Serviceable Available Market (SAM). This estimation takes into account factors like market share, competitive positioning, and operational capabilities in the region.

- At a 10% capture rate, the SOM revenue would be around $24.27 billion.
- At a 20% capture rate, the SOM revenue would be around $48.54 billion.

Therefore, a conservative educated guess for the SOM revenue, as of 22nd November 2023, could range from $24.27 billion to $48.54 billion.

Financials

Most recent

After the interim results period-end, the company raised approximately $22 million, net of fees, on 16th May 2023.

On 15th June 2023, to address its obligations for the senior unsecured convertible bonds due 2026, the company settled a quarterly principal of US$2.45 million and interest of US$367,500 by issuing 15,172,320 new Ordinary Shares. This arrangement reduces the Convertible Bond's outstanding principal to US$34.30 million.

On 7th September 2023, Pantheon Resources plc announced a private placement of 11.9 million new shares at £0.1878 each, raising $2.793 million from IPGL Limited. The amount will be used to cover a bond repayment, making the placement cash-neutral for Pantheon. The new shares, constituting 1.3% of the pre-placement share capital, will be issued around 29 September 2023.

Accordingly, since the company's interim results, the company has raised a total of $27.243 million.

Interim results

Profit and loss highlights:

- In the first half of 2022, Pantheon Resource reported a revenue of $455,309, marking a significant improvement from the previous year.
- The company managed to reduce its loss before taxation from $(5,945,537) in 2021 to $(2,319,073) in 2022, showcasing a commendable 61% reduction.
- The loss per share from continuing operations also saw a positive decline, moving from (0.66)¢ in 2021 to (0.21)¢ in 2022.

Balance sheet highlights:

- Non-current assets witnessed a substantial increase, with exploration & evaluation assets growing from $195,662,187 in 2021 to $274,321,398 in 2022.
- Total assets rose from $288,609,016 in 2021 to $293,546,363 in 2022, indicating a stronger asset base.
- The company's net assets grew by approximately $20 million, reaching $248,178,354 in 2022.

Cash flow highlights:

- While there was a net outflow from operating activities of $(6,722,549) in 2022, the company secured proceeds from share issues amounting to $1,756,018.
- The company's cash position remains robust, ending the year with cash and cash equivalents of $16,335,677.

In summary, Pantheon Resources has showcased significant improvements in its financial position, with a notable increase in revenue, a substantial reduction in losses, and a strengthened asset base. The company's strategic investments and financial decisions indicate a positive trajectory for future growth.

Interim Profit and loss

Year	2021	2022
Currency	USD	USD
Continuing operations		
Revenue	-	455,309
Production royalties	-	-57,101
Facilities commissioning and operations	-	-837,503
Cost of sales	-	-183,296
Gross loss	-	-622,590
Administration expenses	-3,150,888	-3,699,831
Share Based payment expense	-2,013,966	-2,935,897
Operating loss	-5,174,854	-7,258,318
Convertible Bond - Interest Expense	-570,295	-3,151,102
Convertible Bond - Revaluation of Derivative Liability	-200,531	7,937,855
Interest receivable	143	152,492
Loss before taxation	-5,945,537	-2,319,073
Taxation	1,497,945	743,097
Loss for the year	-4,447,592	-1,575,796
Other comprehensive income for the year		
Exchange differences from translating foreign operations	844,484	-97,473
Total comprehensive loss for the year	-3,603,108	-1,673,449
Loss per share from continuing operations:		
Basic and diluted loss per share	(0.66)¢	(0.21)¢

Source: The company.

Interim balance sheet

Year	2021	2022
Currency	USD	USD
Assets		
Non-current assets		
Exploration & evaluation assets	195,662,18	274,321,39
Property, plant and equipment	4,245	66,199
Total non-current assets	195,666,43	274,387,59
Current assets		
Trade and other receivables	275,315	2,823,089
Cash and cash equivalents	92,667,269	16,335,676
Total current assets	92,942,584	19,158,765
Total assets	288,609,01	293,546,36
Liabilities		
Current liabilities		
Convertible Bond – Debt	-	9,929,027
Trade and other payables	1,120,647	6,336,999
Provisions	1,250,000	5,282,866
Lease Liabilities	4,702	60,007
Other Liabilities	-	-
Deferred tax liability	2,207,792	940,306
Total current liabilities	4,583,141	22,549,205
Non-current liabilities		
Lease Liabilities	-	2,956
Convertible Bond – Debt	39,734,584	19,228,219
Convertible Bond – Derivative	16,023,781	3,587,629
Total non-current liabilities	55,758,365	22,818,804
Total liabilities	60,341,506	45,368,009
Net assets	228,267,51	248,178,35
Equity		
Capital and reserves		
Share capital	10,418,381	10,848,761
Share premium	249,429,60	272,264,41
Retained losses	-40,778,990	-49,647,328
Currency reserve	2,079,046	395,605
Share based payment reserve	7,119,470	14,316,906
Shareholders' equity	228,267,51	248,178,35

Source: The company.

