ODDO BHF

Equity report– Initiating coverage
Energy Companies | Germany

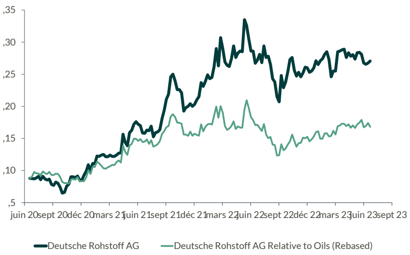
Deutsche Rohstoff AG

Outperform ➔ | Target price : 40.0 €
Price (21/07/2023) : € 27.05 | Upside : 48%

Revision	12/23e	12/24e
EPS	ns	ns

Profiting from US oil & gas exposure

Publication date 24/07/2023 17:43
Writing date 24/07/2023 15:37



Sources : ODDO BHF Securities, SIX

Share data		
DRO GR | DROG.DE		
Market Cap (€m)		135
Enterprise value (€m)		175
Extrema 12 months (€)	20.30 -	29.50
Free Float (%)		64.0

Performance (%)	1m	3m	12m
Absolute	-3.7	-6.1	0.6
Perf. rel. Country Index	-5.5	-5.3	-8.3
Perf. rel. Oils	-4.8	-4.1	-10.1

P&L	12/23e	12/24e	12/25e
Sales (€m)	168	175	181
EBITDA (€m)	124	130	135
Current EBIT (€m)	73.7	76.1	79.8
Attr. net profit (€m)	47.0	47.7	53.0
Adjusted EPS (€)	24.70	32.66	41.63
Dividend (€)	1.35	1.40	1.45
P/E (x)	1.1	0.8	0.6
P/B (x)	0.8	0.7	0.5
Dividend Yield (%)	5.0	5.2	5.4
FCF yield (%)	5.1	26.7	36.1
EV/Sales (x)	1.04	0.87	0.63
EV/EBITDA (x)	1.4	1.2	0.8
EV/Current EBIT (x)	2.4	2.0	1.4
Gearing (%)	30	14	-3
Net Debt/EBITDA (x)	0.4	0.2	-0.1

Next Events	
15/08/2023	H1 Results
15/11/2023	Q3 Results
30/04/2024	FY Results

Founded in 2006, Deutsche Rohstoff (DRAG) is an independent German-based company focusing on oil & gas production in the US. In addition, DRAG participates globally in exploration and mining projects in the field of battery and strategic metals. In view of growing revenues (CAGR 3.7%, 2023e to 2025e), strong EBITDA margins (+90bp to 74.8% in 2025e vs 2023e) and a solid balance sheet (equity ratio >70%, net cash position as of 2025e), we initiate coverage with Outperform and a target price of € 40.

Oil & gas demand remains favourable

According to BP's Energy Outlook 2023 Edition, global demand for oil is expected to plateau (close to 100 Mb/d) by the end of the decade as the role of oil falls across all modes of transport, reflecting a shift to alternative, low-carbon energy sources. We believe that with proved reserves of 35.7m BOE (barrel of oil equivalent) and the high additional potential of up to 100 gross wells (outside the current reserve categories), Deutsche Rohstoff is well positioned to benefit from the ongoing high demand for oil and gas in the coming years.

Drilling program drives earnings

We assume that the combination of more than 300 already producing wells, and the start of production of new wells in 2023e (+11.9 new net wells) and beyond, will lead to profitable growth in the future. As a result, we forecast 2025e revenues of € 180.8m (+7.6% vs. 2023e) and an EBITDA margin of 74.8% (+90bp vs 2023e). For 2023e, we see revenues of € 168.1m (+1.6% y-o-y) and an EBITDA margin of 73.9% (vs. 84.1% a year ago) mainly driven by lower other operating income. For 2023e, we are in-line with the DRAG's base scenario, but almost 3% above consensus EBITDA.

Strong balance sheet

DRAG is expected to report an average positive FCF of € 42.5m (2024e-2025e), a net cash position of ca. € 9m (2025e) and an equity ratio >70% (2025e). We believe that it can use its strong financial profile to acquire additional acreage in well-explored areas or expand its portfolio through investments in the battery and strategic metals business.

Initiation with an Outperform rating and a target price of € 40

We have used a DCF and a peer group valuation to determine the fair value of the shares. As the company's cash flows are highly dependent on volatile and uncertain oil & gas prices as well as exchange rate risks between the dollar and the euro, we prefer to take a conservative approach and have used the valuation method with the lowest fair value (DCF). This gives us a target price of € 40 (rating: Outperform). Based on our 2024e, DRAG is trading at a discount (53%/61%/49%) to its peers on EV/sales, EV/EBITDA and P/E which we believe is not justified given the higher revenue growth and EBITDA margins (2023e to 2025e). Investment risks include lower GDP growth, changes in political and legal frameworks, FX and the speed of the energy transition which may lead to lower demand for oil & gas.

Klaus Breitenbach (Analyst)
+49 (0) 69 718 1011
klaus.breitenbach@oddo-bhf.com

Deutsche Rohstoff AG

Outperform

Energy Companies | Germany		Target price :	40.0 €
Market Cap: € 135m		Price (21/07/2023) :	€ 27.05

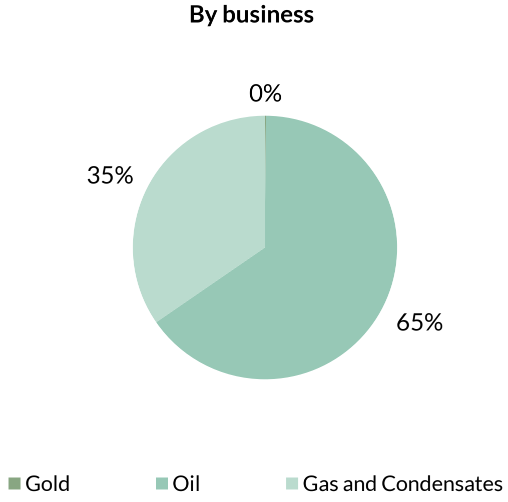
Company profile

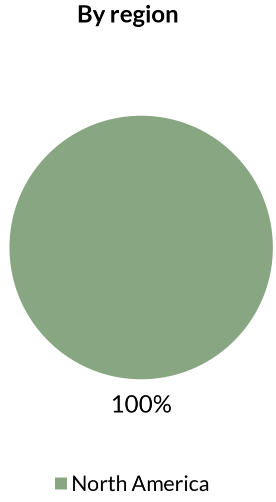
Deutsche Rohstoff AG (DRAG) is an oil & gas production company based in Mannheim (Germany). In addition, DRAG participates in exploration and mining projects in the field of strategic metals and raw materials. The company concentrates its activity in acquiring acreage in well-explored areas in politically stable countries. Through subsidiaries, investments, or cooperation agreements all activities take place in the US, Australia, Western Europe, Canada, and South Korea. DRAG is listed on the open market in Frankfurt (XETRA) and became a public traded company on 26 May 2010.

Shareholders

Free Float	64.00%
Institutional	27.00%
Management	9.00%

Sales breakdown (2022)





Investment case

Founded in 2006, Deutsche Rohstoff (DRAG) is an independent German-based company focusing on oil & gas production in the US. In addition, DRAG participates globally in exploration and mining projects in the field of battery and strategic metals. With the addition of new wells in the coming years, DRAG's production in oil & gas will continue to increase and pave the way for profitable growth in the coming years. As a result, we anticipate growing revenues (CAGR 3.7%, 2023e to 2025e) and EBITDA margins (+90bp to 74.8% in 2025e vs. 2023e) and a solid balance sheet (equity ratio >70%, net cash position as of 2025e)..

SWOT

Strengths

- Oil & gas portfolio with an extensive drilling pipeline
- Attractive dividend yield
- Management with significant and succesful experience in the oil & gas industry
- Established partner for US oil & gas operators

Weaknesses

- Decline in oil & gas production which may weigh on earnings
- Geographic focus on the US
- Limited control on non-operated wells

Opportunities

- Exposure to tungsten trough shareholding in Almonty Industries
- Promising projects in battery and strategic metals
- Global recovery in oil & gas demand
- Growth in oil consumption per capita (i.e. in China) reaches level of Western Europe

Threats

- Currency fluctuations (mainly EUR/USD)
- Volatility in oil & gas prices
- Changes in political and legal frameworks
- Speed of the energy transition

ESG

Environment

Since the start of fracking technology, a dense network of regulatory provisions has developed in the US to ensure that oil and gas extraction is carried out in a fair and competitive environment and with due regard for the interests of all stakeholders. The protection of the environment and local residents plays a special role. Environmental concerns linked to hydraulic fracturing include for example groundwater contamination or air pollution from methane emissions. After the drilling is completed, companies inject fluids into the well and the back-pressure from the rock formation generally pushes the mix of water and chemicals back to the surface. At that point, the fluids can be recycled or collected for eventual disposal. Drilling companies take precautions to ensure their wells do not leak either fracturing fluids or petroleum liquids into local water tables. But environmental groups have voiced concerns about contamination from inadequate holding tanks and spills. Note also that some SRI labelled funds (e.g., in France, with the reform ISR® of the label under way) will likely exclude companies that do more than 5% of their turnover in “unconventional oil & gas”. In Colorado and Wyoming, for example, there are extensive laws that DRAG complies with at all times through trained personnel and ensures through the following exemplary measures:

- Protection of groundwater: Drilling and, in particular, the correct cementing of the well are continuously monitored and documented. This ensures that no oil, gas or fluids can escape into groundwater-bearing strata.
- Protection of free-ranging wildlife: The nesting sites of rare birds, including the bald eagle, golden eagle and the endangered ground-nesting sage-grouse, are documented at regular intervals on publicly available maps. If these are in critical proximity to well pads, no drilling activities take place during the nesting period from 1 February to 31 July each year.
- Protection of residents: DRAG minimises noise emissions by means of noise barriers and, in selected areas, also by electrifying the conveyor technology, and it is in continuous exchange with authorities on emission values.
- Protection of the atmosphere: All well pads have emission control devices that monitor whether gas escapes from the well into the atmosphere. The emission limits have been continuously reduced in recent years and the company complies with them. Increasingly, emissions are also being further reduced during drilling, for example through the use of generators that use Compressed Natural Gas (CNG) instead of conventional diesel fuels, thus reducing the CO_2 impact on the environment.
- Cleanliness of roads: The arrival and departure of production facilities, water and ultimately oil, which is not sold through pipelines, is transport-intensive. Damage or soiling of roads is constantly monitored and any soiling that occurs is removed promptly.

The Deutsche Rohstoff Group naturally complies with all regulatory requirements. Nevertheless, residual risks cannot be completely ruled out.

Social

DRAG’s workforce consists of 28 employees as of 31 December 2022. Women accounted for 29% of the employees while the proportion of women in management positions below the Executive Board was 38%.

Governance

DRAG is committed to the internationally and nationally recognised standards of good and responsible corporate governance. It wants to be successful as a company in the long term and creates value for all stakeholders.
Transparency is an essential component of the corporate management. The company reports regularly and openly on the status of its business, its future plans and risks associated with the strategy. DRAG reports on its financial performance and increasingly on the impact of its activities on society and the environment.
The prevention of corruption is essential for the long-term reputation and ability to survive in the markets. Raw material extraction in particular is vulnerable to attempts to influence political decisions. DRAG has therefore established a set of rules to prevent employees of its companies or companies working with it from unlawfully enriching themselves. It represents a high ethical standard. DRAG wants to constantly improve in all aspects of sustainability. The Management Board is directly responsible for enforcing the policies.

Contents

A COMPANY WITH A FOCUS ON COMMODITIES

Deutsche Rohstoff AG (DRAG) is an independent oil & gas production company based in Mannheim, Germany. In addition, DRAG participates in exploration and mining projects in the field of strategic metals and raw materials. The company concentrates its activity in acquiring acreage in well-explored areas in politically stable countries. Through subsidiaries, investments and cooperation agreements, all activities take place in the US, Australia, Western Europe, Canada, and South Korea.

A portfolio in oil/gas and strategic metals

Deutsche Rohstoff generates almost 100% of its revenues in the US oil & gas industry and employs 28 people in Germany and the US. In 2022, the company reported revenues of € 165.4m and an EBITDA of € 139.1m (EBITDA margin 84.1%). DRAG is domiciled in Mannheim (Germany) and is listed on the open market in Frankfurt (Xetra). It became a public traded company on 26 May 2010.

Since the IPO, DRAG has placed two capital increases as well as three bonds and one convertible bond with a total volume of over € 200m. During this period, the company was able to sell a total of seven projects with total proceeds of around € 270m, generating a total pre-tax profit of ca. € 80m.

Revenue (€ m) and EBITDA margin

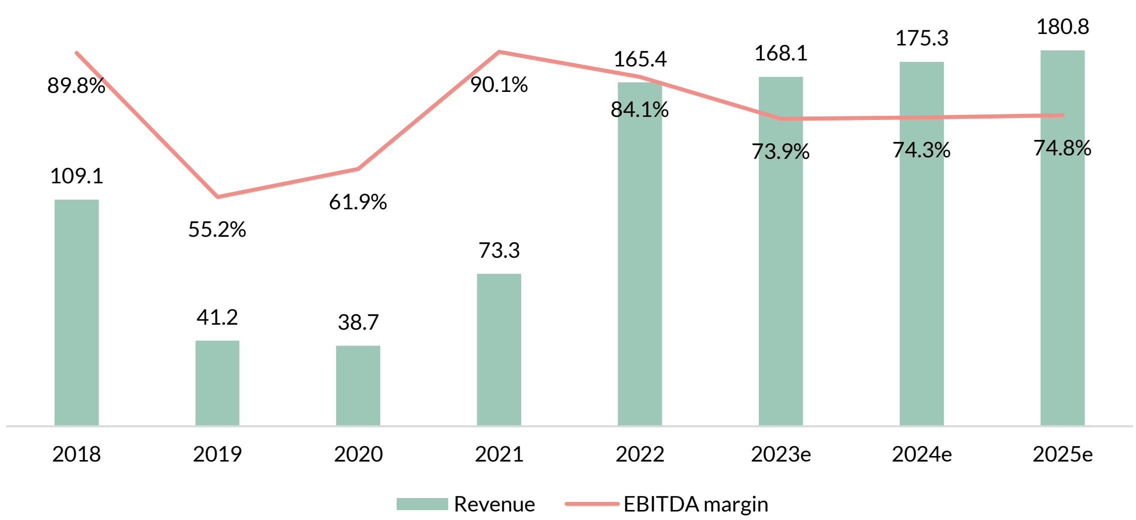


Chart 1 - Sources: Deutsche Rohstoff, ODDO BHF Securities

Revenue by segment – higher percentage share of oil expected

€ m	2018	2019	2020	2021	2022	2023e	2024e	2025e
Gold	0.04	0.01	0.01	0.07	0.02	0.02	0.02	0.02
Change y-o-y		*-63%*	*3%*	*ns*	*-64%*	*-10%*	*-10%*	*-10%*
Oil	84.7	30.2	28.8	47.9	122.6	129.5	134.3	144.5
Change y-o-y		*-64%*	*-4%*	*66%*	*156%*	*6%*	*4%*	*8%*
Gas and condensates	24.3	11.0	9.9	25.4	42.8	38.6	41.0	36.3
Change y-o-y		*-55%*	*-11%*	*157%*	*69%*	*-10%*	*6%*	*-11%*
Total revenues	**109.1**	**41.2**	**38.7**	**73.3**	**165.4**	**168.1**	**175.3**	**180.8**
Change y-o-y		*-62%*	*-6%*	*90%*	*126%*	*2%*	*4%*	*3%*
As a % of total revenues								
Oil	*77.7%*	*73.2%*	*74.5%*	*65.3%*	*74.1%*	*77.0%*	*76.6%*	*79.9%*
Gas and condensates	*22.3%*	*26.7%*	*25.5%*	*34.6%*	*25.9%*	*22.9%*	*23.4%*	*20.1%*

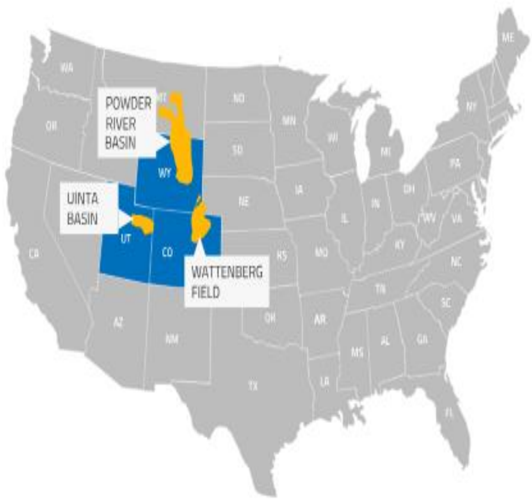
Table 2 - Sources: Deutsche Rohstoff, ODDO BHF Securities

Strong in oil & gas

Deutsche Rohstoff's focus is on the development of oil and gas production in the US. DRAG pursues the goal of steadily expanding oil and gas production, increasing its acreage and further consolidating its market position. As operator, the company currently produces from several dozen horizontal wells in the Wattenberg oil field in the state of Colorado. In the US, DRAG has successfully developed a total of over 100 oil wells in recent years. It has minority interests in over 250 non-operated wells. DRAG produces a high four-digit number of boe per day. The majority of production comes from the production facilities in Colorado. However, the importance of other oil fields, in particular the Powder River Basin, is steadily increasing. At the end of 2022, the Group had interests in a total of 89 independently operated horizontal wells in the Denver-Julesberg Basin, Colorado and in the Powder River Basin, Wyoming, as well as 260 wells operated by partners. In total, this corresponds to around 94 net wells, i.e. wells operated by the group with a calculated share of 100 %.

Deutsche Rohstoff – Four US subsidiaries

Three oil fields for productionin the US



Charts 3 - Source: Deutsche Rohstoff

We believe that the production of oil & gas will increase from 9,594 BOEPD in 2022 to 12,733 BOEPD in 2025e, implying a CAGR of around 10%.

Deutsche Rohstoff - Development of BOEPD (barrel of oil equivalent per day)

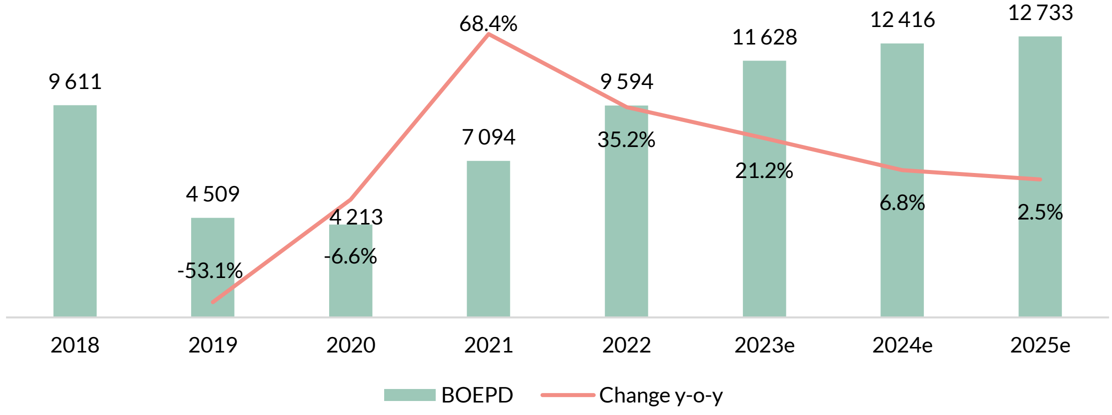


Chart 4- Sources: Deutsche Rohstoff, ODDO BHF Securities

Compared to its peers in terms of BOEPD, Deutsche Rohstoff is a relatively "small player" in the production of oil & gas in the US.

Deutsche Rohstoff vs peer group – BOEPD, 2022

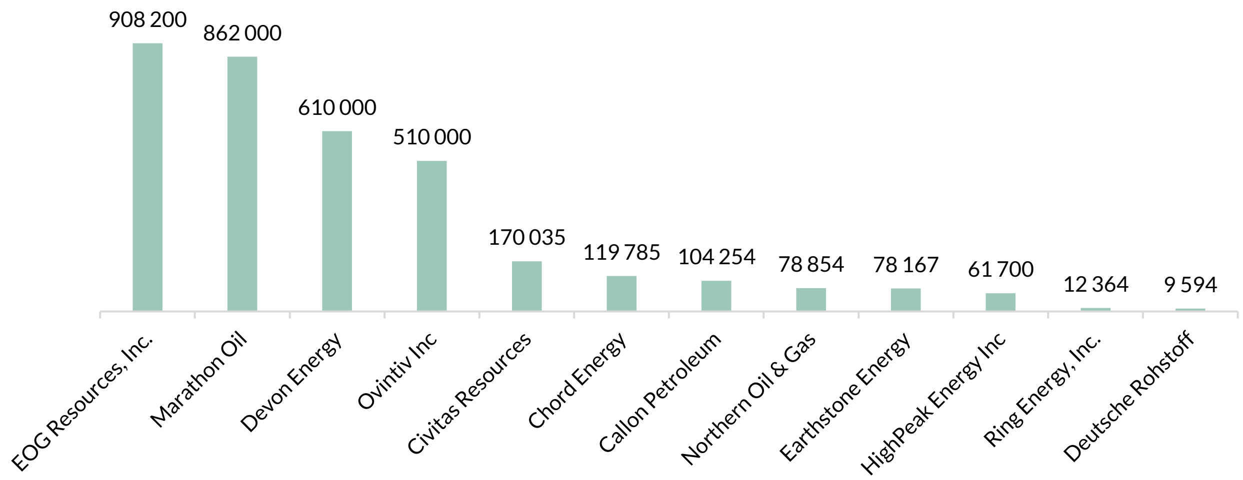


Chart 5 - Sources: Deutsche Rohstoff, companies data, ODDO BHF Securities

Metals such as gold, lithium and tungsten complete the portfolio. DRAG takes advantage of the opportunities offered by the commodity market and the experience and strengths of its local teams to generate sustained high returns for the shareholders.

Battery and strategic metals are part of the portfolio

In addition to the oil and gas projects in the US, the company is involved in a number of promising metals projects and is constantly looking for new investment opportunities. The focus is on strategic metals, which are needed for high-performance batteries, among other things. The projects are located in countries that are politically stable and have a reliable legal system.

The group has four subsidiaries, one joint venture (EXAI) and one investment (Almonty Industries) with a share of 14.2%. This investment makes DRAG the third largest shareholder in Almonty. The subsidiaries Prime Lithium AG (100% share) and Suomi Oy (100% share) pursue early-stage projects in the metals sector. Tin International AG (95.04% share) and Ceritech AG (72.46% share) were continued only as investment shells in 2022. As part of the EXAI joint venture (70% share) with the Australian partner SensOre, DRAG targets the exploration of lithium in the state of Western Australia.

The most important shareholding is Almonty Industries, which is listed on the Toronto Stock Exchange. Almonty is specialised in tungsten, a metal that is needed in many important industrial products due to its extremely high heat resistance, and therefore cannot be replaced. Almonty is already producing in Portugal and is in the process of significantly increasing its market power with the Sangdong project in South Korea. The goal is to establish the largest tungsten producer outside of China. Sangdong will reliably supply tungsten concentrates of high and consistent quality, mainly for customers in Western Europe, on a long-term basis from around 2024.

We believe that tungsten will not make any meaningful contributions to the earnings of Deutsche Rohstoff in the coming years and therefore have not included any numbers in our financial forecast.

Location of Deutsche Rohstoff's metal projects

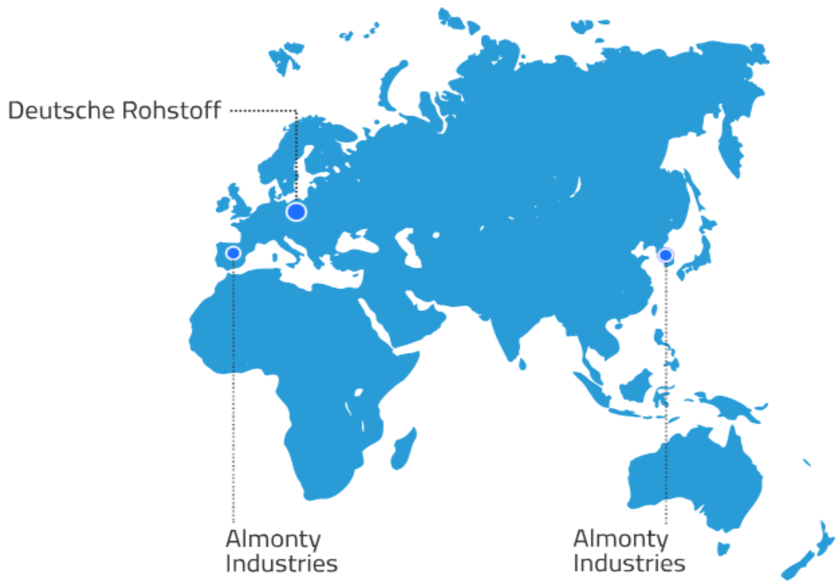


Chart 6 - Source: Deutsche Rohstoff

Company structure

As of 30 June 2023, the Deutsche Rohstoff Group consisted of the following material group companies and investments. Material subsidiaries and investments are those which are intended to be held on a permanent basis. Of the companies shown in the chart, Almonty Industries Inc. and EXAI (Exploration Ventures AI PTY LTD) were carried as investments at the end of June 2023. All other companies were fully consolidated.

Of the four oil & gas producing companies in the US, 1876 Resources and Bright Rock Energy act as an operator, whereas Elster Oil & Gas and Salt Creek Oil & Gas act as non-operators (so-called "non-op") and only participate in operating wells of other companies.

Company structure

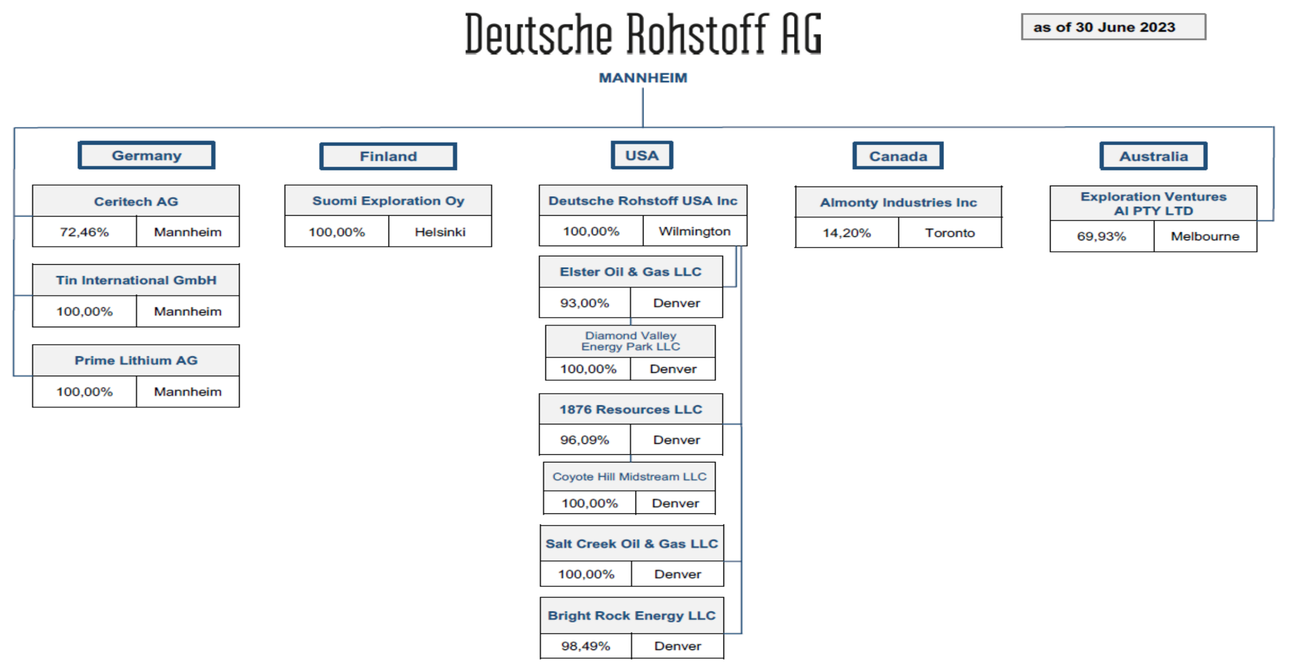


Chart 7 - Source: Deutsche Rohstoff

Cub Creek Energy (renamed as 1876 Resources at the beginning of 2023) produced in the Denver-Julesberg Basin in Colorado and Powder River Basin in Wyoming on purchased acreage in 2021. In early 2023, Cub Creek Energy also began drilling oil wells in Wyoming for the first time as an operator.

Elster Oil & Gas continued to operate exclusively in the production of crude oil in the Denver-Julesberg Basin in Colorado in 2022. Elster Oil & Gas, as a non-operator (so-called "non-op"), only participates in operating wells of other companies.

Bright Rock Energy had acquired acreage in the Uinta Basin in Utah, the US, in 2018 to 2021 and participated as a "non-op" in operating wells of other companies. In mid-2022, these "non-op" activities were sold to sister company Salt Creek Oil & Gas. In 2020, Bright Rock Energy also acquired acreage in the Powder River Basin in Wyoming. In October 2021, the company drilled its first well as operator on these lands. It is currently preparing to drill additional wells.

Salt Creek Oil & Gas significantly increased its interests as a "non-op" in other companies' oil wells in 2022. In addition to the added acreage from Bright Rock Energy, this was done through two joint ventures with Occidental Petroleum in Wyoming. Salt Creek sold its remaining acreage in North Dakota during the year under review.

Almonty Industries, the minority holding specialising in tungsten mining, operated the Panasqueira mine in Portugal in 2022 and is also developing further tungsten projects. The company's largest project, the Sangdong mine in South Korea, is scheduled to commence production in 2024.

EXAI is a joint venture with the Australian partner SensOre. The target of the JV is the exploration of lithium in the state of Western Australia.

Ceritech AG has been held as a "shell company" with the intention of contributing its own or a third-party business to the company since the shares were introduced to the open market of the Düsseldorf Stock Exchange.

Tin International AG held cash exclusively for new projects and for intercompany loans at the end of the year.

Prime Lithium AG operates a research & development project for processing lithium precursors into high-purity lithium products.

Suomi Exploration Oy, Finland, founded in the previous year, is pursuing an early-stage metals exploration project in Finland.

Company development – from phase 1 to phase 3

After the listing of the company and market entry in the US (2011-2014), DRAG established its US subsidiaries and diversified into new oil fields in the following years. From the beginning of 2021, the company entered a new phase as an established partner for US companies (i.e. joint venture with Occidental), acquired new areas with the potential for future growth in the production of oil & gas and diversified its portfolio with strategic metals.

Company development since 2011

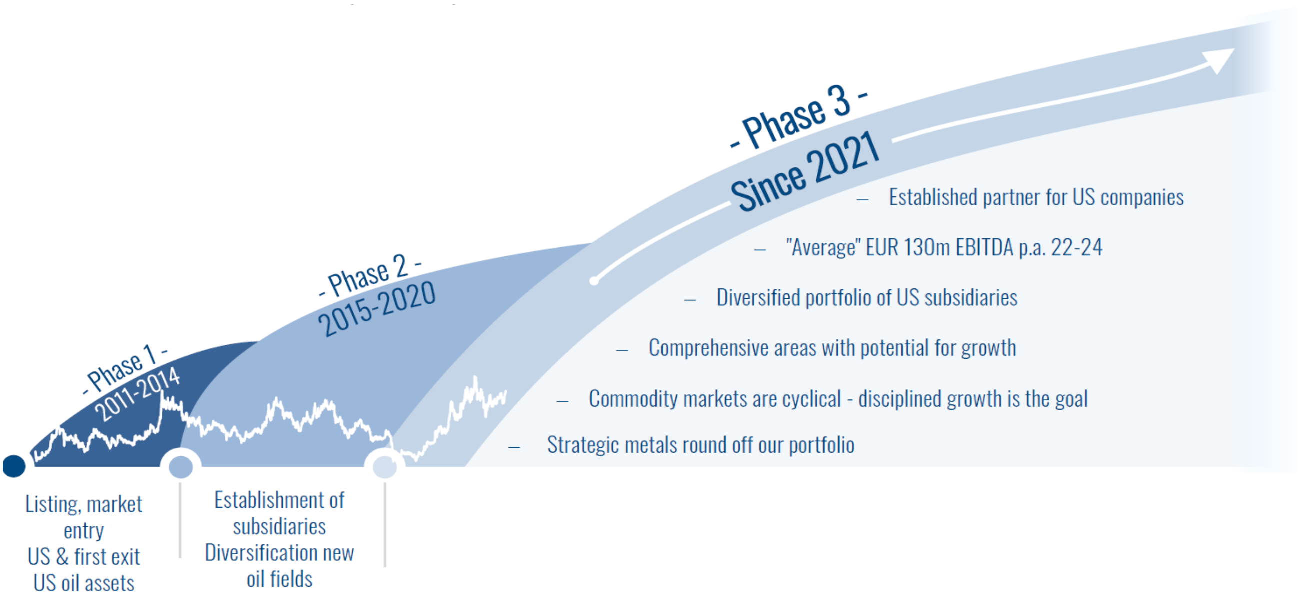


Chart 8 - Source: Deutsche Rohstoff

Members of the management board with many years of experience

Deutsche Rohstoff's management board consists of two members. We like the composition of the board as its members have varied professional backgrounds and many years of significant experience.

Jan-Philipp Weitz (CEO) has been a member of the Deutsche Rohstoff AG team since 2011 and has served as an Executive Board member and CFO of Deutsche Rohstoff AG since 2017. He took on the role of CEO of the company in June 2022. He is responsible for the management of the group and the control of the subsidiaries and participations. In addition, he is in charge of project evaluation as well as the initiation and foundation of portfolio companies.

Henning Döring (CFO) joined the Deutsche Rohstoff AG team in October 2022. He is responsible for the finances and financing of the company. Henning Döring started his professional career at KPMG AG, where he also successfully passed the exam as certified financial auditor. From 2012, he worked for the listed PVA TePla Group, and from 2014 to 2017 in the role of the CFO. From 2017, he first headed up Group Controlling at the Schunk Group, and became the CFO for the leading company in the semiconductor technology sector at the Schunk Group in 2020.

Jan-Philipp Weitz (CEO)	Henning Döring (CFO)
	

Chart 9 - Source: Deutsche Rohstoff

Shareholder structure and profiles

The shareholder structure has been stable for many years and can be divided into legal entities (27%) and private individuals holding more or less than 10,000 shares. The management holds 9% of the number of shares.

Shareholder structure (as of April 2023)

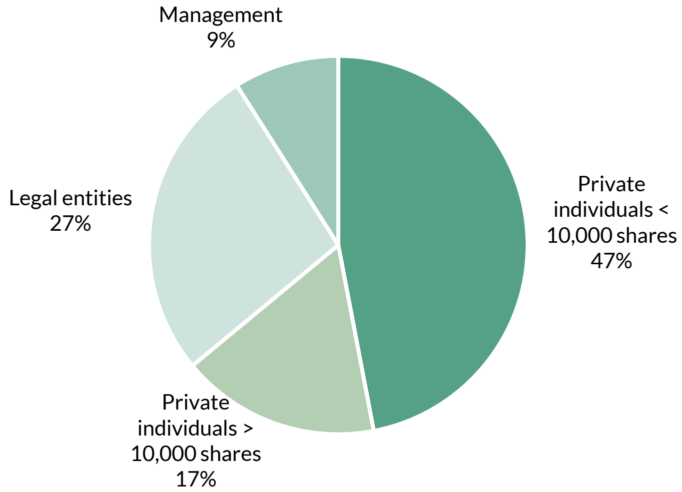


Chart 10 - Source: Deutsche Rohstoff

ACREAGES OFFER HUGE POTENTIAL

The group is in the possession of comprehensive areas of development land with the possibility of more than 100 wells, which could carry the company for well over 10 years at the current rate of development.

The Group uses the techniques of horizontal drilling and hydraulic fracturing to produce oil & gas. It has drilled over 70 horizontal wells and participated in dozens of others with smaller shares.

New and current acreages

DRAG has a portfolio of more than 60,000 acreages which could carry the company for well over 10 years at the current rate of development. On the basis of all potentially possible wells, this could even be significantly longer. In addition, there are ongoing opportunities to purchase additional acreage. At the same time, DRAG also regularly reviews whether it can sell acreage and wells from subsidiaries if it receives an attractive offer. For example, Salt Creek sold its remaining acreage in North Dakota to various buyers for $ 6.6m. The acreage had been acquired in various transactions since 2016 for a total of ca. $ 7.5m and had generated ca. $ 3m in cash flow during the holding period.

High production from three states

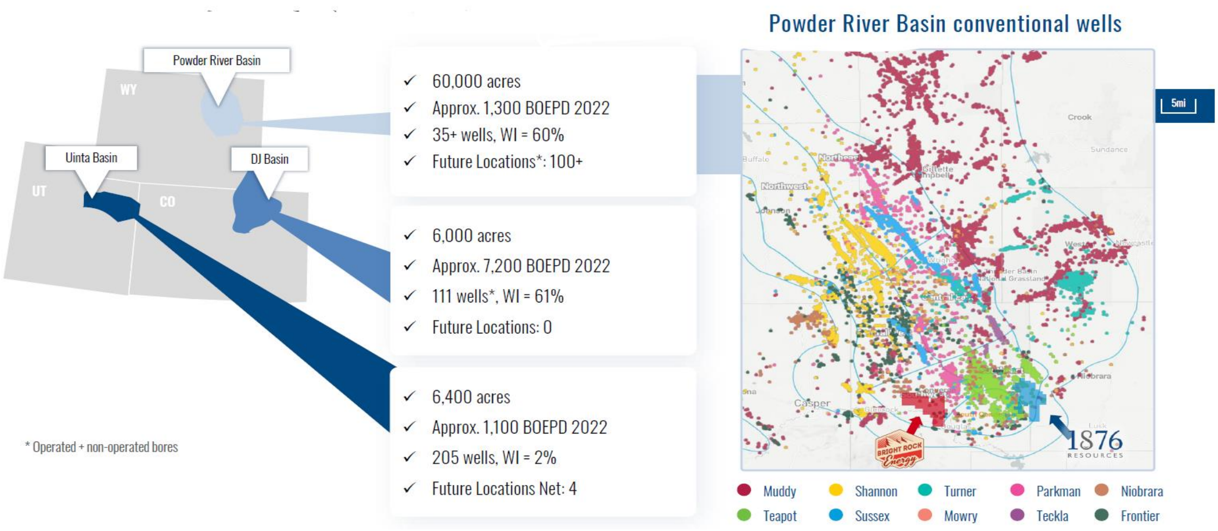


Chart 11- Source: Deutsche Rohstoff

Extensive acreage in Wyoming

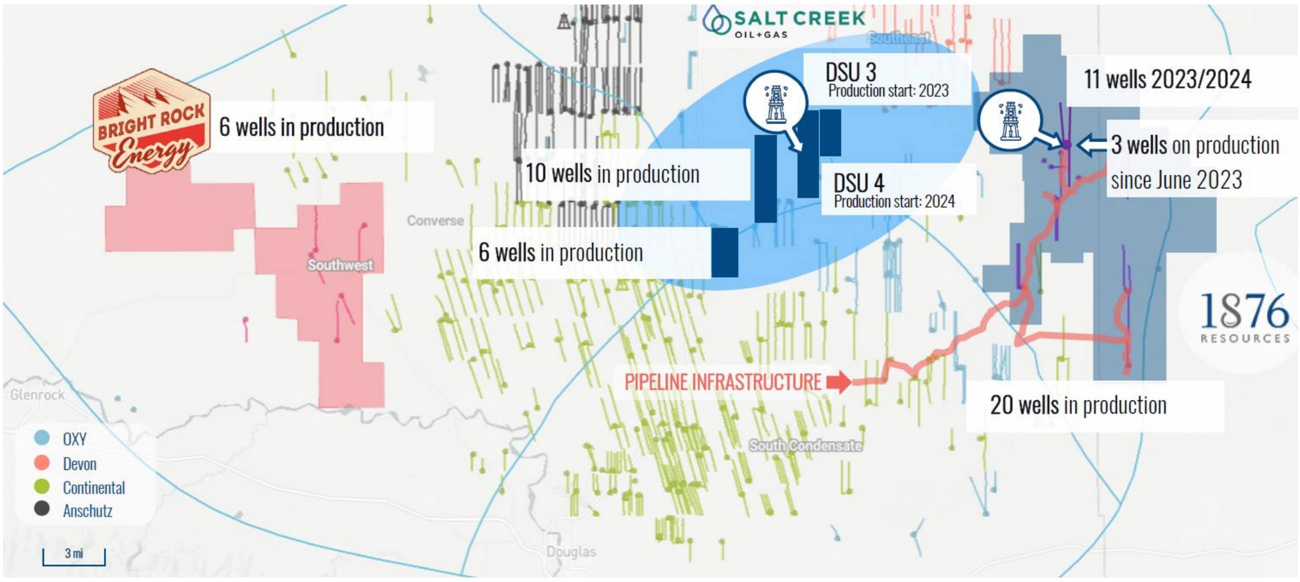


Chart 12 - Source: Deutsche Rohstoff

Competition for the most desired areas

The requirements for successful wells and production of oil and gas are to acquire the rights for a certain area. Only the person who owns the rights may develop an area. In this respect, the acquisition of land represents one of the key success factors in oil and gas developments.