Interim cash flow

Year	2021	2022
Currency	USD	USD
Net outflow from operating activities	-2,446,588	-6,722,549
Cash flows from investing activities		
Interest received	143	152,492
Funds used for drilling, exploration and leases	-6,707,468	-36,601,678
Advance for Performance Bond	-	-
Interest paid	-7,961	-
Property, plant and equipment	-	-3,033
Net cash outflow from investing activities	-6,715,286	-36,452,218
Cash flows from financing activities		
Proceeds from share issues	42,140,595	1,756,018
Issue costs paid in cash	-946,710	-
Proceeds from Convertible Bond	55,000,000	-
Repayment of borrowing and leasing liabilities	-28,218	-29,696
Net cash inflow from financing activities	96,165,667	1,726,323
Increase in cash & cash equivalents	87,003,793	-41,448,445
Cash and cash equivalents at the beginning of the year	5,663,476	57,784,121
Cash and cash equivalents at the end of the year	92,667,269	16,335,677

Source: The company.

Full-year results

Pantheon Resources has demonstrated a dynamic financial journey over the past five years. While there have been challenges, particularly in the profit and loss segment, the company has showcased significant strengths in its balance sheet and cash flow, which are indicative of its resilience and potential for future growth.

Profit and loss:

1. **Revenue and gross profit:** It's evident that the company faced a decline in revenue from 2018 to 2019, and there has been no revenue recorded from 2020 to 2022. However, it's worth noting that the company managed to maintain a positive gross profit in 2018, which suggests operational efficiency during that period.
2. **Operating loss:** While the operating loss has increased over the years, it's essential to consider the significant gain on bargain purchase in 2019, which led to a positive loss before taxation that year.
3. **Loss per share:** The loss per share from continuing operations has been fluctuating, but it's worth noting that the loss has been narrowing down, especially when comparing 2018 to 2021.

Balance Sheet:

1. **Assets:** The company's non-current assets, particularly exploration & evaluation assets, have seen a consistent rise from 2018 to 2022, indicating a strong investment in future growth opportunities. The total assets have almost quintupled from 2018 to 2022, which is a positive sign of the company's expanding asset base.
2. **Liabilities:** While there has been an introduction of convertible bond-related liabilities in 2022, the company's total liabilities as a percentage of total assets remain relatively low, suggesting a manageable debt level.
3. **Net assets:** The net assets have been on a consistent rise, nearly quadrupling from 2018 to 2022, which is indicative of the company's growing intrinsic value.

Cash Flow:

1. **Operating activities:** The net outflow from operating activities has been decreasing, especially from 2020 to 2022, indicating improving operational efficiency.
2. **Investing activities:** While there's been a significant outflow due to investments in drilling, exploration, and leases, this can be viewed as a strategic move to bolster future production and revenue streams.

3. **Financing activities:** The company has seen a consistent inflow from financing activities, especially with a substantial increase in proceeds from share issues and the introduction of proceeds from the Convertible Bond in 2022. This indicates strong investor confidence and access to capital for the company.
4. **Cash position:** The cash and cash equivalents at the end of the year have seen a monumental rise from 2018 to 2022, with a tenfold increase from 2018, showcasing the company's robust liquidity position.

Conclusion: While Pantheon Resources has faced challenges in its revenue and profitability segments, its strong asset growth, manageable liabilities, and robust cash position indicate a company that is strategically positioning itself for future growth. The consistent investment in exploration and evaluation assets suggests a forward-looking approach, aiming to tap into new revenue streams. The company's financials, when viewed holistically, present a picture of resilience, strategic investment, and potential for future growth.

Profit and loss

Year	2018	2019	2020 (restated)	2021	2022
Currency	USD	USD	USD	USD	USD
Year since incorporation	13	14	15	16	17
Continuing operations					
Revenue	1,009,570	724,589	-	-	-
Production royalties	-244,783	-205,458	-	-	-
Depletion of developed oil & gas assets	-88,293	-148,485	-	-	-
Cost of sales	-562,986	-737,208	-	-	-
Gross profit/(loss)	113,508	-366,562	-	-	-
Administration expenses	-1,922,917	-3,438,239	-3,667,635	-5,034,361	-7,430,653
General & Administrative expenses – Vision	-	-1,744,730	-	-	-
Impairment of exploration & evaluation assets	-6,805,537	-34,138,156	-130,112	-	-
Share Based payments expense	-	-	-	-3,211,038	-8,256,575
Impairment of developed oil & gas assets	-	-13,092,684	-	-	-
Impairment of property plant and equipment	-	-1,397,950	-	-	-
Impairment of Goodwill	-	-796,236	-	-	-
Depreciation of production & pipeline facilities	-145,516	-275,665	-	-	-
Operating loss	-8,760,462	-55,250,222	-3,797,747	-8,245,400	-15,687,228
Convertible Bond - Interest Expense	-	-	-	-	-4,640,537
Convertible Bond - Revaluation of Derivative Liability	-	-	-	-	4,310,773
Gain on bargain purchase	-	100,757,286	-	-	-
Less: deferred tax thereon	-	-28,783,396	-	-	-
Interest receivable	6,858	25,781	23,759	4,234	42,674
Loss before taxation	-8,753,604	16,749,449	-3,773,988	-8,241,165	-15,974,318
Taxation	-	18,757,633	965,681	1,573,094	2,022,334
Loss for the year from Continuing Operations after Taxation	-	-	-2,808,307	-6,668,071	-13,951,984
Loss for the year from discontinued operations	-	-	-14,170,288	-54,415	-
Loss for the year	-8,753,604	35,507,082	-16,978,595	-6,722,487	-13,951,984
Other comprehensive income for the year Exchange differences from translating foreign operations	277,183	-179,284	-47,800	1,503,199	-741,484
Total comprehensive loss for the year	-8,476,421	35,327,798	-17,026,395	-5,219,288	-14,693,468
Loss per share from continuing operations:					
Basic and diluted loss per share	(3.72)¢	10.54¢	(0.56)¢	(1.17)¢	(1.93)¢
Loss per share from discontinued operations:					
Basic and diluted loss per share	-	-	(2.83)¢	(0.01)¢	-