However, unlike in most other countries, rights are not granted by the state through a licensing system. Instead, the mineral resources are in private ownership.

DRAG therefore enters into agreements with the owners of the rights ("Mineral Owners") which allow the company to extract their mineral resources (so-called "Lease Agreement"). In return, the owners of the rights receive a one-off payment and an additional share of the revenue from the wells ("royalty").

The more coveted an area is, the higher the payments the mineral owners can demand. As a rule, these contracts initially run for 3-4 years with an extension option. During this period, one or more wells must be drilled, otherwise the right expires. Once an area has been produced, the right to produce remains virtually indefinitely with the company that acquired the right.

Focus on known fields with low risk

There are various possibilities to acquire acreage. Often private individuals or companies offer entire packages of rights. DRAG acquired such a package at the end of 2016 with its subsidiary Salt Creek. As a result, DRAG has acquired minority interests in 60 producing wells and 90 potential wells. This way DRAG can quickly build up a larger position.

Much more complex is the possibility of acquiring individual rights and combining them into a package over time. DRAG has chosen this approach for its subsidiary Bright Rock, which operates in Utah and purchased approximately 2,000 acres from dozens of mineral owners from mid-2018 to the end of 2019.

Together with its subsidiaries in the US, the company has specialised in developing fields that are already well known. To date, around 20,000 wells have been drilled in the Wattenberg field in Colorado, several thousand of which are producing. DRAG is specifically looking for land that is in already developed areas. The risk of drilling errors is much lower there than in areas where little or no drilling has been done in the past.

In fact, since 2012, DRAG has drilled more than 100 wells itself or had a minority stake in them.

Experience in land acquisition and drilling

While DRAG's first wells were vertical wells, since 2015 the company has exclusively drilled and financed horizontal wells with lengths of 1 to 2.5 miles. All wells are producing oil and gas and were successful in this respect.

Another special feature of the US legal system is that all companies producing oil and gas are required to publish production data. The production data is published for each individual well and for each month by the department responsible for the respective state.

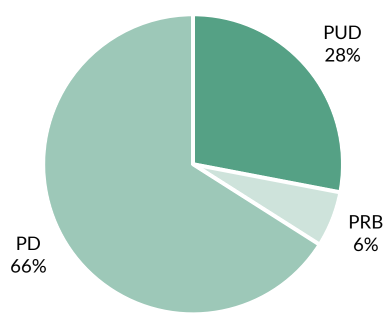
This data also enables the company to evaluate the areas or wells offered to it. Due to the very dense drilling grid in the developed fields, it is possible to make a fairly reliable estimate of what production can be expected on the available area by drilling wells that produce nearby.

Of course, the production data is not only important for the acquisition decision but also provides a solid basis for the investment decision of a drilling program. Furthermore, the many years of experience of DRAG's colleagues on site also enable a detailed cost estimate of the drilling costs as well as the production costs.

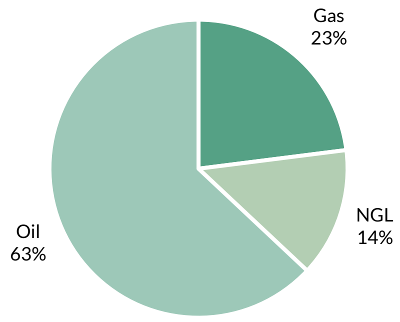
Oil and gas – current reserve estimates

According to DRAG, proved reserves increased by 22% y-o-y due to investments and field development and totalled $ 352m (discounted cashflow; previous year: $ 318m) at the end of 2022. Proved and probable reserves combined totalled $ 372m (discounted cashflow; previous year: $ 368m). Proved reserves were calculated at 35.7m barrels of oil equivalent (BOE) at year-end (previous year: 29.2m BOE), while probable reserves were calculated at 13.7m BOE (previous year: 19.4m BOE). See chart below. Reserves include the reserves of the subsidiaries Cub Creek Energy, Elster Oil & Gas, Bright Rock Energy and Salt Creek Oil & Gas. Reserves of 1876 Resources, Elster Oil & Gas and Salt Creek Oil & Gas were prepared by independent reserve auditors (Netherland Sewell & Associates, DeGolyer & MacNaughton). Bright Rock Energy reserves have been prepared by Bright Rock Energy without external auditors.

Reserve values by category – $ 372m



Reserves by commodity – 49m BOE



Charts 13 - Sources: Deutsche Rohstoff; PD Proved Developed, PUD Proved Undeveloped, PRB Probable, 49m BOE = Natural gas is converted to BOE with an industry standard of 6000 cf

Reserves (as of 1 January 2023)

	Proved			Probable	Total
in million USD	Proved Developed	Proved Undeveloped	Proved	Probable	
BOE in millon	14.8	20.9	35.7	13.7	49.4
Revenue[2]	626.1	1,058.7	1,684.8	698.1	2,382.9
Production tax	63.2	127.4	190.6	83.1	273.7
OPEX	209.6	232.1	441.7	147.8	589.5
Operational Cash Flow	353.0	698.5	1,051.5	467.0	1,518.6
CAPEX	1.6	399.4	401.1	317.7	718.7
Cash Flow	**351.4**	**299.1**	**650.5**	**149.3**	**799.8**
Discounted Cash Flow (10%)	**246.5**	**105.3**	**351.8**	**20.2**	**372.0**
Net wells	94.1	38.5	132.6	28.7	161.4

Discounted Cash Flow (10%) for different price scenarios

60 USD/bbl and 3 USD/MMBtu	175.4	38.7	214.1	5.0	219.0
80 USD/bbl and 4 USD/MMBtu	277.7	190.1	467.8	95.0	562.8

Chart 14- Sources: Deutsche Rohstoff, Reserves include the reserves of the subsidiaries Cub Creek Energy, Elster Oil & Gas, Bright Rock Energy and Salt Creek Oil & Gas. Reserves of Cub Creek Energy, Elster Oil & Gas and Salt Creek Oil & Gas were prepared by independent reserve auditors. Bright Rock Energy reserves have been prepared by Bright Rock Energy without external auditors.
[2] Revenues shown are net of partners's shares and royalties

Based on the discounted cash flow for its proved reserves ($ 351.8m) as of 1 January 2023, the reserves would be valued at $ 70.32 per share (or € 62.78 per share using a €/$ 1.12).

Oil price sensitivity: An increase in the flat oil price from $ 60/bbl to $ 80/bb increases the value of reserves by $ 344m to $ 562.8m. See table above.

Strip and price scenarios for reserves

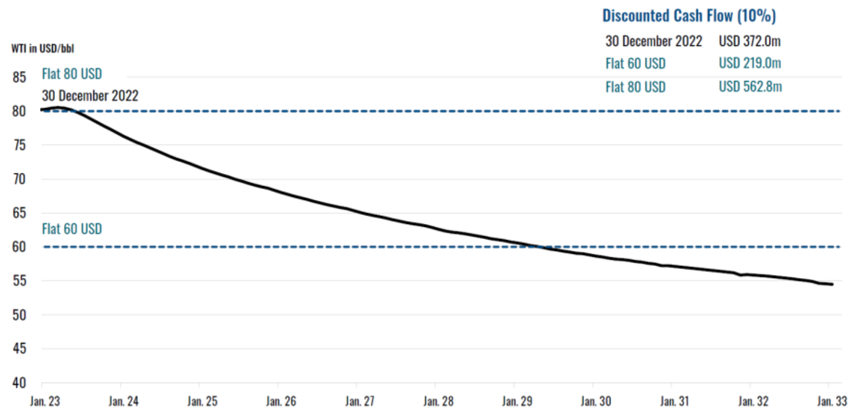


Chart 15 - Source: Deutsche Rohstoff

Drilling Technology used for different fields and rocks

The Group uses the techniques of horizontal drilling and hydraulic fracturing to produce oil & gas. It has drilled around 70 horizontal wells and participated in dozens of others with smaller shares.

Oil and gas reservoirs, such as those explored by Deutsche Rohstoff and used for production, consist of layers of rocks that are usually several meters thick and located at a depth of 1-4 kilometres.

The conventional way to drill these layers and to produce the valuable oil and gas they store is by **vertical drilling.** To do this, you have to drill vertically downwards from the surface to the oil layer. With this type of well, the oil is located in easily permeable rock. It can flow into the well and be produced by its own pressure.

For a long time now there has also been the possibility of **directional drilling.** With this method the drill head is deflected during the drilling process. This way it can be continuously guided in the direction in which you want to drill.

Horizontal drilling is a further development of directional drilling. In this process, drilling is first carried out vertically to the depth of the oil-bearing layer. As soon as this layer is reached, the drill head and with it the drill pipe and the casing are deflected by 90 degrees into a horizontal direction. From there, the well is then drilled horizontally for up to 4km through the oil-bearing rock. This technique is particularly suitable for very impermeable rocks. In a simple vertical well, too little oil would pass into the well. In order to increase the surface area, long horizontal stretches are created in which the oil can enter the well. This modern method of horizontal drilling is applied to all wells financed by Deutsche Rohstoff. The horizontal length of the well varies between 1 to 3 miles, which is approximately 1.6 to 4km. The highly developed drilling technology makes it possible to guide the drilling very precisely along the path that the engineers have determined in advance. Another advantage of horizontal drilling technology is obvious; it is possible to develop an entire oil field covering an area of 3-5 square km from a relatively small well pad. The amount of land used on the surface is minimal and is only the size of half a football field.

Horizontal drillings enable effective development

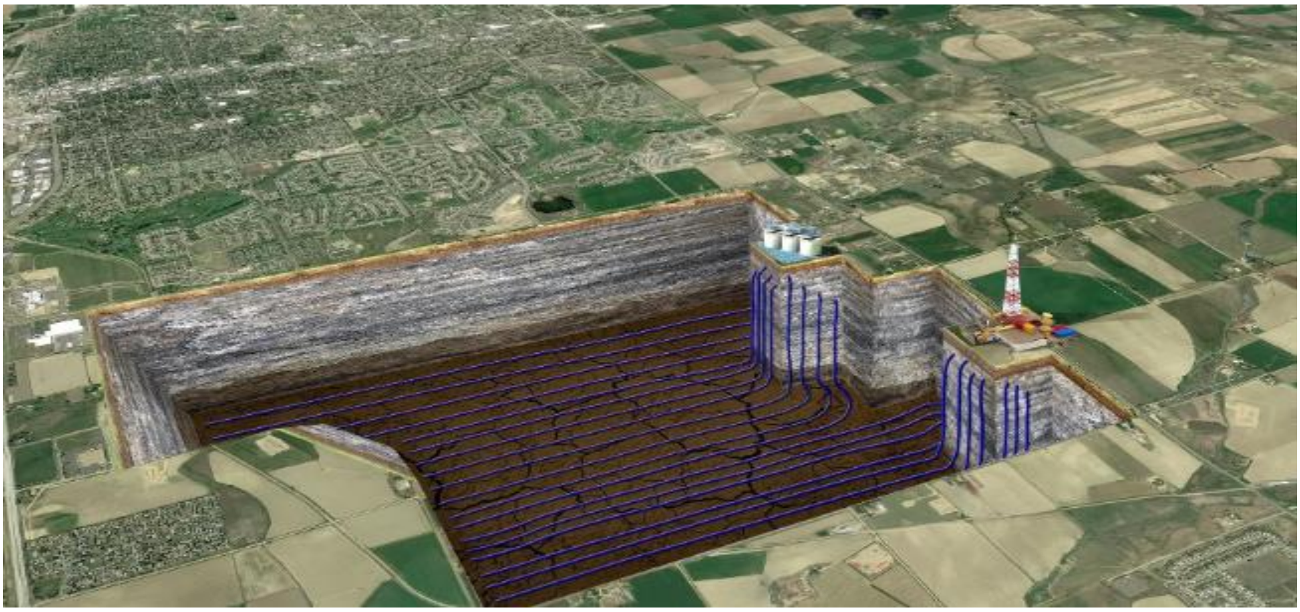


Chart 16- Source: Deutsche Rohstoff

Another technology that has gained considerable importance in recent years is **hydraulic fracturing.** In this process, a mixture of water, sand and chemical additives is pumped into the well at high pressure. The aim is to create cracks in the rock surrounding the well at several points. This allows more oil to flow into the well.

From a single pad, 10 or more wells can be drilled, allowing a large area to be reached and developed

Chart 17- Source: Deutsche Rohstoff

Both the techniques of horizontal drilling and hydraulic fracturing were perfected in the course of the development of shale oil deposits. In former times, slate was often used for rain protection as roofing shingles. It is a very dense rock from which only small amounts of oil would flow into the well by itself. By creating fine cracks, the permeability of this rock increases considerably. The added sand is transported into the cracks. The sand in the cracks prevents them from closing again by themselves due to the high pressure at a depth of 1-4 km.

The horizontal drilling method is now used in the majority of cases in the US. In 2004, horizontal wells were still producing around 14% of the shale oil in the US. By the end of 2018, however, the share had already reached 96%. These figures show that the horizontal drilling technique has almost completely replaced the earlier methods.

Deutsche Rohstoff and its subsidiaries also make use of the great advantages of the new technology. The company drilled its first wells in spring 2012 as vertical wells. Since then, it has drilled around 70 horizontal wells and participated in dozens of others with smaller shares.

Wyoming – example of potential wells*

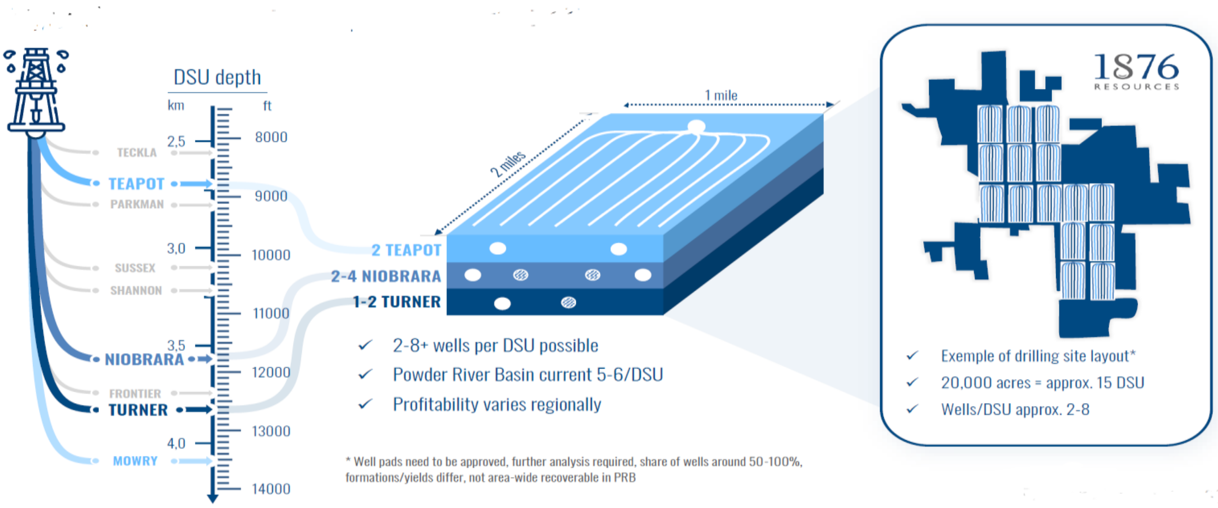


Chart 18- Source: Deutsche Rohstoff

Automation and pipelines for low-cost production

DRAG's oil and gas production is state-of-the-art and has been tested thousands of times in the US in recent years. Once drilling is completed and production begins, an optimisation phase lasting several months follows, during which the well pad is prepared for long-term production.

A typical well pad requires very little space. In the final stage of development, the area is roughly comparable to the size of half a football field (rather smaller). No personnel is required on site and production is fully automated. Of course, the conveyance is constantly monitored by the company's own personnel or by service providers in order to ensure an optimal operating procedure.

The production of a mixture of oil, gas and water is very typical for the area in the Wattenberg field. This mixture, conveyed through the pipes from the depths by its own pressure, reaches a separation plant, which is an integral part of the conveyor system.

The separation plant separates the components of the mixture using simple physical processes. The water is separated and fed into tanks so that it can later be disposed of in an environmentally friendly way.

After drilling, the plants are ready for production	Plant for the automatic separation of the oil-gas-water mixture
	

Chart 19- Source: Deutsche Rohstoff

Logistics and transportation of oil and gas

The oil and gas that is freed from water content is pumped into pipelines on site. The pipeline infrastructure is very good in the areas where DRAG produces and almost every well pad has a connection. In some cases, oil is transported by a tanker. However, this is no longer the case at the newer well pads.

Transport by pipeline is much cheaper, less prone to failure and more environmentally friendly.

DRAG sells its oil and gas directly from the well site to specialised logistics companies that operate entire pipeline networks in the respective region. They pay the market price for the oil, also known as West Texas Intermediate (WTI). The natural gas price is referred to as the “Henry Hub” or “CIG”.

The logistic companies currently receive between $ 2 and $ 5 per barrel for their services, namely transport and marketing. This price can fluctuate depending on the utilisation of the pipelines. If they are heavily used, the price is higher than at times of low throughput.

COMMODITY MARKETS – HIGH VOLATILITY EXPECTED

We believe that Deutsche Rohstoff will benefit from 1) ongoing global demand for oil and gas which is not expected to plateau before the end of the decade and 2) the massively growing battery metals business.

Oil, gas and tungsten – historical development

The global oil and gas demand continued to trend positively in 2022, returning to pre-pandemic levels of ca. 99.5m to 100m BOPD (barrels of oil per day). However, supply did not expand at the same rate due to a variety of reasons. Key factors for limited supply expansion included production constraints due to pandemic measures, lack of investment in new production space in North America, lack of capacity in many OPEC+ countries, and volume reductions by OPEC+ countries to stabilise prices at high levels. These factors had already led to a significant increase in oil prices by mid-February 2022. Two weeks before the Russian attack on Ukraine, WTI peaked above 95 $/bbl and was thus at the level of the later 2022 annual average. The oil price increase was initially accelerated by the Ukraine war from the end of February. In the second half of the year, the price returned to the average level and closed at 80.16 $/bbl on the last trading day. For 2022, WTI averaged 94.90 $/bbl or 39.3% above the 2021 average (68.14 $/bbl).

WTI Crude Oil Spot Price ($/barrel)

Chart 20 - Source: FactSet

The average gas price (Henry Hub) changed little in 2022 (2022: $ 6.45/MMBTU vs 2021: $ 6.54/MMBTU). However, the price experienced unprecedented volatility during the year in the wake of supply uncertainties associated with the Ukraine war, with spikes as high as $ 9.85/MMBTU. At the end of the year, the gas price was quoted at $ 3.52/MMBTU, well below the high and the average for the year.

Henry Hub Natural Gas ($/MMBTU)

Chart 21 -Source: FactSet

Correlation between the price of oil & gas vs. DRAG's share price of DRAG

The development of DRAG's share price is strongly correlated to the development of the price of oil and gas. Over the last three years, the correlation between the share price of DRAG and the price of oil was 0.89 and 0.61 vs the price of Henry Hub Natural Gas. Even for a longer time frame (last 10 years), the correlation was 0.66 (share price vs price of oil) and 0.59 (share price vs price of Henry Hub Natural Gas).

Deutsche Rohstoff vs Light Crude Oil

Chart 22- Source: FactSet

Deutsche Rohstoff vs Henry Hub Natural Gas

Chart 23 - Source: FactSet

$/barrel oil cost breakdown – 2022

Changes in the demand and supply of oil and gas have a significant impact on the price of the commodity and hence on the profitability of the company.

In the chart below, we show a simple explanation of how the company generates its gross profit (or free cash flow) starting from the price of oil per barrel (bbl).

In 2022, the average WTI price was 94.90 $/bbl. With each barrel of oil, the group also produces natural gas and NGLs, which generated around 34 $/bbl in 2022. Gross revenues thus amounted to 128.9 $/bbl. Deducted from this are so-called differentials (transportation, marketing) of 3.4 $/bbl, 22 $/bbl hedging losses (68% oil and 32% gas), and local production taxes (11.4 $/bbl). According to German HGB, this gives net revenue of 92.1 $/bbl. After deducting operating costs of 17.2 $/bbl (equivalent to 9.04 $/bbl), the group is left with a cash flow of 74.9 $/bbl, which can also be described as a gross profit margin of 81%. After depreciation and amortisation of 23.5 $/bbl (equivalent to 12.5 $/bbl), the group is left with 51.4 $/bbl as gross profit or free cash flow.

$/barrel oil cost breakdown (2022)

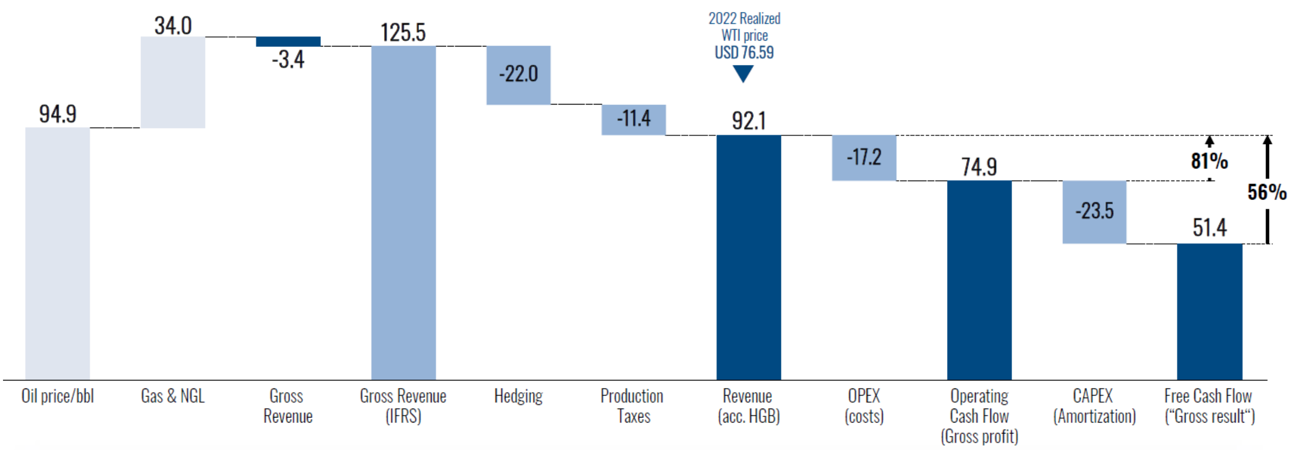


Chart 24- Source: Deutsche Rohstoff

Tungsten

The most important industrial metal for DRAG is tungsten because of its 14.2% shareholding in Almonty. After the tungsten APT price increased significantly (+45%) in 2021 to $/mtu (metric tonne unit) 336.5, it remained at almost the same level throughout 2022 and closed at $/mtu 335.

Tungsten ($ or AUD)

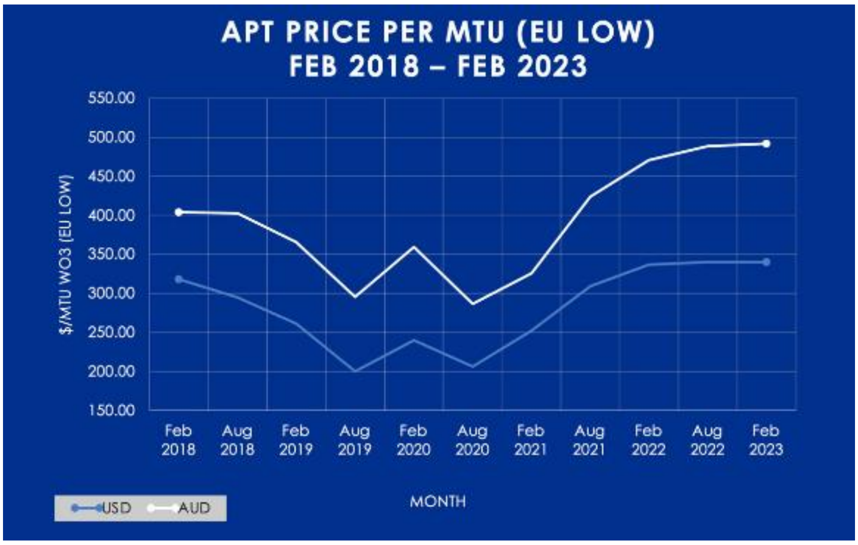
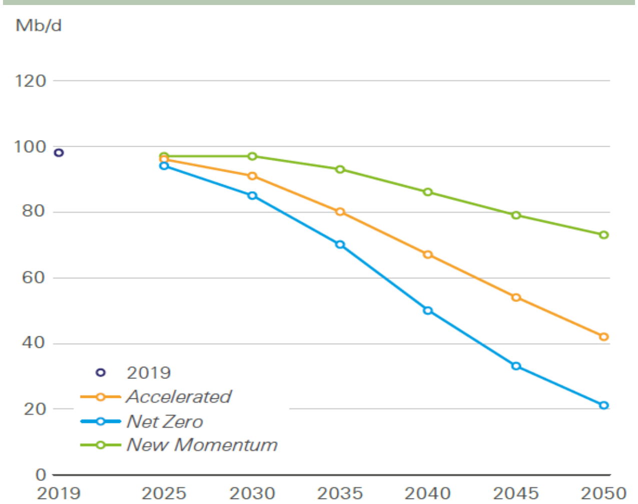


Chart 25 - Source: Almonty Indutries

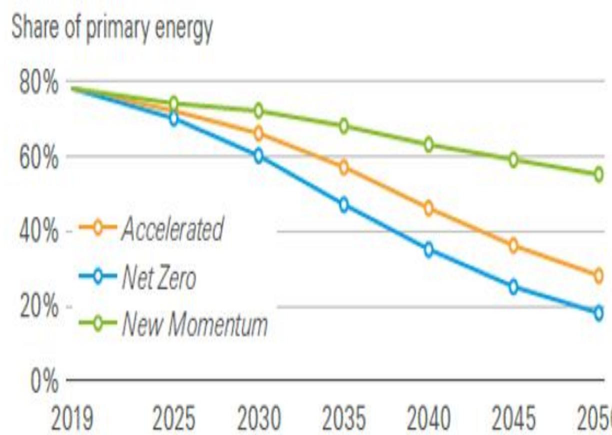
Oil demand remains favourable

According to BP's Energy Outlook 2023 Edition, global demand for oil is expected to plateau (close to 100Mb/d) by the end of the decade as the role of oil falls across all modes of transport, reflecting a shift to alternative, low-carbon energy sources. BP's forecast is based on three different scenarios (*Accelerated, Net Zero, New Momentum*) and our oil and gas analyst sees *New Momentum* as the most likely scenario.

Oil demand, 2019 - 2050



Fossil fuels, 2019 - 2050



Charts 26 - Source: BP Energy Outlook 2023

New Momentum is designed to capture the broad trajectory along which the global energy system is currently travelling. It places weight on the marked increase in global ambition for decarbonization in recent years, as well as on the manner and speed of decarbonization seen over the recent past, whereas *Accelerated* and *Net Zero* explore how different elements of the energy system might change in order to achieve a substantial reduction in carbon emissions. The last two scenarios are conditioned on the assumption that there is a significant tightening in climate policies.

In the scenario of *New Momentum*, the consumption of oil is stronger than during the scenarios of *Accelerated and Net Zero*, remaining close to 100 Mb/d through much of this decade, after which consumption declines gradually to around 75 Mb/d by 2050, implying a CAGR of -1% between 2019 – 2050.

The global energy transition leads to lower demand for oil and gas.

World Primary Energy Mix

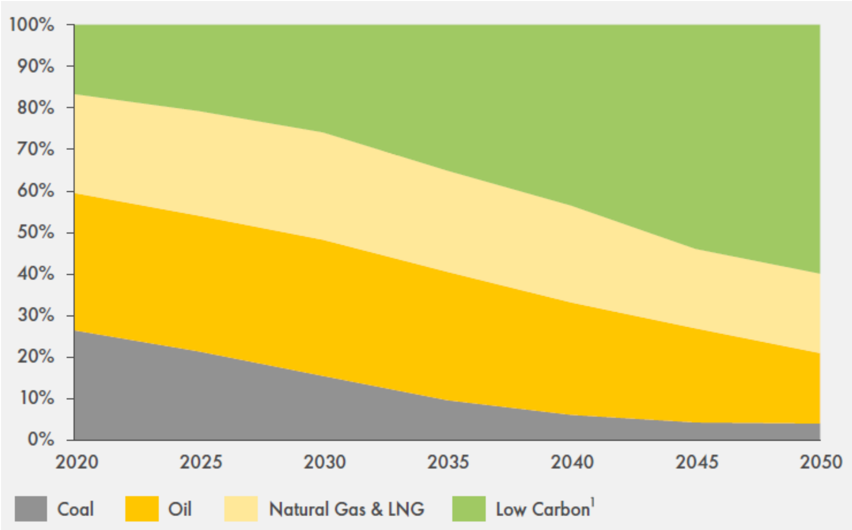


Chart 27- Source: Shell Capital Markets Day 2023

[1]Includes renewable electricity, nuclear and biomass

In 2022, the oil consumption of the major regions was 22.1 billion barrels. Similar per capita consumption of China to that of Western Europe would mean growth of 40% in oil consumption.

World oil consumption, 2022

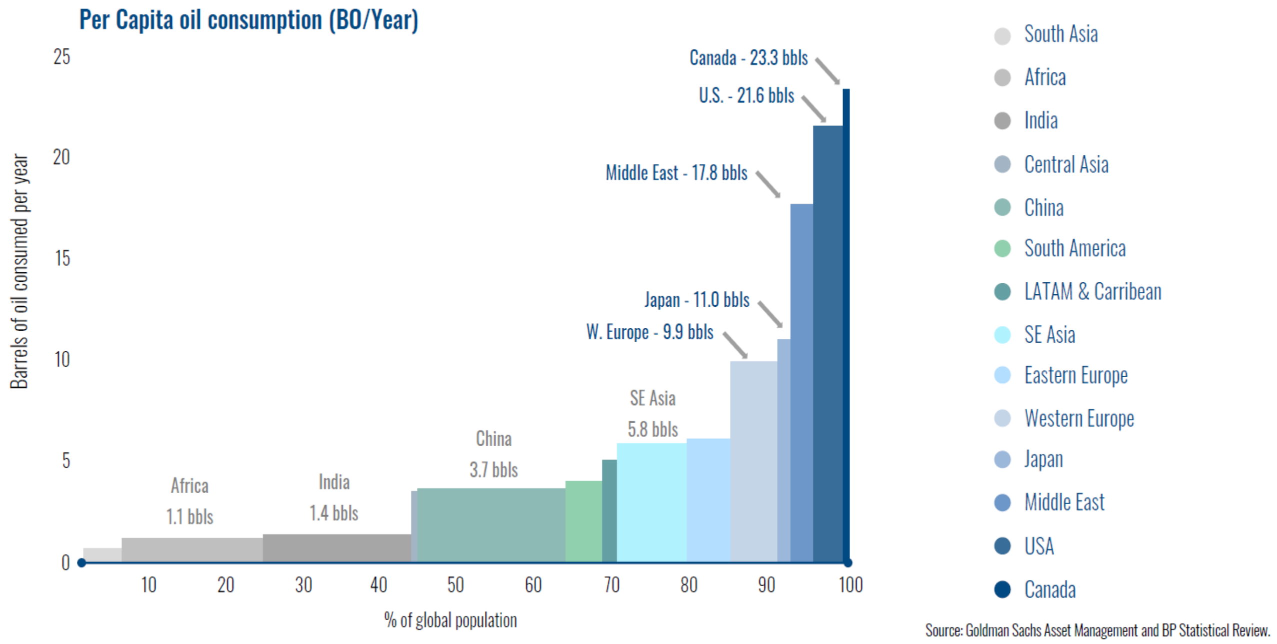


Chart 28 -Source: Deutsche Rohstoff

Rest of the world needs more oil

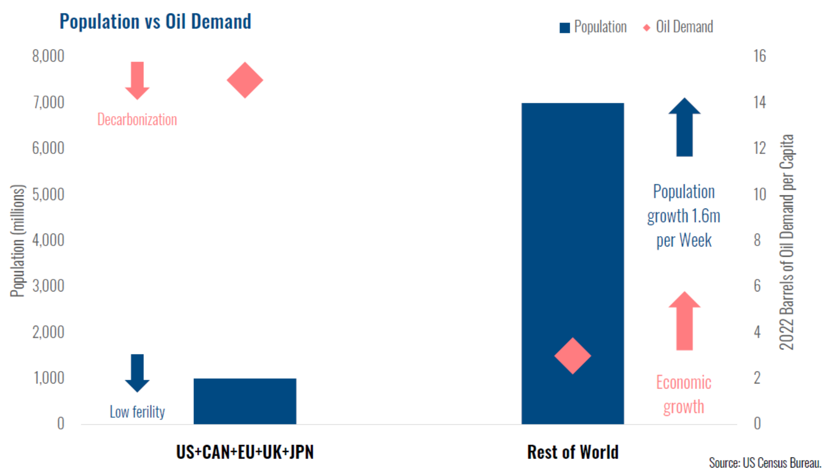


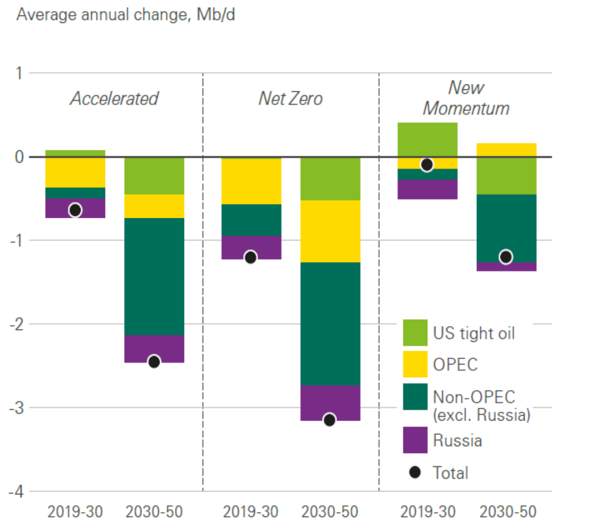
Chart 29 - Source: Deutsche Rohstoff

Oil supply – global composition shifts over time

It is expected that the composition of global oil supplies shifts over time. In our view, this shift may have a negative impact on DRAG in the long term as it produces oil and gas in the US only.

US tight oil – including natural gas liquids (NGLs) – will grow over the first 10 years or so of the outlook, peaking at between 11-16 Mb/d around the turn of this decade in all three scenarios. Afterwards, US tight oil will decline as the most productive locations are exhausted and OPEC competes to increase its market share.

Change in oil supply



OPEC market share of global oil supply, 2000 - 2050

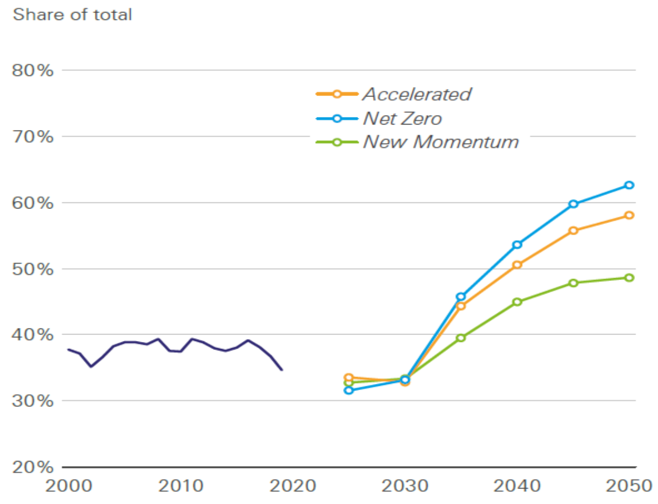


Chart 30 - Source: BP Energy Outlook 2023

Natural gas - prospects depend on the speed of the energy transition

The prospects for natural gas depend on the outcome of two significant but opposing trends: increasing demand in emerging economies as they grow and industrialise, offset by a shift away from natural gas to lower-carbon energy led by the developed world. The net impact of these opposing trends on global gas demand depends on the pace of the energy transition.

Like BP's outlook for oil, the forecast for natural gas is also based on three different scenarios (*Accelerated, Net Zero, New Momentum*) and we view *New Momentum* as the most likely scenario.

In the *New Momentum* scenario, global demand for natural gas rises over the rest of this decade driven by strong growth in China – underpinned by continued coal-to-gas switching – and also by India and other emerging Asian countries as they industrialise further.

Natural gas demand, 2020 - 2050

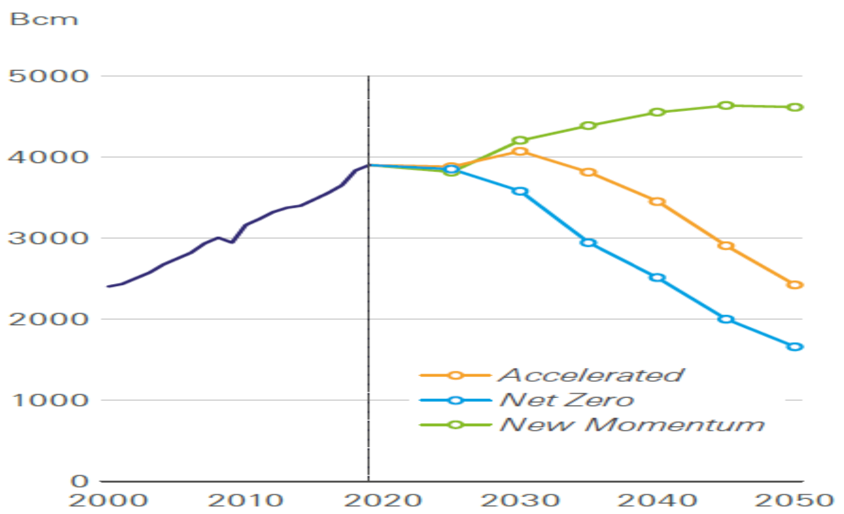


Chart 31 - Source: BP Energy Outlook 2023

After 2030, global natural gas demand in *New Momentum* continues to grow for much of the period out to 2050, driven by growing use in emerging Asia and Africa. Much of this growth is in the power sector as the share of natural gas consumption in power generation in these regions grows and overall power generation increases robustly. Global natural gas demand in *New Momentum* in 2050 is around 20% above 2019 levels (CAGR of +0.5%, 2019-2050).