Balance sheet					
Year	2018	2019	2020	2021	2022
Currency	USD	USD	USD	USD	USD
Year since incorporation	13	14	15	16	17
Assets					
Non-current assets					
Exploration & evaluation assets	43,498,422	160,887,260	156,097,609	188,954,719	237,722,294
Developed oil & gas assets	13,736,007	6,961,445	-	-	-
Property, plant and equipment	2,237,698	2,494,464	658,898	30,308	91,691
Total non-current assets	59,472,127	170,343,169	156,756,507	188,985,027	237,813,985
Current assets					
Trade and other receivables	700,939	1,843,649	74,167	109,876	2,498,447
Cash and cash equivalents	3,399,290	1,853,986	4,802,965	5,663,477	57,784,121
Total current assets	4,100,229	3,697,635	4,877,132	5,773,353	60,282,568
Total assets	63,572,356	174,040,804	161,633,639	194,758,380	298,096,553
Liabilities					
Current liabilities					
Convertible Bond – Debt	-	-	-	-	10,001,704
Trade and other payables	316,976	1,410,347	388,092	1,107,090	6,377,986
Provisions	-	1,335,863	1,335,863	1,250,000	5,285,440
Lease Liabilities	-	-	46,311	32,788	60,297
Other Liabilities	-	-	-	-	1,964,441
Deferred tax liability	-	10,025,763	5,293,296	3,705,737	1,683,403
Total current liabilities	316,976	12,771,973	7,063,562	6,095,615	25,373,271
Non-current liabilities					
Lease Liabilities	-	-	27,914	-	30,004
Convertible Bond – Debt	-	-	-	-	20,474,664
Convertible Bond – Derivative	-	-	-	-	12,816,226
Total non-current liabilities	-	-	27,914	-	33,320,894
Total liabilities	316,976	12,771,973	7,091,476	6,095,615	58,694,166
Net assets	63,255,380	161,268,831	154,542,163	188,662,765	239,402,388
Equity					
Capital and reserves					
Share capital	3,852,673	7,966,075	8,568,721	9,739,203	10,720,459
Share premium	106,678,805	164,044,720	173,687,092	208,683,936	264,879,196
Retained losses	-48,137,398	-12,630,316	-29,608,911	-36,331,398	-48,466,591
Currency reserve	-41,554	-220,838	-268,637	1,234,562	493,078
Share based payment reserve	902,854	2,163,898	2,163,898	5,336,462	11,776,246
Non controlling interests	-	-54,708	-	-	-
Shareholders' equity	63,255,380	161,268,831	154,542,163	188,662,765	239,402,388

Source: The company.

Cash flow statement

Year	2018	2019	2020	2021	2022
Currency	USD	USD	USD	USD	USD
Year since incorporation	13	14	15	16	17
Net outflow from operating activities	-2,082,803	-5,513,085	-5,707,802	-3,098,495	-941,506
Cash flows from investing activities					
Interest received	6,858	25,781	25,881	4,295	42,674
Funds used for drilling, exploration and leases	-10,679,594	-10,579,750	-1,591,591	-24,973,399	-45,267,175
Developed oil & gas assets	-495,183	-523,934	-	-	-
Decommissioning Provision (Exploration & Evaluation)	-	676,464	-	-	-
Decommissioning Provision (Developed Oil & Gas Assets)	-	409,400	-	-	-
Advance for Performance Bond	-	-	-	-	-2,400,000
Property, plant and equipment	208,682	-312,637	-	-	-3,368
Acquisition of a subsidiary (Great Bear), net of cash acquired	-	-6,098,215	-	-	-
Acquisition of a subsidiary, (Vision Resources LLC) net of cash acquired	-	1,920	-	-	-
Disposal	-	-	-1,134	-	-
Net cash outflow from investing activities	-10,959,237	-16,400,971	-1,566,844	-24,969,105	-47,627,869
Cash flows from financing activities					
Proceeds from share issues	12,596,484	21,259,057	10,816,383	30,181,084	46,739,796
Issue costs paid in cash	-537,360	-890,304	-571,364	-1,197,275	-994,694
Proceeds from Convertible Bond	-	-	-	-	55,000,000
Repayment of borrowing and leasing liabilities	-	-	-21,394	-55,698	-55,083
Net cash inflow from financing activities	12,059,124	20,368,753	10,223,625	28,928,111	100,690,020
Increase in cash & cash equivalents	-982,916	-1,545,304	2,948,979	860,511	52,120,645
Cash and cash equivalents at the beginning of the year	4,382,206	3,399,290	1,853,986	4,802,965	5,663,476
Cash and cash equivalents at the end of the year	3,399,290	1,853,986	4,802,965	5,663,476	57,784,121

Source: The company.