We see the global demand outlook as positive for DRAG, even if gas revenues account for only 20% of total revenues.

NEW WELLS CREATE LONG-TERM VALUE

With the addition of new wells in 2023 and 2024, Deutsche Rohstoff's production in oil and gas will continue to increase and pave the way for profitable growth in the coming years. As a result, we anticipate that revenues and EBITDA will rise by 7.6% and 8.8% respectively (2023e to 2025e) with EBITDA margins up by 90bp to 74.8% (2025e).

Record of production volumes ahead

The group's business activities are focused on the production of oil and gas in the US. At the end of 2022, DRAG was an operator in 89 wells and had minority interest in over 250 producing wells.

The guidance is mainly based on the currently producing wells in Colorado, Utah and Wyoming. In addition, the planning includes further wells of the subsidiaries Cub Creek and Salt Creek Oil & Gas, which are currently being drilled or have been decided by management and are very likely to start production in the course of 2023 and 2024.

Daily production is expected to average 11,000 to 12,000 BOE in 2023, an average increase of nearly 20% compared to 2022. In terms of volume, production is expected to be split 52% oil and 48% natural gas and condensates. In terms of value, this corresponds to a revenue share for oil of ca. 80% and for natural gas and condensates of ca. 20%. It is planned to increase these volumes again in 2024, provided that the oil price remains at the current attractive level. The drilling program as the basis for the guidance reflects this intention and will lead to an increase in volumes of around 10% to 15%.

Guidance for wells – 2023

- The wells (over 300) that are already producing in 2023.
- Start of production from 15 wells (45% share) at Salt Creek in a joint venture with Oxy.
- Production start of 5 gross wells (80% share) in Wyoming, of which 3 have already been drilled.
- 45 wells with a share of approximately 2.5% at Salt Creek in Utah.

The guidance implies that 11.9 new net wells will start production in 2023.

Guidance for wells – 2024

- The wells (over 300) that are already producing in 2024.
- Start of production from 10 additional wells (45% share) at Salt Creek in a joint venture with Oxy.
- Start of production of 6 gross wells in Wyoming (90% share).

The guidance implies that 9.9 new net wells will start production in 2024.

Production program – 2023 & 2024

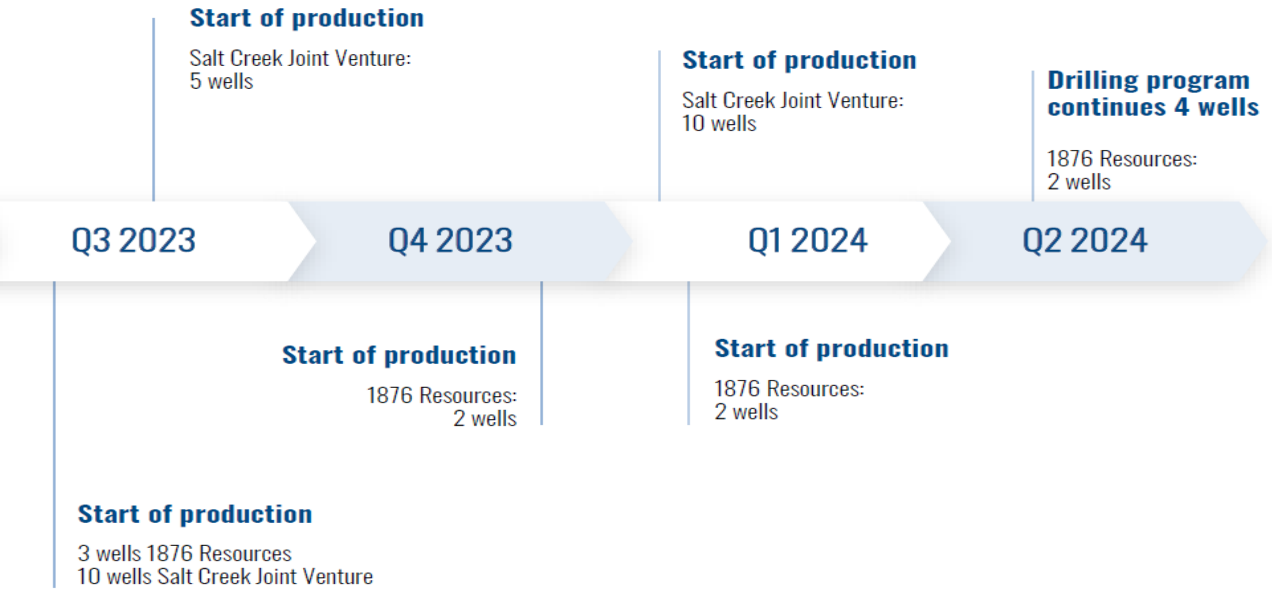


Chart 32 - Source: Deutsche Rohstoff

The forecast for 2023 and 2024 comprises a base scenario and an increased price scenario with the following ranges and underlying assumptions:

Deutsche Rohstoff – Guidance for 2023 & 2024

2023	BASE SZENARIO	INCREASED SZENARIO	2024	BASE SZENARIO	INCREASED SZENARIO
Revenue	150–170 EUR Mio.	165–185 EUR Mio.	Revenue	170–190 EUR Mio.	190–210 EUR Mio.
EBITDA	115–130 EUR Mio.	125–140 EUR Mio.	EBITDA	130–145 EUR Mio.	155–170 EUR Mio.
UNDERLYING ASSUMPTION:			UNDERLYING ASSUMPTION:		
Oil price	75.00 USD	85.00 USD	Oil price	75.00 USD	85.00 USD
Gas price	3.00 USD	3.00 USD	Gas price	3.00 USD	3.00 USD
Exchange rate	1.12 USD	1.12 USD	Exchange rate	1.12 USD	1.12 USD

Chart 33 - Source: Deutsche Rohstoff

Forecasts within guidance range

2023e – we expect higher revenues, but a decline in EBITDA margins

We believe that the addition of 11.9 new net wells in 2023 will increase the daily production by around 21% to 11,628 BOE. As a result, revenues are expected to rise to € 168.1m in 2023 (or +1.6% y-o-y). However, due to lower other operating income and higher cost of materials (which depend on the number of BOE produced) vs 2022, EBITDA will decline to € 124.3m vs € 139.1m a year ago. Our estimates are within guidance range for the base scenario, but 2.8% above consensus revenues. For additional details, please see the table 38 "Production & revenue forecast" (on page 33) which includes our underlying assumptions.

Company guidance (base scenario) vs estimates, 2023e

€ m	2022	2023 guidance		2023e	Chg y-o-y	ODDO BHF vs guidance		2023e consensus	ODDO BHF vs cons
		Low	High			Low	High		
Sales	165.4	150.0	170.0	168.1	1.6%	12.1%	-1.1%	163.5	2.8%
EBITDA	139.1	115.0	130.0	124.3	-10.6%	8.1%	-4.4%	124.5	-0.1%
Margin	*84.1%*	*76.7%*	*76.5%*	*73.9%*				*76.1%*	

Table 34 - Sources: Deutsche Rohstoff, ODDO BHF Securities

2024e and beyond – daily production continues to rise

We expect that DRAG will continue its drilling program and add new net wells every year. For 2024, the company guides for 9.9 new net wells, leading to estimated daily production of 12,416 BOE (+6.8% y-o-y vs company guidance of +10% to 15% y-oy-). Afterwards, we assume that the company will add 7.5 new net wells every year. Our estimate is based on the published oil & gas reserves (38.5 proved undeveloped and 28.7 probable net wells, as of 1 January 2023).

For 2024e, we are within the guidance range for the base scenario, but 1.2% above consensus revenues.

Company guidance (base scenario) vs estimates, 2024e

€ m	2023e	2024 guidance		2024e	Chg y-o-y	ODDO BHF vs guidance		2024e consensus	ODDO BHF vs cons
		Low	High			Low	High		
Sales	168.1	170.0	190.0	175.3	4.3%	3.1%	-7.7%	173.2	1.2%
EBITDA	124.3	130.0	145.0	130.2	4.8%	0.2%	-10.2%	133.2	-2.2%
Margin	*73.9%*	*76.5%*	*76.3%*	*74.3%*				*76.9%*	

Table 35- Sources: Deutsche Rohstoff, ODDO BHF Securities

For 2025, we are forecasting revenues of € 180.8m (+7.6% vs 2023e) and an EBITDA margin of 74.8% (+ 90bp vs 2023e).

Earnings summary

€ m	2018	2019	2020	2021	2022	2023e	2024e	2025e
Revenue	109.1	41.2	38.7	73.3	165.4	168.1	175.3	180.8
Change y-o-y		*-62%*	*-6%*	*90%*	*126%*	*2%*	*4%*	*3%*
EBITDA	97.9	22.7	23.9	66.1	139.1	124.3	130.2	135.3
Change y-o-y		*-77%*	*5%*	*176%*	*111%*	*-11%*	*5%*	*4%*
EBITDA margin	*89.8%*	*55.2%*	*61.9%*	*90.1%*	*84.1%*	*73.9%*	*74.3%*	*74.8%*
Total net debt	33.4	72.5	105.6	93.9	55.7	51.5	29.5	-8.9
Change y-o-y		*117%*	*46%*	*-11%*	*-41%*	*-8%*	*-43%*	*-130%*
FCF	40.9	-14.7	-22.7	0.6	60.3	6.9	36.1	48.9
Change y-o-y		*-136%*	*54%*	*-103%*	*9519%*	*-89%*	*422%*	*35%*

Table 36 - Sources: Deutsche Rohstoff, ODDO BHF Securities

Main assumption behind our forecasts

Our revenue and production forecast is based on the following assumptions:

❖ Exchange rate €/$

We have used a €/$ exchange rate of 1.12 for 2023e and 2024e. For 2025e, we expect an exchange rate of 1.15. The main reason to expect some € appreciation/$ depreciation going forward rests on the idea that the US central bank will end its policy tightening before the ECB and starts to cut rates earlier as well (Source: ODDO BHF Chief Economist).

❖ Price for WTI ($/bbl), Natural gas ($/MMBTU) and NGL ($/bbl)

Our estimates for the price of WTI (80.00 $/BO for 2023e, 70 $/BO for 2024e and 2025e) is based on the forecast of ODDO BHF's Oil & Gas Analyst for the price of Brent. The price for a barrel of Brent is usually around $ 5 more than the price for a barrel of WTI. For the price of natural gas, we have assumed a price of 3.00 $/MMBTU for 2023e and 4.00 $/MMBTU for 2024e and 2025e vs ODDO BHF's Oil & Gas Analyst forecast of 5.0, 5.5 and 5.5 $/MMBTU respectively. We believe that demand for LNG will continue to grow, but given some delay in the final investment decisions of US LNG projects we prefer to be more conservative in the short to medium term on US natural gas prices. The price of NGL is 40% of the price of oil per BOE.

❖ Hedging the price of oil and gas

As commodity markets are extremely volatile, hedging the price of oil and gas is an important part of the group's strategy. This allows the company to partially offset the price risk resulting from the ups and downs of oil and gas prices. Hedging is carried out using financial instruments traded on NYMEX (New York Mercantile Exchange). DRAG purchases contracts at a certain price and for a fixed term. If the price on the agreed date falls below the price at which the company concluded the contract, it will receive corresponding compensation. If the market price rises above the agreed price, DRAG has to pay compensation. As the company is simultaneously paid for its physical production at the respective market price, in de facto it always receives the hedged price for its production.

We have used DRAG's reported hedgebook (as of 11 April 2023) to calculate the volumes and price of oil & gas:

Hedgebook (as of 11 April 2023)

	Q2 2023	Q3 2023	Q4 2023	Q1 2024	Q2 2024	Q3 2024	Q4 2024	Q1 2025
Volumes in BBL	226,000	242,000	202,500	126,000	67,500	37,000	36,000	26,000
Price floor in USD/BBL	76.0	74.4	74.7	74.3	73.1	73.1	73.1	69.5
Volumes in MMBtu	564,500	325,000	305,000	287,000	151,250			
Price floor in USD/MMBtu	3.7	3.4	3.6	4.0	3.6			

Table 37 - Source: Deutsche Rohstoff

Production and revenue, 2022 – 2025e

Production	2022	2023e	2024e	2025e
New net wells per year		11.9	9.9	7.5
Oil (bbl)	1,861,269	2,207,019	2,492,609	2,788,466
Gas (mcf)	6,317,164	7,639,680	7,613,786	7,250,010
NGL (bbl)	587,696	763,968	770,443	650,642
BOE	3,501,826	4,244,267	4,532,016	4,647,443
BOEPD	9,594	11,628	12,416	12,733
Change y-o-y		*21.2%*	*6.8%*	*2.5%*
Oil price WTI ($ per BO)		80.00	70.00	70.00
Gas Price Henry Hub ($ in cubic feet)		3.00	4.00	4.00
NGL ($ per BOE)		32.00	28.00	28.00
Exchange rate (€/$)		1.12	1.12	1.15
$ m				
Revenues (Oil, Gas, NGL)		221.3	227.4	242.4
Less differentials (incl transport, marketing)		-8.3	-9.2	-10.2
Profit (+) / loss (-) from hedging		-2.6	0.9	0.0
Less production taxes		-22.1	-22.7	-24.2
Total revenues		188.3	196.4	207.9
€ m				
Total revenues	165.4	168.1	175.3	180.8
Change y-o-y		*1.6%*	*4.3%*	*3.1%*

Table 38- Sources: Deutsche Rohstoff, ODDO BHF Securities

Production, 2018 – 2025e

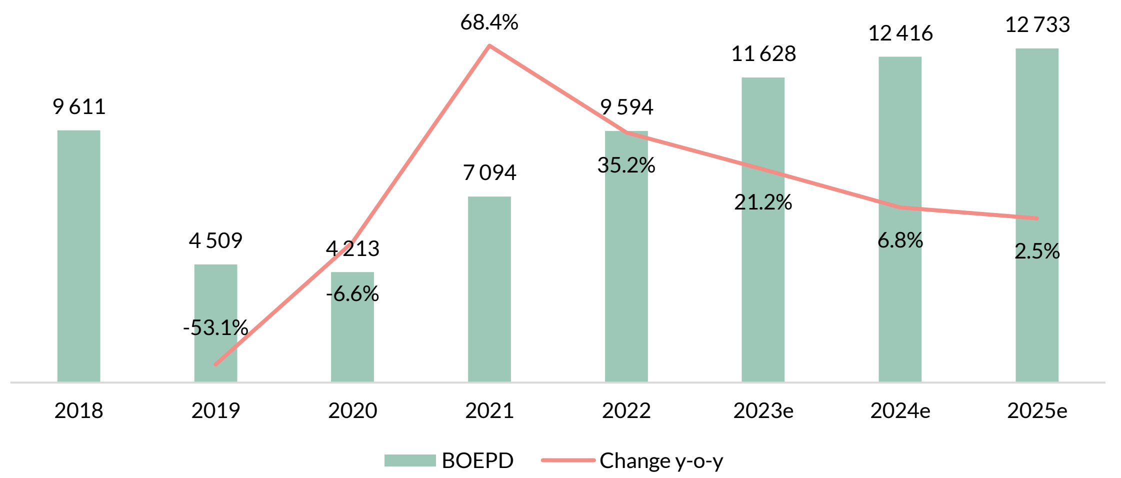


Chart 39- Sources: Deutsche Rohstoff, ODDO BHF Securities

Research & development

The group conducts only a small amount of research and development aimed at supporting the development of existing projects or optimising them. The production of crude oil and natural gas as well as ore mining generally uses existing processes that are freely available through service providers. The group uses service providers who carry out the work in accordance with the current state of the art. In 2022, development expenses of € 0.7m were incurred for Prime Lithium AG. A further € 0.5m was invested in a joint venture with the Australian company SensOre for the early-stage exploration of lithium deposits in Western Australia.

Strong balance sheet and high cash flows

Over the last five years (2018 to 2022), DRAG has spent an average of € 48.4m annually for investments in property, plant and equipment. With the addition of 11.9 and 9.9 new net wells in Utah and Wyoming in 2023e and 2024e respectively, capex for new net wells will rise to € 200m of which € 110m relate to 2023e. The € 200m capex for new net wells is divided into operated (€ 90m at 1876 Resources) and non-operated (€ 100m in a JV with Oxy and € 10m in Utah). Unused credit lines with a volume of $ 80m in the US subsidiaries can be used to finance investment peaks as part of the completion of larger drilling sites. On top of the € 110m capex for new net wells in 2023e, DRAG will spend € 14m for gas gathering pipeline infrastructure and € 5m for water infrastructure.

For 2023e and 2024e, we have used the company’s capital expenditure budget in our calculations. From the beginning of 2025e, we believe that DRAG will add 7.5 new net wells every year with capex of $ 11m for every new well. However, acquisitions of, the drilling of or participation in new wells may result in additional new production and increased capital expenditure. Such development projects and acquisitions are not included in the company guidance and our estimates. At the same time, if commodity prices fall or costs rise, investments may be interrupted or scaled back in a timely manner, resulting in lower revenue.

Capex breakdown, 2022

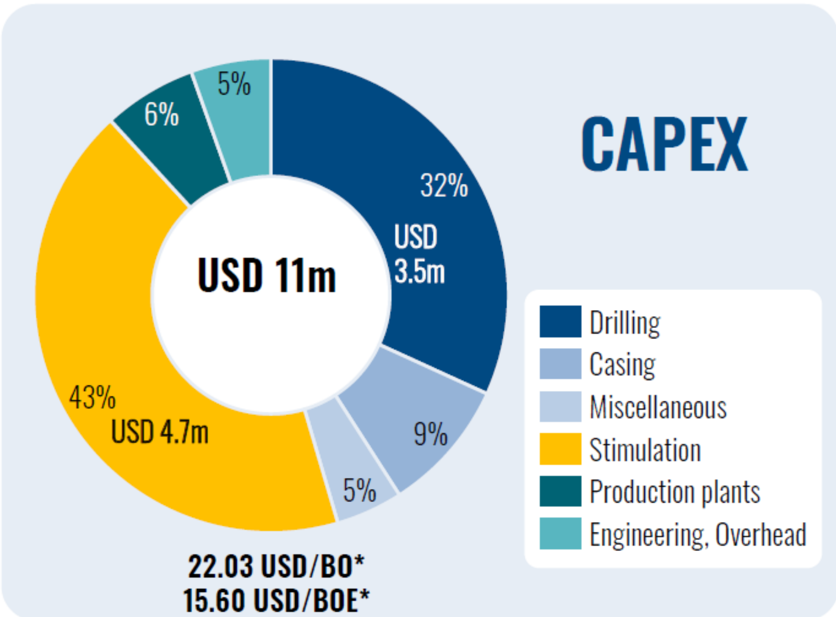


Chart 40 - Source: Deutsche Rohstoff

Capex will peak in 2023e

€ m	2018	2019	2020	2021	2022	2023e	2024e	2025e
Cash paid for investments in property, plant and equipment	-63.8	-22.5	-30.7	-41.9	-82.9	-129.0	-90.0	-82.5
Change y-o-y		*-65%*	*36%*	*36%*	*98%*	*56%*	*-30%*	*-8%*
Cash paid for investments in intangible assets	-2.5	-6.2	-6.1	-11.0	-6.0	-3.0	-3.0	-3.0
Change y-o-y		*153%*	*-2%*	*79%*	*-45%*	*-50%*	*0%*	*0%*
Total capex (tangible, intangible)	-66.2	-28.7	-36.8	-52.8	-88.9	-132.0	-93.0	-85.5
Revenues	109.1	41.2	38.7	73.3	165.4	168.1	175.3	180.8
As a % of revenues	*-60.7%*	*-69.7%*	*-95.2%*	*-72.1%*	*-53.8%*	*-78.5%*	*-53.0%*	*-47.3%*

Table 41 - Sources: Deutsche Rohstoff, ODDO BHF Securities

We believe that DRAG will report an average positive FCF of almost € 31m (2023e-2025e) as higher cash flows from operating activities offset higher investments in PP&E (mainly new net wells).

Free cash flow

€ m	2018	2019	2020	2021	2022	2023e	2024e	2025e
Cash flow from operating activities	68.7	13.9	14.0	51.8	142.7	138.9	129.1	134.4
Cash paid for investments in intangible assets	-2.5	-6.2	-6.1	-11.0	-6.0	-3.0	-3.0	-3.0
Cash paid for investments in property, plant and equipment	-63.8	-22.5	-30.7	-41.9	-82.9	-129.0	-90.0	-82.5
Cash received from disposal of intangible assets	7.9	0.0	0.1	1.6	0.0	0.0	0.0	0.0
Proceeds from disposals of intangible assets	30.5	0.1	0.0	0.0	6.5	0.0	0.0	0.0
FCF	40.9	-14.7	-22.7	0.6	60.3	6.9	36.1	48.9

Table 42 -Sources: Deutsche Rohstoff, ODDO BHF Securities

Given its strong financial profile, we assume that the company may acquire acreage in well-explored areas or expand its portfolio through investments in the battery and strategic metals business.

Financial position

€ m	2018	2019	2020	2021	2022	2023e	2024e	2025e
Bank balances	45.6	61.3	8.2	12.7	47.5	41.9	-36.2	2.3
Securities classified as fixed assets	5.9	18.2	13.2	13.6	12.0	12.0	12.0	12.0
Securities classified as current assets	14.3	5.4	14.6	10.8	6.7	6.7	6.7	6.7
Trade receivables	11.6	8.9	3.5	16.8	28.6	16.8	17.5	18.1
Trade payables	-6.8	-17.1	-2.9	-20.8	-11.4	-8.4	-8.8	-9.0
Financial position	70.7	76.6	36.6	33.2	83.5	69.0	-8,6	30.1

Table 43 - Sources: Deutsche Rohstoff, ODDO BHF Securities

At the end of 2022, the financial leverage (net debt/EBITDA) amounted to 0.4x (see table below). In view of the anticipated repayment of the outstanding amount of the bond for 2019-24 (coupon 5.25%) in December 2024e and the fact that the company is becoming more profitable, we forecast a comfortable financial leverage position going forward.

Financial leverage (net debt/EBITDA)

€ m	2018	2019	2020	2021	2022	2023e	2024e	2025e
Bonds	77.3	131.1	114.4	97.8	109.8	100.0	0.0	0.0
Liabilities to banks	16.1	8.0	14.0	19.6	0.1	0.1	0.1	0.1
Securities classified as current assets	-14.3	-5.4	-14.6	-10.8	-6.7	-6.7	-6.7	-6.7
Bank balances	-45.6	-61.3	-8.2	-12.7	-47.5	-41.9	36.2	-2.3
Total net debt	33.4	72.5	105.6	93.9	55.7	51.5	29.5	-8.9
EBITDA	97.9	22.7	23.9	66.1	139.1	124.3	130.2	135.3
Net debt / EBITDA (x)	0.34	3.19	4.41	1.42	0.40	0.41	0.23	-0.07

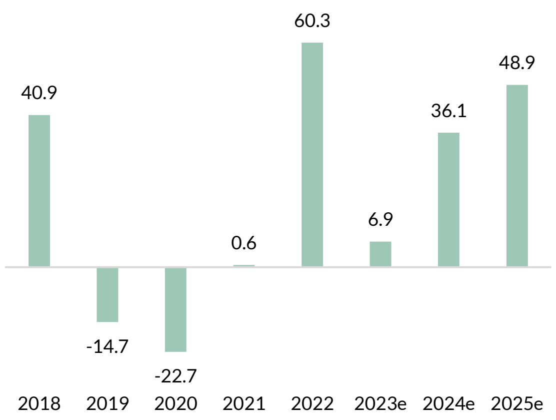
Table 44 - Sources: Deutsche Rohstoff, ODDO BHF Securities

Working capital

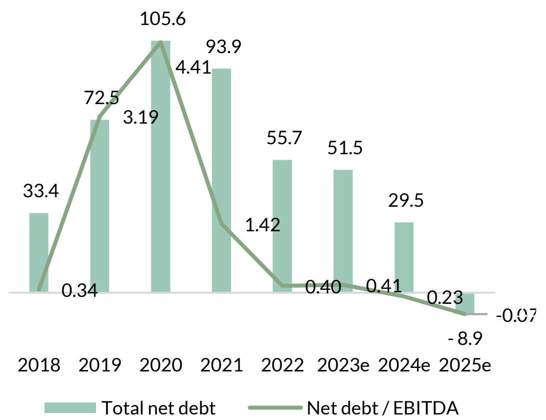
€ m	2018	2019	2020	2021	2022	2023e	2024e	2025e
Trade receivables	11.6	8.9	3.5	16.8	28.6	16.8	17.5	18.1
Inventories	0.2	0.2	0.2	0.2	0.1	0.3	0.4	0.4
Trade payables	6.8	17.1	2.9	20.8	11.4	8.4	8.8	9.0
Working capital	5.0	-8.1	0.8	-3.8	17.4	8.7	9.1	9.4
As % of revenues	*4.6%*	*-19.6%*	*2.0%*	*-5.2%*	*10.5%*	*5.2%*	*5.2%*	*5.2%*

Table 45 - Sources: Deutsche Rohstoff, ODDO BHF Securities

FCF (€ m)



Net debt (€ m) and Net debt / EBITDA (x)



Charts 46 - Sources: Deutsche Rohstoff, ODDO BHF Securities

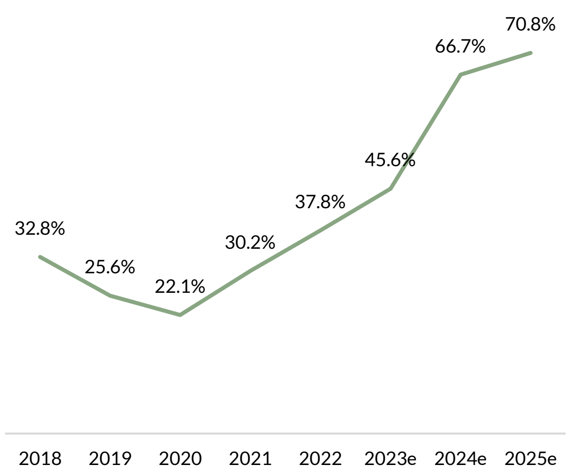
At 37.8%, the equity ratio was above the 2021 level (30.2%). This change was attributable to the increase (+65.3%) in shareholder's equity (mainly due to a higher consolidated net retained profit) accompanied by a 32.2% (+€ 85.3m) increase in total assets. For 2023e, we anticipate an equity ratio of 45.6%.

Equity ratio

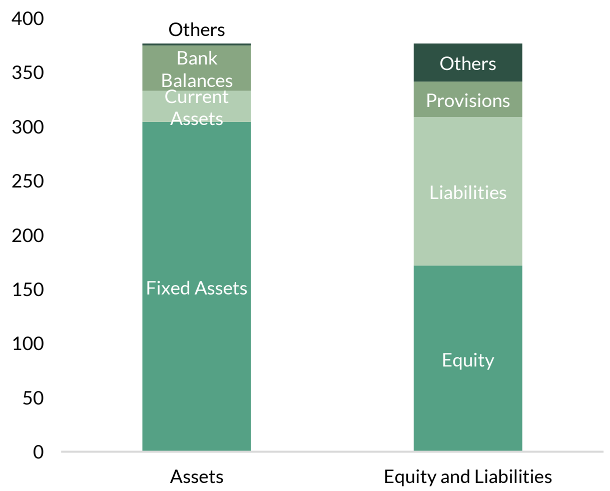
€ m	2018	2019	2020	2021	2022	2023e	2024e	2025e
Equity	73.8	71.5	45.6	80.1	132.4	172.8	211.6	256.5
Total assets	224.8	278.9	206.7	265.0	350.3	376.9	317.1	362.3
Equity ratio	*32.8%*	*25.6%*	*22.1%*	*30.2%*	*37.8%*	*45.6%*	*66.7%*	*70.8%*

Table 47 - Sources: Deutsche Rohstoff, ODDO BHF Securities

Equity ratio (equity/total assets)



Balance sheet (€ m), 2023e



Charts 48 - Sources: Deutsche Rohstoff, ODDO BHF Securities

Attractive dividend yield

Since its IPO in 2010, the company paid around € 19m in dividends to its shareholders. We believe that DRAG's dividend will rise in the coming years from € 1.30/per share (2022) to € 1.45/per share in 2025e, thereby offering a dividend yield of more than 5%.

Development of dividend and dividend yield

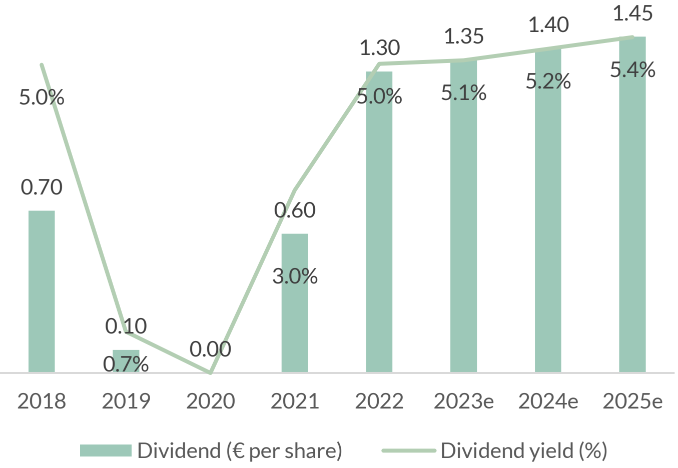


Chart 49 - Sources: Deutsche Rohstoff, ODDO BHF Securities

External opportunities and risks

Opportunities and risks from changes in exchange rates

Changes in exchange rates have a significant impact on the group's business performance as the company's investments are mainly denominated in $, and to a far lesser extent in AUD and CAD. The €/$ exchange rate is of particular importance, as all major commodities are invoiced in $. A stronger $ means that commodities outside the US become more expensive. For example, the development of the €/$ in 2022 led to a currency gain of € 4.0m. In a sensitivity analysis, the change in the $ by 1 cent has the following effect on revenue and EBITDA:

Sensitivity analysis – USD on revenue and EBITDA

CHANGE BY 1 USD-CENT	US-DOLLAR
Effect on revenue	+/- 1.5 EUR MIO.
Effect on EBITDA	+/-1.2 EUR MIO.

Chart 50 - Source: Deutsche Rohstoff

Opportunities and risks from changes in commodity prices

In the group, price risk currently exists mainly for crude oil and natural gas. For crude oil/natural gas, 1876 Resources, Elster Oil & Gas, Bright Rock Energy and Salt Creek Oil & Gas regularly use sensitivity analyses to calculate how earnings and cash flows will change if prices vary. If the price of WTI crude oil were to fall below $ 50/barrel on a sustained basis, new horizontal wells would no longer pay for themselves as quickly as management believes makes sense from an opportunity/risk perspective. In this respect, no new wells would be drilled at a price level below this threshold. Such a decision not to drill new wells would have an impact on the results of operations, financial position and net assets. A sustained or very long-term level of the oil price below $ 40/barrel represents a significant risk to the business model of Deutsche Rohstoff AG, the further development of land in the US and the overall economic situation of the Group.

In a sensitivity analysis, the change in the oil price by $ 1 and in the gas price by $ 0.1 for 2023, respectively, has the following impact on revenue and EBITDA, taking into account the current hedging transactions:

Sensitivity analysis – Oil & gas price on revenue and EBITDA

	2023	2024
Oil price – change by 1 USD	+/- 1.0 EUR MIO.	+/- 2.1 EUR Mio.
Gas price – change by 0,1 USD	+- 0.4 EUR MIO.	+/- 0.6 EUR Mio.

Chart 51 -Source: Deutsche Rohstoff

INITIATION WITH AN OUTPERFORM RATING AND A TARGET PRICE OF € 40.0

We have used a DCF model and a peer group valuation method to determine the fair value of the company. As the company's cash flows are highly dependent on volatile and uncertain oil and gas prices as well as exchange rate risks between the USD and the euro, we prefer to take a conservative approach and have used the valuation method with the lowest fair value (DCF). This gives us a target price of € 40.0. We initiate coverage with Outperform.

Share price - outperformance vs index

Since 2019 and YTD, the shares of Deutsche Rohstoff have outperformed the Dow Jones US Select Oil & Gas Exploration & Production Index.

Share price development vs Index since 2019 (base 100)

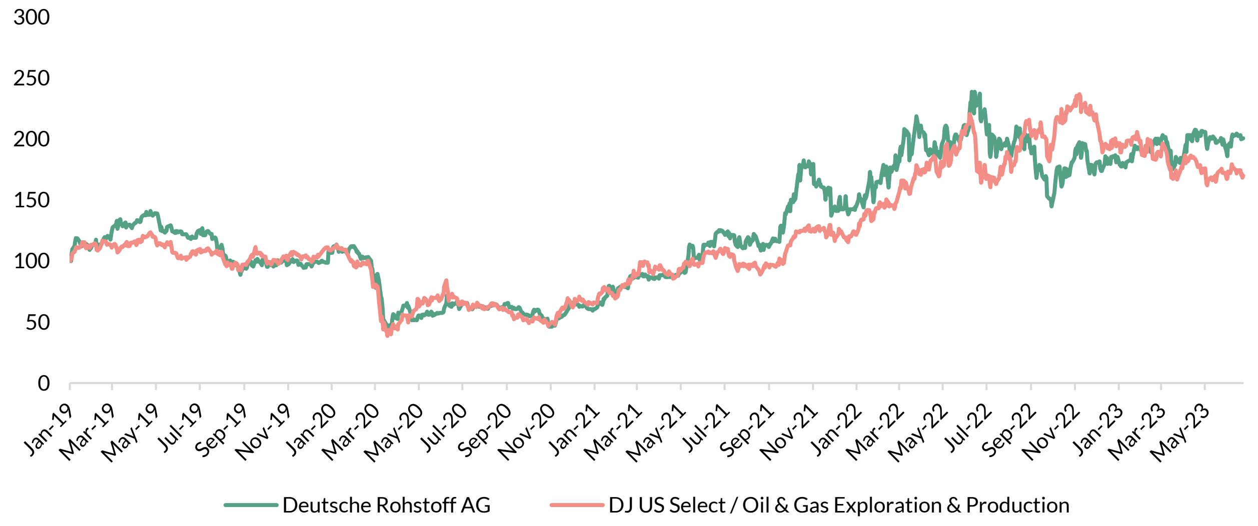


Chart 52- Source: FactSet

Deutsche Rohstoff multiples at a discount to peers

We have included 11 companies in our peer group analysis (see table below). The market cap of these companies ranges from € 373m (Ring Energy) to € 63.9bn (EOG Resources).

DRAG has the lowest market cap (€ 134m) within the peer group. In our view, only four companies (Callon Petroleum, Ring Energy, HighPeak Energy, Earthstone Energy) come close to DRAG in terms of market cap which we call selected peer group.

However, based on our estimates, DRAG has the highest sales growth (+3.0% CAGR, 2023e to 2025e) and the highest average EBITDA margin (74.3%, 2023e – 2025e) compared to the median peer group.

Deutsche Rohstoff vs peer group

	Price	Market cap	Sales chg y-o-y			CAGR
	(€)	(€ m)	2023e	2024e	2025e	2023e /2025e
Callon Petroleum	31.02	1,920	-28.1%	4.8%	-6.0%	-9.7%
Chord Energy	131.40	5,460	-18.2%	11.1%	-4.2%	-3.8%
Civitas Resources	67.03	5,391	-9.9%	36.8%	-1.3%	-8.5%
Devon Energy	45.23	29,026	-18.6%	-5.9%	1.1%	-7.8%
EOG Resources, Inc.	109.41	63,989	-16.8%	8.7%	3.0%	-1.7%
Marathon Oil	24.87	13,725	-20.4%	4.7%	0.2%	-5.2%
Northern Oil & Gas	35.89	2,738	24.3%	12.8%	-3.6%	11.2%
Ovintiv Inc	41.46	10,236	-14.1%	5.1%	-1.7%	-3.6%
Ring Energy, Inc.	2.14	373	5.8%	15.2%	-	10.5%
HighPeak Energy Inc	12.86	1,301	53.2%	16.5%	-	34.9%
Earthstone Energy, Inc. Class A	14.79	1,856	-1.2%	20.5%	-5.8%	4.5%
Average peer group			**-4.0%**	**11.8%**	**-2.0%**	**3.4%**
Median peer group			**-14.1%**	**11.1%**	**-1.7%**	**-1.7%**
Median of selected peer group			2.3%	15.8%	-5.9%	7.5%
Deutsche Rohstoff	26.9	134	1.6%	4.3%	3.1%	3.0%
Discount vs median peer group			-111%	-61%	-281%	-278%
Discount vs Median of selected peer group			-30%	-73%	-153%	-60%

Table 53 - Sources: ODDO BHF Securities, FactSet

Deutsche Rohstoff vs peer group

%	EBITDA margin			EBITDA margin average
	2023e	2024e	2025e	2023e - 2025e
Callon Petroleum	57.3	57.6	59.2	58.0
Chord Energy	57.6	59.5	60.5	59.2
Civitas Resources	68.3	68.5	67.6	68.1
Devon Energy	47.8	54.9	53.5	52.1
EOG Resources, Inc.	56.7	58.1	57.2	57.3
Marathon Oil	67.8	71.2	67.1	68.7
Northern Oil & Gas	70.9	71.1	72.0	71.3
Ovintiv Inc	37.3	40.3	40.9	39.5
Ring Energy, Inc.	65.7	66.6	-	66.2
HighPeak Energy Inc	80.2	81.7	-	80.9
Earthstone Energy, Inc. Class A	66.8	69.2	69.4	68.5
Average peer group	**61.5**	**63.5**	**60.8**	**62.7**
Median peer group	**65.7**	**66.6**	**60.5**	**66.2**
Median of selected peer group	**66.2**	**67.9**	**64.3**	**67.3**
Deutsche Rohstoff	73.9	74.3	74.8	74.3
Discount vs median peer group	12	12	24	12
Discount vs Median of selected peer group	12	9	16	10

Table 54 - Sources: ODDO BHF Securities, FactSet

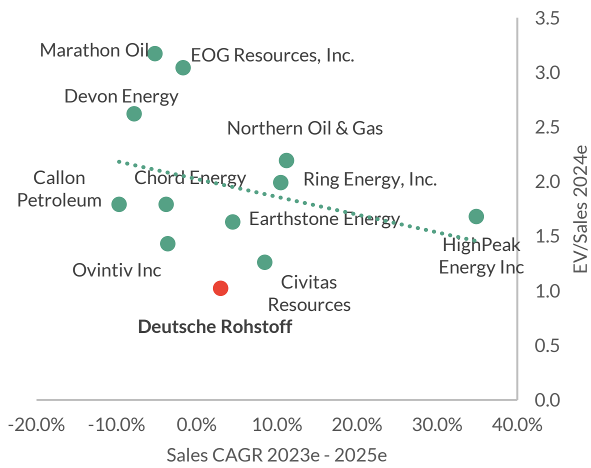
Based on our 2024e, DRAG is trading at a discount (53%/61%/49%) on EV/sales (0.85x), EV/EBITDA (1.2x) and P/E (2.8x) to its peers. Even compared to its four closest peers in terms of market cap, the company is trading at a discount (51%/55%/29%) on EV/sales, EV/EBITDA and P/E. We believe that the discount is not justified and the shares are undervalued given the company's higher revenue growth and EBITDA margins compared to its peers.