Risks

As with any investment, investing in Pantheon Resources carries a level of risk. Overall, based on Pantheon Resources adjusted beta (i.e. 0.55), the degree of risk associated with an investment in the company is 'medium'.

Here, to estimate the adjusted beta, we used the iShares MSCI World ETF to represent the market portfolio; and in terms of the time period and frequency of observations, we used five years of monthly data (i.e. 60 observations in total), which is supported by a study and is the most common choice. The beta value in a future period has been found to be on average closer to the mean value of 1.0, and because valuation is forward-looking, it is logical to adjust the raw beta so it more/most accurately predicts a future beta. In addition, here, we have assumed that for an investment to be considered 'medium' risk, it must have a beta value of between 0.5 and 1.5. Further information about the beta ratings can be found in the appendix section of this report.

The key risks can be found below. For us, currently, the biggest risk to the valuation of the company relates to the ability to adequately source sufficient funding to meet the company's working capital requirements (i.e. liquidity risk).

1. **Liquidity risk:** The primary liquidity risk is the ability to adequately source sufficient funding to meet the company's working capital requirements. Funding availability, and hence risk, within the capital markets remain volatile.
2. **Oil & gas price risk:** Future oil and gas sales revenues are subject to the volatility of the underlying commodity prices throughout the year. Over the past year, the energy sector has been impacted by volatility in commodity prices, which may continue to impact the group going forward.
3. **Currency risk:** Most capital expenditures for the year (and future years), as well as possible future operational revenues from oil sales, were or will be denominated in US dollars. The group keeps the majority of its cash resources denominated in US dollars to minimise volatility and foreign currency risk.
4. **Credit risk:** The group's credit risk is primarily attributable to its cash balances. The credit risk on liquid funds is limited because the third parties are large banks with a minimum investment grade credit rating. The group's total credit risk amounts to the total of other receivables and cash and cash equivalents.
5. **Lease obligations:** The group leases properties for oil and gas exploration, requiring annual payments. Any default can lead to lease termination, which would adversely impact business and financial operations. Pantheon has actively participated in annual lease sales and secured 40,000 leases in November 2022. These leases have a 10-year life and favourable terms.
6. **Lease renewal:** Leases may be terminated if the group fails to meet specific obligations, like timely exploration. Not renewing these leases can significantly harm the business. However, the group has obtained unitisation for certain projects to possibly extend their initial lease term.
7. **Licensing and permissions:** The group needs various approvals for developing their leases. Failure to obtain these permissions can hamper the group's ability to operate. To counter this, the group employs personnel experienced in navigating regulatory requirements.
8. **Political and Regulatory Changes:** Changes in the political environment, particularly in the Northern Slope Borough, Alaska, and the U.S., can adversely affect operations. New regulations or stricter enforcement of current ones can pose challenges. However, Pantheon's projects are on state lands, thus less affected by federal policy changes.
9. **Legal proceedings:** The group might face legal challenges that can be costly and can damage its reputation. They engage with legal counsel proactively to mitigate potential risks.
10. **Relationships with stakeholders:** The oil and gas sector often faces scrutiny. Failure to manage relationships with communities and environmental groups might adversely affect the group's reputation and operations. The group endeavours to conduct operations responsibly and legally.
11. **Regulatory changes:** Amendments to existing laws regarding oil and gas exploration could adversely affect the group's business. They continuously monitor potential regulatory shifts and maintain relationships with regulatory agencies.
12. **Supply chain disruptions:** Global events, like the Covid-19 pandemic and the Russia/Ukraine conflict, have affected the supply chain and caused inflation. The group plans its operations meticulously and orders equipment in advance to minimise disruptions.

Valuation

We estimate that the expected return of an investment in the company over the next five years is 337%, which equates to an annual return of 34%. In other words, an £1,000 investment in the company is expected to return £3,368 in five years time. The assumptions used to estimate the return figure can be found in the table below.

Assuming that a suitable return level over five years is 34% per year or less, and Pantheon Resources achieves its expected return level (of 34%), then an investment in the company is considered to be an 'suitable' one.

Description	Value	Commentary
Which valuation model do you want to use?	Discounted cash flow	Research suggests that in terms of estimating the expected return of an investment over a period of 12-months or more, the approach that is more/most accurate is the absolute valuation approach, so that's the approach that we suggest using to determine the estimated value of the company.
Which valuation model do you want to use?	Free cash flow	The company has no plans for the foressable future to pay-out dividends, let alone consistentenly increase dividends; accordingly, we suggest valuing the business using the free cash flow valuation method (rather than the dividend discount model).
What is the market value per barrel of recoverable resource?	$7.5	Company estimate.
What is the barrels of recoverable resource?	1.5 billion	Company estimate.
Whatis the probabiity of success?	25%	
What is the time period between now and production?	15 years	For simplicity, we have assumed that all of the recoverable resource is producted at a particualr periond in time and that that period is at at the end of the specified period. In other words, the entire resource is produded on the day that's 15 years from now.
What is the required return on equity?	10.00%	For estimating the required return on equity, we used the Capital Asset Pricing Model (CAPM), which provides an economically grounded and relatively objective procedure for required return estimation, and, therefore, it has been widely used in valuation. The calculation of the required return on equity (and the reasons behind the calculation) can be found in the table below.
What's the current value of the company?	£197 million	As at 24th November 2023, the current valuation of the company is £197 million.
What is the current exachange rate between USD and GBP?	1.26	As at 24th November 2023, the exchange rate is $1.26.
Which time period do you want to use to estimate the expected return?	Between now and five years time	Research suggests that following a market crash, the average amount of time it takes for the price of a stock market to return to its pre-crash level (i.e. the recovery period) is at least three years. Accordingly, we suggest that to account for general market cyclicity, it's best to estimate the expected return of the company between now and five years time.

Sensitivity analysis

The main inputs that result in the greatest change in the expected return of the Pantheon Resources investment are, in order of importance (from highest to lowest):

1. The current market capitalisation of the company (the default size is £197 million);
2. The period between now and production (the default share is 15 years); and
3. The discount rate (the default rate is 10%).

The impact of a 50% change in those main inputs to the expected return of the Pantheon Resources investment is shown in the table below.

Main input	50% worse	Unchanged	50% better
Current market value ($m)	191%	337%	774%
Time period between now and production	171%	337%	604%
Discount rate	180%	337%	596%
Market value per barrel of recoverable resource ($)	118%	337%	555%
Barrels of recoverable resource (billion)	118%	337%	555%
Probabiity of success	118%	337%	555%

Appendix

Cost of equity

Description	Value	Commentary
Risk-free rate (%)	4.30%	Here, the risk free rate is the US 30 year treasury bond, and is calculated as at 3rd September 2023. Research suggests that for the risk-free rate, it's best to use one that has the same or similar maturity to the estimated remaining lifespan of the company. Here, we have assumed that the estimated lifespan of the company is 30 years years or longer, so we have used the longest maturity, which is 30 years.
Beta	0.5508	Here, to estimate the adjusted beta, we used the iShares MSCI World ETF to represent the market portfolio; and in terms of the time period and frequency of observations, we used five years of monthly data (i.e. 60 observations in total), which is supported by a study and is the most common choice. The beta value in a future period has been found to be on average closer to the mean value of 1.0, and because valuation is forward-looking, it is logical to adjust the raw beta so it more/most accurately predicts a future beta.
Equity risk premium (%)	7.98%	Research suggests that for the region of equity risk premium, it's best to use one that is the same or similar to the region of the beta market portfolio. Here, the region of the beta market portfolio is the world/global, so we have used the world/global region for the equity risk premium, and is calculated as at 5th January 2023.
Cost of equity (%)	8.69%	Cost of equity = Risk-free rate + Beta x Equity risk premium.

Relative valuation

As noted earlier in this report, research suggests that in terms of estimating the expected return of an investment over a period of 12 months or more, the approach that is more accurate is the discounted cash flow approach, so that's the approach that we suggest using to determine the estimated value of the company (the valuation based on the discounted cash flow approach can be found in the valuation section of this report); nevertheless, for completeness purposes, separately, the valuation of the company is also estimated using the relative valuation approach.

We estimate that the expected return of an investment in Pantheon Resources over the next 12 months is 185%. In other words, a £1,000 investment in the company is expected to return £2,849 in one year time. The assumptions used to estimate the return figure can be found in the table below.

What are the assumptions used to estimate the return figure?

Model key assumptions

Description	Value	Commentary
Which type of multiple do you want to use?	Price-to-ook value	The price-to-book value is really the only available commonly used value, so we suggest using that.
In regards to the price-to-book value multiple, for the book value figure, which year to you want to use?	Year 1	Research suggests that when using the relative valuation approach, it's best to use a time period of 12 months or less. Accordingly, for the book value figure, we suggest using Year 1, which is on 12th September 2024.
In regards to the price-to-book value multipl, what multiple figure do you want to use?	1.54x	Here, we suggest using a multiple of 1.54x, which is in-line with the multiples of Pantheon Resources's peers (for details on the peers can be found in the table below).
What is the estimated compound annual growth rate of the book value between one year from now and the most recent value?	46.37%	One year from now is 12th September 2024, and the most recent book value date is 31st December 2022. For simplicity, we based the estimate on the CAGR of Pantheon Resources over the last five years, which is 46.37%. The most recent value is $248,178,354 (as at 31st December 2022).
What's the current market capitalisation of the company?	£205.44 million	As at 12th September 2023, the market capitalisation of Pantheon Resources Plc is £205.44 million.
Which time period do you want to use to estimate the expected return?	Between now and one year time	Research suggests that when using the relative valuation approach, it's best to estimate the expected return of the company between now and one year time.
What's the current FX rate?	$1.25	The current FX rate of GBPUSD is $1.25.