Comparison of peer group multiples

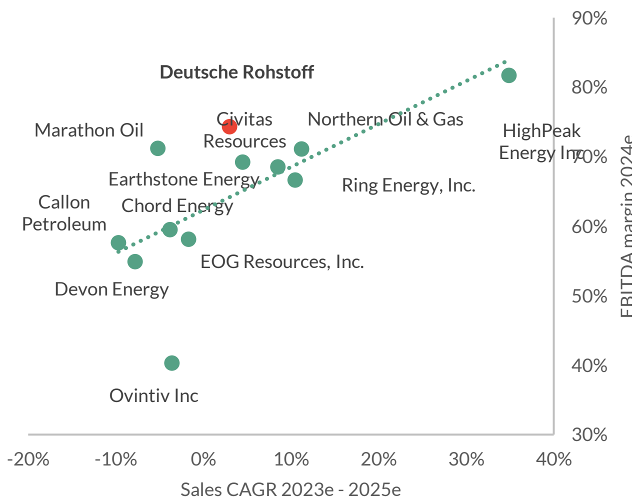
x	EV/Sales			EV/EBITDA			P/E		
	2023e	2024e	2025e	2023e	2024e	2025e	2023e	2024e	2025e
Callon Petroleum	1.87	1.79	1.90	3.3	3.1	3.2	4.7	4.7	5.0
Chord Energy	1.99	1.79	1.87	3.5	3.0	3.1	7.7	6.1	6.4
Civitas Resources	1.73	1.26	1.28	2.5	1.8	1.9	8.0	6.4	7.0
Devon Energy	2.46	2.62	2.59	5.1	4.8	4.8	9.1	8.0	8.5
EOG Resources, Inc.	3.31	3.04	2.95	5.8	5.2	5.2	11.2	10.2	10.3
Marathon Oil	3.31	3.17	3.16	4.9	4.5	4.7	10.1	7.2	7.7
Northern Oil & Gas	2.47	2.19	2.27	3.5	3.1	3.1	5.0	4.6	5.0
Ovintiv Inc	1.50	1.43	1.46	4.0	3.6	3.6	7.0	5.5	5.6
Ring Energy, Inc.	2.29	1.99	-	3.5	3.0	-	4.2	3.8	-
HighPeak Energy Inc	1.96	1.68	-	2.4	2.1	-	4.8	4.0	-
Earthstone Energy, Inc. Class A	1.96	1.64	1.73	2.9	2.3	2.5	5.4	3.9	4.2
Average peer group	**2.26**	**2.05**	**2.13**	**3.8**	**3.3**	**3.6**	**7.0**	**5.9**	**6.6**
Median peer group	**1.99**	**1.79**	**1.90**	**3.5**	**3.1**	**3.2**	**7.0**	**5.5**	**6.4**
Selected median peer group	**1.96**	**1.73**	**1.81**	**3.1**	**2.7**	**2.8**	**4.8**	**3.9**	**4.6**
Deutsche Rohstoff	1.02	0.85	0.62	1.4	1.2	0.8	2.8	2.8	2.5
Discount vs median peer group	*-49%*	*-53%*	*-67%*	*-60%*	*-61%*	*-75%*	*-60%*	*-49%*	*-61%*
Discount vs selected median peer group	*-48%*	*-51%*	*-66%*	*-55%*	*-55%*	*-72%*	*-41%*	*-29%*	*-46%*

Table 55 - Sources: ODDO BHF Securities, FactSet

EV/sales vs sales growth



EBITDA margin vs sales growth



Charts 56- Sources: ODDO BHF Securities, FactSet

- **Callon Petroleum** is an independent oil and natural gas company focused on the acquisition, exploration and development of high-quality assets in the leading oil plays of West and South Texas.
- **Chord Energy** is an independent energy company that acquires, exploits, develops and explores for crude oil, natural gas, and natural gas liquids in the Williston Basin. It is focused primarily on organic drilling activity, both on grassroots oil plays and on the development of previously acquired properties — specifically on projects that provide an opportunity for repeatable success and strong returns.
- **Civitas Resources** is focused on developing and producing crude oil, natural gas and natural gas liquids in Colorado's Denver-Julesburg (DJ) Basin.
- **Devon Energy** is a leading independent oil and natural gas exploration and production company. Devon's operations are focused onshore in the US.
- **EOG Resources** is one of the largest crude oil and natural gas exploration and production companies in the US.
- **Marathon Oil** is an independent exploration and production (E&P) company focused on four of the most competitive resource plays in the US, complemented by a world-class integrated gas business in Equatorial Guinea.

- **Northern Oil & Gas** is a company with a primary strategy of investing in non-operated minority working and mineral interests in oil & gas properties, with a core area of focus in the premier basins in the US.
- **Ovintiv** is a leading North American energy producer focused on developing its multi-basin portfolio of oil, natural gas liquids and natural gas producing plays.
- **Ring Energy** is a growth-oriented independent exploration and production company engaged in oil and natural gas development, production, acquisition, and exploration activities currently focused in the Permian Basin, which is one of the most prolific hydrocarbon-producing regions in the US.
- **HighPeak Energy** is an independent oil and natural gas company focused on the development of unconventional oil and natural gas reserves primarily in Howard County of the Midland Basin in West Texas.
- **Earthstone Energy** is a growth-oriented, independent energy company engaged in the acquisition, development and operation of oil and natural gas properties. The company's primary assets are located in the Midland Basin in West Texas and the Delaware Basin in New Mexico.

Target price of € 40.0

Our DCF model gives us a fair value of € 39.6 per share. Using a peer group valuation, the fair value of the shares is € 59.9. As the company's cash flows are highly dependent on volatile and uncertain oil and gas prices as well as exchange rate risks between the and the euro, we prefer to take a conservative approach and have used the valuation approach with the lowest fair value (DCF). This gives us a target price of € 40.0 (rating: Outperform).

Investment risks include lower GDP growth, changes in political and legal frameworks, FX and the speed of the energy transition which leads to lower demand for oil & gas.

DCF, the adequate method to value Deutsche Rohstoff

In this approach, we determine the fair value of the company by using a DCF model. This gives us a fair value of € 39.6.

The key inputs in our valuation are:

- Target enterprise value of € 237.9m. We use long-term projections until 2033e, a WACC of 11.35% (incl. a market risk premium of 5.78% and risk-free rate of 3.34%, both are set by ODDO BHF's equity research department) and a target debt/equity ratio of 15%/85% (in line with the 2014 to 2022 average reported numbers).
- Long-term growth rate of -8%. The negative growth rate is based on BP's Energy Outlook 2023 Edition. Global demand for oil is expected to plateau (close to 100 Mb/d) by the end of the decade as the role of oil falls across all modes of transport, reflecting a shift to alternative, low-carbon energy sources. BP's forecast is based on three different scenarios (*Accelerated, Net Zero, New Momentum*) and we view *New Momentum* as the most likely scenario (see Market Outlook for Oil & Gas).
- Finally, we deduct net financial debt (2023e) and add the value of DRAG's equity stakes (incl. 14.2% equity stake in Almonty Industries, holding discount of 10%).

Deutsche Rohstoff – DCF overview

€ m	2024e	2025e	2026e	2027e	2028e	2029e	2030e	2031e	2032e	2033e
Revenues	175.3	180.8	188.9	197.9	204.9	210.4	214.1	214.1	213.1	210.9
Chg y-o-y		*3.1%*	*4.4%*	*4.8%*	*3.5%*	*2.7%*	*1.8%*	*0.0%*	*-0.5%*	*-1.0%*
EBIT	76.1	79.8	85.1	91.6	96.0	100.1	103.0	101.7	98.0	94.9
Chg y-o-y		*4.8%*	*6.6%*	*7.7%*	*4.7%*	*4.3%*	*2.9%*	*-1.3%*	*-3.6%*	*-3.2%*
EBIT margin	*43.4%*	*44.1%*	*45.0%*	*46.3%*	*46.8%*	*47.6%*	*48.1%*	*47.5%*	*46.0%*	*45.0%*
Theoretical tax	-22.8	-23.9	-25.5	-27.5	-28.8	-30.0	-30.9	-30.5	-29.4	-28.5
Tax rate	*30%*	*30%*	*30%*	*30%*	*30%*	*30%*	*30%*	*30%*	*30%*	*30%*
NOPAT	53.3	55.9	59.5	64.1	67.2	70.1	72.1	71.2	68.6	66.4
(+) Depreciation & amortisation	54.1	55.5	56.6	57.5	58.2	57.6	56.5	56.5	56.2	55.7
(-) Capex	-93.0	-85.5	-85.5	-85.5	-85.5	-85.5	-85.5	-85.5	-85.1	-84.2
(+/-) Changes in WC	0.4	0.3	0.4	0.5	0.4	0.3	0.2	0.2	0.2	0.2
Operational CF	14.8	26.1	31.0	36.6	40.2	42.4	43.3	42.4	40.0	38.1
Discounted FCF	**14.1**	**22.3**	**23.8**	**25.2**	**24.9**	**23.8**	**21.7**	**19.1**	**16.1**	**13.8**
Sum of discounted FCF	204.6									
Terminal value	33.3									
Growth to infinity	*-8.0%*									
Enterprise value	**237.9**									
Net cash / (net debt)	-51.5									
Equity stakes	11.9									
Equity valuation	**198.3**									
Number of shares ('000)	5,003									
Value per share (€)	**39.6**									

Table 57 - Sources: Deutsche Rohstoff, ODDO BHF Securities

WACC calculation

WACC	**11.35%**
Risk-free rate	3.34%
Market risk premium	5.78%
Beta	1.6
Cost of equity	**12.59%**
Interest rate	6.16%
Tax rate	30.0%
Cost of net debt	**4.31%**
Debt	15.0%
Equity	85.0%

Table 58 - Source: ODDO BHF Securities

Sensitivity analysis – WACC vs terminal growth

€		WACC				
		10.3%	**10.8%**	**11.35%**	**11.8%**	**12.3%**
Terminal growth rate	**-9.0%**	41.31	39.99	38.72	37.52	36.36
	-8.5%	41.82	46.46	39.16	37.92	36.73
	-8.0%	42.36	40.96	**39.63**	38.35	37.14
	-7.5%	42.96	41.51	40.14	38.82	37.57
	-7.0%	43.61	42.11	40.69	39.34	38.05

Table 59 - Source: ODDO BHF Securities

Fair value based on peer group multiples

In our view, DRAG's closest peers in terms of market cap are Callon Petroleum, Ring Energy, HighPeak Energy and Earthstone Energy. As such, we have used the median multiples of these four companies to determine a fair value for Deutsche Rohstoff's shares. Based on our estimates, the fair value per share ranges from € 57.3 (2024e EV/sales) to € 65.9 (EV/EBITDA) leading to an average of € 59.9.

Valuation based on closest peers

€ m	EV/sales			EV/EBITDA			EV/EBIT		
	2023e	**2024e**	**2025e**	**2023e**	**2024e**	**2025e**	**2023e**	**2024e**	**2025e**
Deutsche Rohstoff indicator	168.1	175.3	180.8	124.3	130.2	135.3	73.7	76.1	79.8
Selected peer group median multiple (x)	1.93	1.73	1.81	3.1	2.7	2.8	4.8	3.9	4.6
EV Deutsche Rohstoff	329.5	304.2	327.8	385.5	347.2	385.4	350.8	300.4	367.8
Net cash / (net debt)	-51.5	-29.5	8.9	-51.5	-29.5	8.9	-51.5	-29.5	8.9
Equity stake (incl. Almonty)	11.9	11.9	11.9	11.9	11.9	11.9	11.9	11.9	11.9
Market cap (m)	**289.9**	**286.5**	**348.6**	**345.6**	**329.6**	**406.2**	**311,1**	**282.7**	**388.6**
Number of shares (m)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Value per share (€)	**57.95**	**57.27**	**69.68**	**69.13**	**65.87**	**81.18**	**62.19**	**56.51**	**77.67**

Table 60 - Sources: ODD BHF Securities, FactSet

APPENDIX

Short history of the production of oil & gas

Since its foundation in 2006, Deutsche Rohstoff has co-founded four US subsidiaries and complemented its oil & gas business with a portfolio in the area of metals.

- 2006: Establishment of Deutsche Rohstoff AG in Heidelberg, Germany.
- 2007: Formation of Rhein Petroleum GmbH with a focus on oil exploration in the Upper Rhine Valley.
- May 2009: Acquisition of Georgetown Goldmine in Queensland, Australia.
- May 2010: Inclusion of Deutsche Rohstoff AG's shares on the Frankfurt Stock Exchange.
- Jan 2011: Establishment of Tekton Energy in Denver, Colorado, and entry into the US oil and gas business.
- May 2011: Deutsche Rohstoff acquires 100% of Wolfram Camp Mine in Australia.
- Sep 2012: Partial divestment in Rhein Petroleum GmbH and complete sale of Georgetown Goldmine.
- Feb 2013: Initiation of the first horizontal drilling program at Tekton Energy.
- Jul 2013: Issuance of the first bond worth € 62.5m.
- Mar 2014: Sale of Tekton's assets for approximately $ 200m and establishment of successor company Cub Creek Energy (now 1876 Resources and Elster Oil & Gas).
- Jun 2014: Sale of Wolfram Camp Mine for about CAD 18m in Almonty Industries shares, amounting to a stake of approximately 25% in Almonty.
- Apr 2015: Deutsche Rohstoff establishes Salt Creek Oil & Gas with three partners.
- Jun 2016: Issuance of the second bond worth up to € 75m.
- Nov 2016: 1876 Resources begins oil production from its initial wells.
- Dec 2016: Salt Creek Oil & Gas successfully completes the acquisition of a land package in the Williston Basin, North Dakota.
- Feb 2018: Elster Oil & Gas begins production from 25 non-operated wells in the DJ Basin
- Mar 2018: Deutsche Rohstoff AG issues its first convertible bond worth € 11m.
- May 2018: Deutsche Rohstoff establishes its fourth US oil & gas company, Bright Rock Energy, in collaboration with partners.
- Jun 2018: Salt Creek Oil & Gas successfully completes the sale of its properties acquired in North Dakota in 2016.
- Jul 2018: Full and timely repayment of the bond issued in 2013.
- Sep 2018: Bright Rock Energy acquires initial properties in the Uinta Basin.

- Jun 2019: 1876 Resources initiates another drilling program with 11 horizontal wells, involving an investment volume of around $ 60m.
- Nov 2019: Placement of third bond with volume up to € 100m.
- Jun 2020: Acquisition of approximately 28,000 acres in the Powder River Basin, Wyoming, US, by Bright Rock Energy.
- Jul 2021: Full and timely repayment of the bond issued in 2016/2021.
- Sep 2021: Acquisition of an additional approximately 30,000 acres in the Powder River Basin, Wyoming, US, by 1876 Resources.
- Oct 2021: Bright Rock Energy starts oil and gas production from the first well drilled as an operator in Wyoming.
- Feb 2022: Bright Rock Energy acquires additional 9,500 acres in the Powder River Basin, Wyoming, US and Salt Creek Oil & Gas boosts production through participation in a development program of 16 wells in the Powder River Basin
- Sep 2022: Salt Creek participates in further 15 wells in the Powder River Basin and takes over Bright Rock's Utah assets.
- Dec 2022: Deutsche Rohstoff sells its remaining 10% stake in Rhein Petroleum.
- Jan 2023: Deutsche Rohstoff establishes a joint venture with Australian listed SensOre, focusing on early-stage lithium exploration in Western Australia.
- Mar 2023: Full and timely repayment of the convertible bond 2018/2023 (€ 9.8m).
- May 2023: 1876 Resources acquires existing pipeline infrastructure in the Powder River Basin, Wyoming, US, for $ 14m.
- Jun 2023: Production from an additional 13 wells in the Powder River Basin by Salt Creek and 1876 Resources has started.

Description of the oil & gas subsidiaries

1876 Resources (formerly known as Cub Creek Energy)

Chart 61- Source: Deutsche Rohstoff

1876 Resources is a company based in Highlands Ranch, Colorado. The company was founded as Cub Creek Energy in 2014 by Deutsche Rohstoff AG (DRAG) and the management. Currently (as of 31 March 2023), DRAG holds a 96.03% interest in 1876 Resources. The company has been engaged in the exploration, development and production of oil and gas in Colorado since 2014. In 2015 and 2016, the company was able to secure extensive areas in the Wattenberg field. From 2016, it began to develop the areas by means of horizontal drilling. From 2016 to the end of 2019, the company has brought 55 wells into production as operator and has continuously expanded its production. These were wells with one mile of horizontal length. 1876 Resources has ownership of the wells of between 60% and 100%. In mid-2019, 1876 Resources began drilling eleven wells with two miles of horizontal length. These wells have been producing oil and gas since late 2019 and, with a Covid-related interruption of 9 months, again since early 2021. An additional 12 wells were brought into production in late 2021 with 2.25 miles lateral. With the acquisition of an extensive land package in Wyoming, 1876 Resources focuses its future development plans on Wyoming. In 2023, the company started its first drilling program.

Elster Oil & Gas

Chart 62 - Source: Deutsche Rohstoff

Elster Oil & Gas is an oil and gas company based in Highlands Ranch, Colorado. The management is identical to the management of 1876 Resources. The company was originally founded as Tekton Energy. Tekton Energy was the first company founded by Deutsche Rohstoff in the beginning of 2011 together with partners in the US to participate in the shale oil boom that was just beginning. Tekton sold most of its assets at a high profit in May 2014. Deutsche Rohstoff currently holds a 93% stake in Elster Oil & Gas. In the context of the sale of the assets in 2014, some areas remained with the company. They are located in the northeast of the Wattenberg field. Elster holds minority interests of between 4% and 45% in these areas. The development of the areas was carried out by the operator Extraction Oil & Gas, who brought a total of 40 wells with lengths of between 1 and 2.5 miles into production between 2015 and 2018. This means that the areas that Elster has at its disposal have been drilled. The majority of the wells in which Elster is involved have proved to be very advantageous. At the beginning of 2019, Elster was able to announce that the investments of around $ 60m made by the company in 2017 and 2018 had flowed back within one year from the proceeds of the drilling operations. In contrast to 1876 Resources, Elster does not drill its own wells.

Salt Creek Oil & Gas

Chart 63 - Source: Deutsche Rohstoff

Salt Creek was established by Deutsche Rohstoff AG and three other partners in mid-2015. In late 2016, Salt Creek acquired minority stakes in the Williston Basin in North Dakota for $ 38 million. These assets were sold in April 2018 for roughly $ 60m. Following the sale, all shareholders except Deutsche Rohstoff USA left the company. Salt Creek initially focused on the Williston Basin and made smaller acquisitions. However, in 2022, Salt Creek initiated extensive projects in the Powder River Basin in Wyoming with an invest over $ 150m over 3 years. In August 2022, Salt Creek also sold its North Dakota acreage for $ 6.6m and acquired acreage from Bright Rock in Utah. Salt Creek only holds minority interests in wells. The operators in the field are usually very large companies that carry out a large number of new wells every year and have been able to achieve more and more production with less effort in recent years.

Bright Rock Energy

Chart 64 - Source: Deutsche Rohstoff

Bright Rock Energy is based in Denver, Colorado. The company was formed in mid-2018 by Deutsche Rohstoff and current management. The company identifies, acquires and develops prospective acreage for oil and gas development. With the acquisition in the first half of 2020 in Wyoming, Bright Rock is active in the Powder River Basin. The management team has extensive experience in acquiring and developing properties in oil and gas fields throughout the Rocky Mountain region of the United States. Deutsche Rohstoff holds a 98.5% interest in Bright Rock Energy.

The acquired acreage position in the Powder River Basin consists of approximately 35,000 acres and is 40% secured by existing production over the long term.

Bright Rock's management spent several years developing and expanding its acreage in the Uinta Basin for a major Canadian corporation before joining Deutsche Rohstoff in mid-2018 to co-found Bright Rock Energy.