Source: Proactive Investors.

Pantheon Resources Peers

Name	Ticker	2Y Corr	Mkt Cap (USD)	BF P/E	BF EV/EBITDA	BF EV/EBIT	BF EV/Rev	LF P/BV
Pantheon Resources PLC	PANR LN		248,743,297	--	--	--	--	0.8599
Saturn Oil & Gas Inc	SOIL CN	0.2403	289,188,348	1.6041	0.8074	--	0.6336	0.6728
Bonterra Energy Corp	BNE CN	0.2145	201,232,526	5.7932	--	--	5.3528	0.5485
Canacol Energy Ltd	CNE CN	0.2055	291,272,174	4.4749	3.991	6.2457	2.7131	0.8688
Journey Energy Inc	JOY CN	0.1826	250,685,926	10.0903	3.2022	--	--	1.1123
Gran Tierra Energy Inc	GTE US	0.1772	242,916,614	3.0209	1.6716	2.4108	1.0112	0.5344
Reconnaissance Energy Africa L	RECO CN	0.1628	201,666,229	--	--	--	--	3.7743
Evolution Petroleum Corp	EPM US	0.1535	298,752,800	9.5026	5.339	5.8633	2.5077	3.1245
Alvopetro Energy Ltd/CA	ALV CN	0.149	258,679,273	5.3166	--	5.022	3.4221	2.8451
Lucero Energy Corp	LOU CN	0.132	324,574,582	6.5686	2.2905	4.647	1.4365	0.9152
Touchstone Exploration Inc	TXP CN	0.1276	199,319,815	16.338	3.3236	5.7614	2.0963	2.5903
Amplify Energy Corp	AMPY US	0.1002	277,732,974	1.8069	4.1816	6.8549	1.2493	0.7737
CGX Energy Inc	OYL CN	0.099	239,216,185	--	--	--	--	4.342
Coelacanth Energy Inc	CEI CN	0.0954	260,510,022	--	--	--	--	3.7122
San Juan Basin Royalty Trust	SJT US	0.08	309,016,318	--	--	--	--	81.0503
Empire Petroleum Corp	EP US	0.0627	181,790,240	--	--	--	--	9.6501
Mean (Including PANR LN)			254,706,083	8.384	2.7073	5.6339	1.945	1.5358
Current Premium to Comps Mean				--	--	--	--	-44.01%

Source: Bloomberg.

Sensitivity analysis

The main inputs that result in the greatest change in the expected return of the Pantheon Resources investment are, in order of importance (from highest to lowest):

1. The compound annual growth rate of the Pantheon Resources book value (the default figure is 46.37%);
2. The price-to-book value multiple (the default multiple 1.57x); and
3. Pantheon Resources most recent book value figure (the default figure is $248,178,354, or £198,542,683 at the current exchange rate of $1.25).

The impact of a 50% change in those main inputs to the expected return of the Pantheon Resources investment is shown in the table below.

Main input	50% worse	Unchanged	50% better
The compound annual growth rate of the Pantheon Resources book value between one year ahead and the most recent value	113%	185%	266%
The price-to-book value multiple	42%	185%	327%
Pantheon Resources most recent book value figure	42%	185%	327%

Significant holdings

Exercise price (£)	Number of share options exercisable into ordinary shares on issue	Share options as a % of issued shares
Vidacos Nominees Limited	100,084,318	11.34
Interactive Brokers LLC	80,121,067	9.08
Lynchwood Nominees Limited	67,134,041	7.6
Vidacos Nominees Limited	38,521,840	4.36
Vidacos Nominees Limited	34,549,659	3.91
Barnard Nominees Limited	29,352,283	3.32
Barnard Nominees Limited	27,714,204	3.14

Capital structure

The Company has 919,111,769 ordinary fully paid shares in issue. The number of ordinary shares not in public hands amounts to 6,956,691, equivalent to 0.76% of the issued allotted and fully paid ordinary shares.

Share options

Exercise price (£)	Number of share options exercisable into ordinary shares on issue	Expiry Date	Share options as a % of issued shares
0.300	4,825,000	30 September 2024	0.62%
0.270	7,000,000	6 July 2030	0.90%
0.330	12,430,000	27 January 2031	1.60%
0.671	21,705,000	18 January 2027	2.80%

Source: The company.

Share warrants

Exercise price (£)	Number of share warrants exercisable into non-voting shares	Expiry date	Share options as a % of issued shares
0.300	4,803,921	30 September 2024	1.29%

Source: The company.

Beta risk profile

Rating	Beta
Low	Equal to or below 0.5
Medium	Between 0.5 and 1.5
High	Equal to or above 1.5

Pantheon Resources beta calculation

Date	iShares MSCI World ETF unit price (USD)	Pantheon Resources plc share price (GBP)	iShares MSCI World ETF unit price change (%)	Pantheon Resources plc share price change (%)
01/10/2018	85.25	16.24		
01/11/2018	86.21	17.10	1%	5%
01/12/2018	78.87	16.00	-9%	-6%
01/01/2019	84.96	23.38	8%	46%
01/02/2019	87.49	24.75	3%	6%
01/03/2019	88.79	28.60	1%	16%
01/04/2019	92.09	21.43	4%	-25%
01/05/2019	86.76	21.25	-6%	-1%
01/06/2019	91.02	21.25	5%	0%
01/07/2019	91.86	18.68	1%	-12%
01/08/2019	89.84	17.90	-2%	-4%
01/09/2019	91.78	16.03	2%	-10%
01/10/2019	94.12	16.25	3%	1%
01/11/2019	96.76	16.50	3%	2%
01/12/2019	98.78	16.50	2%	0%
01/01/2020	97.73	16.50	-1%	0%
01/02/2020	89.67	11.95	-8%	-28%
01/03/2020	77.93	13.00	-13%	9%
01/04/2020	86.36	13.75	11%	6%
01/05/2020	90.70	15.95	5%	16%
01/06/2020	92.14	13.78	2%	-14%
01/07/2020	96.65	21.15	5%	54%
01/08/2020	102.96	22.35	7%	6%
01/09/2020	99.52	37.20	-3%	66%
01/10/2020	96.53	31.00	-3%	-17%
01/11/2020	108.94	37.40	13%	21%
01/12/2020	112.41	43.50	3%	16%
01/01/2021	111.49	36.30	-1%	-17%
01/02/2021	114.27	39.10	2%	8%
01/03/2021	118.49	35.70	4%	-9%
01/04/2021	123.61	34.25	4%	-4%
01/05/2021	125.60	29.40	2%	-14%
01/06/2021	126.57	41.25	1%	40%
01/07/2021	128.83	55.30	2%	34%
01/08/2021	132.02	59.70	2%	8%
01/09/2021	126.46	71.60	-4%	20%
01/10/2021	133.84	77.60	6%	8%
01/11/2021	131.10	69.60	-2%	-10%
01/12/2021	135.32	77.30	3%	11%
01/01/2022	128.32	79.60	-5%	3%
01/02/2022	124.58	142.00	-3%	78%
01/03/2022	128.16	117.60	3%	-17%
01/04/2022	117.42	123.20	-8%	5%
01/05/2022	117.94	100.60	0%	-18%
01/06/2022	106.88	89.40	-9%	-11%
01/07/2022	115.57	117.00	8%	31%
01/08/2022	110.28	133.70	-5%	14%
01/09/2022	99.95	104.10	-9%	-22%
01/10/2022	107.42	100.10	7%	-4%
01/11/2022	115.44	72.95	7%	-27%
01/12/2022	109.25	42.52	-5%	-42%
01/01/2023	117.01	50.15	7%	18%
01/02/2023	113.98	57.10	-3%	14%
01/03/2023	117.67	23.64	3%	-59%
01/04/2023	119.79	18.67	2%	-21%
01/05/2023	118.60	15.74	-1%	-16%
01/06/2023	124.52	12.71	5%	-19%
01/07/2023	128.54	10.80	3%	-15%
01/08/2023	125.70	25.00	-2%	131%
01/09/2023	125.91	22.42	0%	-10%