DROG.DE | DRO GR — **Outperform** — **Price 27.05 €**

Energy Companies | Germany — **Upside** 47.87% — **TP 40.0 €**

PER SHARE DATA (€)	12/18	12/19	12/20	12/21	12/22	12/23e	12/24e	12/25e
Adjusted EPS	5.81	5.15	1.92	6.92	16.82	24.70	32.66	41.63
Reported EPS	**2.81**	**0.06**	**-3.13**	**5.00**	**12.15**	**9.39**	**9.53**	**10.59**
Growth in adjusted EPS	59.3%	-11.3%	-62.7%	ns	ns	46.8%	32.2%	27.5%
Net dividend per share	0.70	0.10	0.00	0.60	1.30	1.35	1.40	1.45
FCF to equity per share	8.28	-2.98	-4.58	0.13	12.05	1.38	7.22	9.78
Book value per share	13.32	12.98	7.96	14.68	25.78	33.65	41.61	50.58
Number of shares market cap (m)	5.06	5.08	5.08	5.08	5.00	5.00	5.00	5.00
Number of diluted shares (m)	5.06	5.08	5.08	5.08	5.00	5.00	5.00	5.00
VALUATION (€m)	**12/18**	**12/19**	**12/20**	**12/21**	**12/22**	**12/23e**	**12/24e**	**12/25e**
12m highest price (€)	25.90	19.80	15.95	25.60	33.50	29.15		
12m lowest price (€)	13.86	12.45	6.22	8.70	20.20	24.60		
(*) Reference price (€)	21.19	15.84	9.45	16.18	26.36	27.05	27.05	27.05
Capitalization	107	80.5	48.0	82.2	132	135	135	135
Restated Net debt	33.4	72.5	106	93.9	55.7	51.5	29.5	-8.9
Minorities (fair value)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Financial fixed assets (fair value)	10.0	6.7	10.3	15.8	14.3	11.9	11.9	11.9
Provisions	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Enterprise Value	**131**	**146**	**143**	**160**	**173**	**175**	**153**	**115**
P/E (x)	3.6	3.1	4.9	2.3	1.6	1.1	0.8	0.6
P/CF (x)	1.5	55.0	1.7	1.6	0.8	1.0	1.0	1.0
Net Yield	3.3%	0.6%	0.0%	3.7%	4.9%	5.0%	5.2%	5.4%
FCF yield	39.1%	ns	ns	0.8%	45.7%	5.1%	26.7%	36.1%
P/B incl. GW (x)	1.59	1.22	1.19	1.10	1.02	0.80	0.65	0.53
P/B excl. GW (x)								
EV/Sales (x)	1.20	3.55	3.70	2.19	1.05	1.04	0.87	0.63
EV/EBITDA (x)	1.3	6.4	6.0	2.4	1.2	1.4	1.2	0.8
EV/Current EBIT (x)	**4.0**	**26.0**	**ns**	**4.9**	**1.9**	**2.4**	**2.0**	**1.4**
(*) historical average price								
PROFIT AND LOSS (€m)	**12/18**	**12/19**	**12/20**	**12/21**	**12/22**	**12/23e**	**12/24e**	**12/25e**
Sales	109	41.2	38.7	73	165	168	175	181
EBITDA	98	22.7	23.9	66	139	124	130	135
Depreciations	-65.2	-17.1	-40.1	-33.5	-47.7	-50.7	-54.1	-55.5
Current EBIT	**32.7**	**5.6**	**-16.1**	**32.6**	**91**	**74**	**76**	**80**
Published EBIT	32.7	5.6	-16.1	32.6	91	74	76	80
Net financial income	-6.2	-5.4	-6.4	-5.5	-5.5	-4.9	-6.3	-2.4
Corporate Tax	-8.5	-0.1	6.4	-0.7	-19.8	-20.6	-20.9	-23.2
Net income of equity-accounted companies	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Profit/loss of discontinued activities (after tax)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Minority interests	-4.1	0.1	0.6	-1.6	-5.4	-1.2	-1.2	-1.2
Attributable net profit	13.9	0.3	-15.5	24.8	61	47.0	47.7	53
Adjusted attributable net profit	**28.7**	**25.5**	**9.5**	**34.3**	**84**	**124**	**163**	**208**
BALANCE SHEET (€m)	**12/18**	**12/19**	**12/20**	**12/21**	**12/22**	**12/23e**	**12/24e**	**12/25e**
Goodwill	1.7	1.6	1.3	1.3	1.2	1.2	1.2	1.2
Other intangible assets	15.2	20.6	20.6	28.6	32.8	35.8	38.8	41.8
Tangible fixed assets	110	140	113	149	193	271	307	334
WCR	7.8	-4.7	9.2	6.7	23.2	14.6	14.9	15.2
Financial assets	23.2	38.2	37.2	35.1	35.0	-2.5	-24.0	-47.8
Ordinary shareholders equity	65.8	64.3	39.4	72.7	129	168	208	253
Minority interests	8.1	7.2	6.2	7.4	3.4	3.4	3.4	3.4
Shareholders equity	73.8	71.5	45.6	80.1	132	172	212	256
Non-current provisions	50.8	51.2	29.9	46.8	96.7	96.7	96.7	96.7
Net debt	**33.4**	**72.5**	**106**	**93.9**	**55.7**	**51.5**	**29.5**	**-8.9**
CASH FLOW STATEMENT (€m)	**12/18**	**12/19**	**12/20**	**12/21**	**12/22**	**12/23e**	**12/24e**	**12/25e**
EBITDA	**97.9**	**22.7**	**23.9**	**66.1**	**139.1**	**124.3**	**130.2**	**135.3**
Change in WCR	-1.6	12.5	-13.9	2.4	-16.5	8.7	-0.4	-0.3
Interests & taxes	15.0	5.6	0.0	6.3	23.4	25.5	27.3	25.6
Others	-42.6	-26.9	4.0	-23.0	-3.2	-19.6	-28.0	-26.2
Operating Cash flow	68.7	13.9	14.0	51.8	142.7	138.9	129.1	134.4
CAPEX	-27.8	-28.7	-36.7	-51.2	-82.5	-132.0	-93.0	-85.5
Free cash-flow	**40.9**	**-14.7**	**-22.7**	**0.6**	**60.3**	**6.9**	**36.1**	**48.9**
Acquisitions / disposals	0.1	-2.8	-3.9	-0.3	7.6	0.0	0.0	0.0
Dividends	-6.2	-3.9	-0.7	-0.3	-3.7	-7.6	-7.8	-8.1
Net capital increase	-0.5	0.0	-0.1	-0.1	-16.2	0.0	0.0	0.0
Others	-6.9	-6.6	-7.5	-6.5	-6.7	-6.9	-6.5	-1.7
Change in net cash	43.5	-39.1	-33.1	11.7	38.2	4.1	22.0	38.5
GROWTH MARGINS PRODUCTIVITY	**12/18**	**12/19**	**12/20**	**12/21**	**12/22**	**12/23e**	**12/24e**	**12/25e**
Sales growth	ns	-62.2%	-6.1%	89.5%	ns	1.6%	4.3%	3.1%
Lfl sales growth	-	-	-	-	-	-	-	-
Current EBIT growth	ns	-82.8%	ns	ns	ns	-19.4%	3.4%	4.8%
Growth in adjusted EPS	59.3%	-11.3%	-62.7%	ns	ns	46.8%	32.2%	27.5%
Net margin	26.3%	61.9%	24.6%	46.8%	50.9%	73.5%	93.2%	ns
EBITDA margin	**89.8%**	**55.2%**	**61.9%**	**90.1%**	**84.1%**	**73.9%**	**74.3%**	**74.8%**
Current EBIT margin	**30.0%**	**13.7%**	**-41.7%**	**44.4%**	**55.3%**	**43.8%**	**43.4%**	**44.1%**
CAPEX / Sales	-60.7%	-69.7%	-95.2%	-72.1%	-53.8%	-78.5%	-53.0%	-47.3%
WCR / Sales	7.2%	-11.4%	23.7%	9.2%	14.0%	8.7%	8.5%	8.4%
Tax Rate	32.2%	29.1%	28.5%	2.6%	23.0%	30.0%	30.0%	30.0%
Normative tax rate	30.0%	30.0%	30.0%	30.0%	30.0%	30.0%	30.0%	30.0%
Asset Turnover	0.8	0.3	0.3	0.4	0.8	0.6	0.5	0.5
ROCE post-tax (normative tax rate)	**15.8%**	**2.7%**	**-7.5%**	**13.8%**	**29.4%**	**18.0%**	**15.6%**	**14.8%**
ROCE post-tax hors GW (normative tax rate)	16.1%	2.7%	-7.6%	14.0%	29.6%	18.1%	15.6%	14.9%
ROE	49.8%	39.2%	18.3%	61.2%	83.5%	83.1%	86.8%	90.3%
DEBT RATIOS	**12/18**	**12/19**	**12/20**	**12/21**	**12/22**	**12/23e**	**12/24e**	**12/25e**
Gearing	45%	101%	232%	117%	42%	30%	14%	-3%
Net Debt / Market Cap	0.31	0.90	2.20	1.14	0.42	0.38	0.22	-0.07
Net debt / EBITDA	**0.34**	**3.19**	**4.41**	**1.42**	**0.40**	**0.41**	**0.23**	**-0.07**
EBITDA / net financial charges	15.7	4.2	3.7	11.9	25.3	25.5	20.6	56.0

Sources: ODDO BHF Securities, SIX

- **Valuation method**

Our target prices are established on a 12-month timeframe and we use three valuation methods to determine them. First, the discounting of available cash flows using the discounting parameters set by the Group and indicated on ODDO BHF' website. Second, the sum-of-the-parts method based on the most pertinent financial aggregate depending on the sector of activity. Third, we also use the peer comparison method which facilitates an evaluation of the company relative to similar businesses, either because they operate in identical sectors (and are therefore in competition with one another) or because they benefit from comparable financial dynamics. A mixture of these valuation methods may be used in specific instances to more accurately reflect the specific characteristics of each company covered, thereby fine-tuning its evaluation.

- **Sensitivity of the result of the analysis/ risk classification:**

The opinions expressed in the financial analysis are opinions as per a particular date, i.e. the date indicated in the financial analysis. The recommendation (cf. explanation of the recommendation systematic) can change owing to unforeseeable events which may, for instance, have repercussions on both the company and on the whole industry.

- **Our stock market recommendations**

Our stock market recommendations reflect the RELATIVE performance expected for each stock on a 12-month timeframe.
Outperform: performance expected to exceed that of the benchmark index, sectoral (large caps) or other (small and mid caps).
Neutral: performance expected to be comparable to that of the benchmark index, sectoral (large caps) or other (small and mid caps).
Underperform: performance expected to fall short of that of the benchmark index, sectoral (large caps) or other (small and mid caps).

- **The prices of the financial instruments used and mentioned in this document are the closing prices.**
- **All publications by ODDO BHF concerning the companies covered and mentioned in this document are available on the research site: www.securities.oddo-bhf.com/#disclaimer.**

Recommendation and target price changes history over the last 12 months for the company analysed in this report

Date	Reco	Price Target (EUR)	Price (EUR)	Analyst
20/07/23	Outperform	40.00	26.80	Klaus Breitenbach

In accordance with Article 20 of European Regulation No. 596/2014 (Market Abuse Regulation), a list of all recommendations on any financial instrument or issuer that have been disseminated over the past twelve months is available by clicking on the following link www.securities.oddo-bhf.com/#disclaimer.

Recommendation split

		Outperform	Neutral	Underperform
Our whole coverage	(675)	52%	36%	11%
Liquidity providers coverage	(80)	49%	41%	10%
Research service coverage	(51)	65%	24%	12%
Investment banking services	(28)	68%	25%	7%

Risk of conflict of interest:

Investment banking and/or Distribution	
Has ODDO BHF SCA or its affiliates managed or co-managed in the last 12 months a public offering of securities for the subject company/ies?	No
Has ODDO BHF SCA or its affiliates received compensation for investment banking services from the subject company/ies in the last 12 months or expects to receive or intends to seek compensation for investment banking services from the subject company/ies in the last 12 months?	No
Research contract between ODDO group & the issuer	
Have ODDO BHF SCA or its subsidiary ABN AMRO – ODDO BHF B.V. and the subject company/ies agreed that ABN AMRO - ODDO BHF B.V. or one of its parent companies will produce and disseminate investment recommendations on the subject company/ies as a service to the the subject company/ies?	Yes
Liquidity provider agreement and market-making	
At the date of the distribution of this report, does ODDO BHF SCA or its affiliates act as a market maker or has ODDO BHF SCA or its affiliates signed a liquidity provider agreement with the subject company/ies?	No
Significant equity stake	
Does ODDO BHF SCA or its subsidiary ABN AMRO – ODDO BHF B.V. own 1% or more of any class of common equity securities of the subject company/ies?	No
One or more affiliates of ODDO BHF SCA, other than ABN AMRO – ODDO BHF B.V., from time to time may own 1% or more of a class of common equity securities of the subject company/ies.	
Does ODDO BHF SCA or its subsidiary ABN AMRO – ODDO BHF B.V., own a net long or short position of 0.5% or more of any class of common equity securities of the subject company/ies?	No
Does the subject company beneficially own 5% or more of any class of common equity of ODDO BHF SCA or its subsidiary ABN AMRO – ODDO BHF B.V.?	No
Disclosure to Company	
Has a copy of this report ; with the target price and/or rating removed, been presented to the subject company/ies prior to its distribution, for the sole purpose of verifying the accuracy of factual statements ?	No
Have the conclusions of this report been amended following disclosure to the company/ies and prior its distribution?	No
Additional material conflicts	
Is ODDO BHF SCA or its affiliates aware of any additional material conflict of interest?	No

Personal conflicts of interest	
Have those responsible for the drafting of the present document acquired securities from the issuer concerned by the present financial analysis?	No
Have those responsible for the drafting of the present document received remuneration directly linked to investment firm service transactions or any other kind of transaction they carry out or any trading commissions they, or any legal person who is part of the same group, receive?	No

Statement of conflict of interests of all companies mentioned in this document may be consulted on ODDO BHF: www.securities.oddo-bhf.com/#disclaimer.

Disclaimer:

Disclaimers for Distribution by ODDO BHF SCA to Non-United States Investors:

This research publication is produced by the Corporates & Markets division of ODDO BHF SCA ("ODDO"), which is licensed by the Autorité de Contrôle Prudentiel et de Résolution (ACPR) and regulated by the Autorité des Marchés Financiers ("AMF").

The research, when distributed outside of the U.S., is intended exclusively for non-U.S. customers of ODDO and cannot be divulged to a third-party without prior written consent of ODDO. This document is not and should not be construed as an offer to sell or the solicitation of an offer to purchase or subscribe for any investment. This research has been prepared in accordance with regulatory provisions designed to promote the independence of investment research. "Chinese walls" (information barriers) have been implemented to avert the unauthorized dissemination of confidential information and to prevent and manage situations of conflict of interest. This research has been prepared in accordance with French regulatory provisions designed to promote the independence of investment research. The recommendation presented in this document is reviewed and updated at least quarterly following each Quarterly Report published by the issuer that is the subject of this Research Report.

At the time of publication of this document, ODDO and/or one of its subsidiaries may have a conflict of interest with the issuer(s) mentioned. While all reasonable effort has been made to ensure that the information contained is not untrue or misleading at the time of publication, no representation is made as to its accuracy or completeness and it should not be relied upon as such. Past performances offer no guarantee as to future performances. All opinions expressed in the present document reflect the current context which is subject to change without notice. The views expressed in this Research Report accurately reflect the analyst's personal views about the subject securities and/or issuers and no part of his compensation was, is, or will be directly or indirectly related to the specific views contained in the Research Report. This Research Report does not constitute a personal recommendation or take into account the particular investment objectives, financial situations, or needs of individual clients. Clients should consider whether any advice or recommendation in this research is suitable for their particular circumstances and, if appropriate, seek professional advice, including tax advice.

This Research Report is for institutional investors only. It may not contain information necessary for others to make investment decisions. Consult your financial adviser or an investment professional if you are not an institutional investor.

Disclaimers for Distribution by ODDO BHF New York Corporation to United States Investors:

This Research Report is produced by ODDO BHF Corporates & Markets, a division of ODDO. This research is distributed to U.S. investors exclusively by ODDO BHF New York Corporation ("ONY"), MEMBER: FINRA/SIPC, and is intended exclusively for U.S. customers of ONY and cannot be divulged to a third-party without prior written consent of ONY. This document is not and should not be construed as an offer to sell or the solicitation of an offer to purchase or subscribe for any investment. This research has been prepared in accordance with regulatory provisions designed to promote the independence of investment research. "Chinese walls" (information barriers) have been implemented to avert the unauthorized dissemination of confidential information and to prevent and manage situations of conflict of interest. This research has been prepared in accordance with French regulatory provisions designed to promote the independence of investment research. The recommendation presented in this document is reviewed and updated at least quarterly following each Quarterly Report published by the issuer that is the subject of this Research Report.

At the time of publication of this document, ODDO, and/or one of its subsidiaries may have a conflict of interest with the issuer(s) mentioned. While all reasonable effort has been made to ensure that the information contained is not untrue or misleading at the time of publication, no representation is made as to its accuracy or completeness and it should not be relied upon as such. Past performances offer no guarantee as to future performances. All opinions expressed in the present document reflect the current context which is subject to change without notice. The views expressed in this Research Report accurately reflect the analyst's personal views about the subject securities and/or issuers and no part of his compensation was, is, or will be directly or indirectly related to the specific views contained in the Research Report. This Research Report does not constitute a personal recommendation or take into account the particular investment objectives, financial situations, or needs of individual clients. Clients should consider whether any advice or recommendation in this research is suitable for their particular circumstances and, if appropriate, seek professional advice, including tax advice.

This Research Report is for institutional investors only. It may not contain information necessary for others to make investment decisions. Consult your financial adviser or an investment professional if you are not an institutional investor.

Disclosures Required by United States Laws and Regulations:

Rule 15a-6 Disclosure: Under Rule 15a-6(a)(3), any transactions conducted by ODDO, and/or one of its subsidiaries with U.S. persons in the securities described in this foreign research must be effected through ONY. As a member of FINRA, ONY has reviewed this material for distribution to U.S. persons as required by FINRA Rules 2241(h) applicable to dissemination of research produced by its affiliate ODDO.

FINRA Disclosures:

- Neither ONY, ODDO, nor ODDO BHF Corporates & Markets beneficially owns 1% or more of any class of common equity securities of the subject company.
- The research analyst of ODDO BHF Corporates & Markets, at the time of publication of this research report, is not aware, nor does he or she know or have reason to know of any actual, material conflict of interest of himself or herself, ODDO, ODDO BHF Corporates & Markets or ONY, except those mentioned in the paragraph entitled "Risks of Conflicts of Interest."
- ODDO BHF Corporates & Markets or ODDO may receive or seek compensation for investment banking services in the next 3 months from the subject company of this Research Report, but ONY would not participate in those arrangements.
- Neither ONY, ODDO, ODDO BHF Corporates & Markets has received compensation from the subject company in the past 12 months for providing investment banking services except those mentioned in the paragraph of "Risks of Conflict of Interest"."
- Neither ONY, ODDO, ODDO BHF Corporates & Markets has managed or co-managed a public offering of securities for the subject company in the past 12 months except those mentioned in the paragraph of "Risk of Conflict of Interest".
- ONY does not make (and never has made) markets and, accordingly, was not making a market in the subject company's securities at the time that this research report was published.

Regulation AC:

ONY is exempt from the certification requirements of Regulation AC for its distribution to a U.S. person in the United States of this Research Report that is prepared by an ODDO BHF Corporates & Markets research analyst because ODDO has no officers or persons performing similar functions or employees in common with ONY and ONY maintains and enforces written policies and procedures reasonably designed to prevent it, any controlling persons, officers or persons performing similar functions, and employees of ONY from influencing the activities of the third party research analyst and the content of research reports prepared by the third party research analyst.

Contact Information of firm distributing research to U.S. investors: ODDO BHF New York Corporation, MEMBER: FINRA/SIPC, is a wholly owned subsidiary of ODDO BHF SCA; Louis paul ROGER, President (louis-paul.roger@oddo-bhf.com) 150 East 52nd Street New York, NY 10022 646-286-2137.