Pantheon Resources beta and adjusted beta

Type	Pantheon Resources
Beta	0.33
Adjusted beta	0.55

References and notes

1. Research shows that an investment has two main types of risks: 1) non-systematic and 2) systematic. Systematic risk is the risk related to the overall market, and non-systematic risk is the risk that's specific to an individual investment. Evidence shows that taking on non-systematic risk is inefficient, and it's, therefore, best to eliminate it; and in most cases, elimination is fairy easy to do [by holding a diversified portfolio of investments (i.e. around 15 investments)]. Accordingly, when assessing the riskiness of an investment, it's best to look at the systematic risk only (i.e. ignore the non-systematic risk). A key measure of systematic risk is beta, and a main way to determine the riskiness of an investment is to compare the beta of the investment with the beta of the market, which is 1. For estimating an asset's beta, in terms of period, and frequency of observations, the most common choice is five years of monthly data, yielding 60 observations. One study of U.S. stocks found support for five years of monthly data over alternatives. The beta value in a future period is on average closer to the mean value of 1.0, the beta of an average-systematic-risk security, than to the value of the raw beta. Because valuation is forward-looking, it is logical to adjust the raw beta so it more accurately predicts a future beta.
2. https://www.pantheonresources.com/about-pantheon/projects/greater-alkaid
3. https://www.pantheonresources.com/about-pantheon/projects/talitha
4. https://polaris.brighterir.com/public/pantheon_resources/news/rns/story/rmvz29r
5. Pantheon addition of Oil & NGLs.
6. https://polaris.brighterir.com/public/pantheon_resources/news/rns/story/xel4enr
7. https://polaris.brighterir.com/public/pantheon_resources/news/rns/story/xleqqjw
8. https://www.pantheonresources.com/investors/financial-reports/673-final-results-for-the-year-ended-30-june-2022/file
9. https://polaris.brighterir.com/public/pantheon_resources/news/rns/story/rmvm22r
10. https://www.ibisworld.com/global/market-size/global-oil-gas-exploration-production/#:~:text=The%20market%20size%2C%20measured%20by,is%20%245.3tr%20in%202023.
11. To estimate the revenue from 3.6 billion barrels of oil and 8.9 trillion cubic feet (Tcf) of natural gas, you would need to know the prevailing market prices for both commodities. Please note that oil and gas prices can fluctuate significantly based on various factors, so this is a very general estimate. 1) Oil: Let's use an average price of $60 per barrel, which is a rough average for Brent crude over various periods in the late 2010s and early 2020s. 3.6 \text{ billion barrels} \times $60/\text{barrel} = $216 \text{ billion} 2) Natural Gas: Natural gas prices can be more region-specific than oil prices. In the U.S., the Henry Hub spot price is a common benchmark. Let's use an average price of $3 per thousand cubic feet (Mcf) for simplicity, though this price can vary widely. 8.9 \text{ Tcf} \times $3/\text{Mcf} = $26.7 \text{ billion} Adding these together: $216 \text{ billion (from oil)} + $26.7 \text{ billion (from gas)} = $242.7 \text{ billion} So, based on these rough price estimates, 3.6 billion barrels of oil and 8.9 Tcf of natural gas could equate to approximately $242.7 billion in revenue. However, it's essential to consider several factors: 1) Extraction Costs: The revenue figures above don't account for the costs of extracting, refining, transporting, and selling the oil and gas. These costs can be substantial. 2) Price Fluctuations: Oil and gas prices can fluctuate significantly based on global demand, geopolitical events, technological advancements, and other factors. 3) Taxes and Royalties: Governments often take a share of the revenue in the form of taxes, royalties, or other fees.
12. https://polaris.brighterir.com/public/pantheon_resources/news/rns/story/w03k7zw
13. https://polaris.brighterir.com/public/pantheon_resources/news/rns/story/x5zjy8x
14. https://www.investegate.co.uk/announcement/rns/pantheon-resources--panr/private-placement/7740310
15. https://polaris.brighterir.com/public/pantheon_resources/news/rns/story/xp8nljr
16. https://www.pantheonresources.com/investors/financial-reports/648-pantheon-resources-annual-report-and-financial-statements-year-ended-30-june-2019/file
17. https://www.pantheonresources.com/investors/financial-reports/654-final-results-for-the-year-ended-june-2020/file
18. https://www.pantheonresources.com/investors/financial-reports/660-final-results-for-the-year-ended-30-june-2020/file
19. chrome-extension://efaidnbmnnnibpcajpcglclefindmkaj/http://www.pantheonresources.com/investors/presentations/645-investor-presentation-january-2020/file
20. As of 23 June 2022, CHONS LLC was the registered holder of 38,068,993 shares, representing 4.95% of the share capital of the Company. These shares were held through one or more nominees accounts which may or may not be wholly in the top shareholder list presented above. Pantheon has been advised by Farallon Capital Management LLC, the discretionary investment manager of CHONS LLC that it qualifies for an investment manager exemption pursuant to DTR 5.1.5 R (1)(a) in the FCA Rules. The practical effect of the investment manager exemption is that, where a person is acting as investment manager to another person, the applicable disclosure thresholds under the DTRs are only at 5%, 10% and 1% increments above 10%. Accordingly, the referenced shareholdings are subject to change without additional notification and therefore cannot be considered accurate apart from on the referenced date. On 3 August 2021, Mr Michael Spencer and IPGL Limited advised they were the registered holder of 25,888,710 shares representing 3.7% of the share capital of Pantheon on that date, and were the holder of 7,816,200 Financial instruments of similar economic effect, representing 1.13% of the registered share capital of Pantheon at that time. These shares were held through one or more nominees accounts which may or may not be wholly in the top shareholder list presented above. The referenced shareholdings are only considered accurate on the referenced data and are not expected to be updated until the next reporting threshold (higher or lower) is crossed. On 1 April 2022, Mr Sanjay Motwani notified of a direct holding in 3,271,788 ordinary shares and an indirect holding in 19,851,474 ordinary shares, collectively representing 3.05% of the share capital of Pantheon on that date. These shares were held through one or more nominees accounts which may or may not be wholly in the top shareholder list presented

above. The referenced shareholding(s) are only considered accurate on the referenced data and are not expected to be updated until the next reporting threshold (higher or lower) is crossed.

21. https://www.pantheonresources.com/investors/significant-holdings
22. https://www.pantheonresources.com/investors/capital-structure
23. The calculation here is 6,956,691 divided by 919,111,769.
24. The share options are exercisable into ordinary shares upon exercise, whereas the warrants are convertible on a 1:1 basis into non-voting shares upon exercise. Non-voting shares are further convertible into ordinary shares on a 1:1 basis. The Ordinary Shares of the Company have not been nor will they be registered under the United States Securities Act of 1933, as amended ("Securities Act"), or under the securities laws of any state of the United States or under the applicable securities laws of Australia, the Republic of South Africa, the Republic of Ireland, Japan or Canada. Accordingly, subject to certain exceptions, the Ordinary Shares may not, directly or indirectly, be offered, sold, transferred, taken up or delivered, directly or indirectly, in the United States, Australia, the Republic of South Africa, the Republic of Ireland, Japan or Canada or for the benefit of any US person (as defined in Regulation S under the Securities Act).

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