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Research Update:

3R Petroleum Oleo E Gas Assigned 'B+' Issuer Credit And 'BB-' Issue-Level Ratings; Outlook Stable

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Rating Action Overview

- We expect Brazil-based junior oil and gas company 3R Petroleum Oleo e Gas S.A. to generate more cash from higher daily production. The company is revitalizing assets, mainly in its Potiguar and offshore clusters this year, which should result in average daily production of around 50,000 barrels of oil equivalent (boe) in 2024.
- We expect improved production and efficiency to boost profitability in 2024 and significantly improve credit metrics, with gross debt to EBITDA around 2.5x and funds from operations (FFO) to debt of 30% by the end of the year. Still, the company has lower production levels, reserves size, and geographic diversity than higher rated global peers.
- On Jan. 22, 2024, S&P Global Ratings assigned its 'B+' long-term issuer credit rating to 3R and 'BB-' issue rating to its proposed senior secured notes. The '2' recovery rating on the notes indicates our expectation of substantial recovery (rounded estimate: 85%) in case of a default.
- The stable outlook incorporates our view that 3R will continue to strengthen its operations through asset revitalization, resulting in solid cash generation in the next two years.

Rating Action Rationale

We expect the company to lower leverage and gradually increase production over the next two years. We expect 3R to reach an average daily production of around 50,000 boe in 2024, compared to an average of 34,425 boe/day in 2023. We believe the revitalization plan will organically increase production over the next few years.

We also expect such investments to reduce production costs, enabling greater operating cash flow to offset the debt the company raised to acquire the assets. Still, the company has lower production capacity and reserves than its main local peer Prio S.A. (foreign currency: BB-/Stable/--; Brazil National Scale: brAA+/Stable/brA-1+) and has been slower to reduce leverage following acquisitions.

We predict the company's capital expenditure (capex) will mainly be used to increase production. We forecast yearly capex at around Brazilian real (R$) 2.3 billion-R$2.5 billion in 2024 and 2025, mainly directed to revitalizing Potiguar and offshore assets. As a result, we expect drilling activities to represent a smaller portion of total investments in 2024.

We believe lower production costs will be key for EBITDA margin expansion in the coming years. After incorporating the recently acquired assets, 3R has been gradually decreasing production costs. The company is renegotiating contracts, improving equipment and production infrastructure, and reactivating wells and workovers that will likely lower costs.

We forecast lifting costs per barrel of around US$18 in 2024 and close to US$16 in 2025, compared to an average of about US$22 in 2023. This should result in an EBITDA margin for the company's exploration and production segment of around 55%-60% in 2024 and 60%-65% in 2025. The consolidated EBITDA margin should remain around 40%-50%, and we anticipate the mid and downstream segment, which should remain around 10% of consolidated EBITDA, will have margins of around 3.5%-5.0%.

We expect the company to have a prudent approach to debt and leverage in the coming years. We expect gross debt to EBITDA of around 2.5x in 2024 and 1.5x in 2025, mainly from higher cash generation after 12 months of full consolidation of the acquired assets and operational improvements.

We assume the company will maintain relatively stable debt levels of around R$7.0 billion-R$7.5 billion over the next few years, as operating cash flow in 2024 should already be sufficient to cover capex needs. With that, we expect new debt issuances to refinance upcoming maturities.

Under our midcycle Brent oil price assumptions of US$55/barrel, 3R's credit metrics would deteriorate, with gross debt over EBITDA around 4.5x-5.0x in 2024. However, we believe the company could reduce capex to control leverage in this scenario as most of its assets are onshore.

We don't expect new mergers or acquisitions in our projections. Maha Energy, which holds a 5% stake in 3R's total shares, recently suggested that 3R merge its onshore operations with those of PetroReconcavo S.A. (not rated). The assets of the two companies are located in the Potiguar and Reconcavo basins, which could enable operational synergies. The combined onshore company would have a daily production of about 57,300 boe, based on 2023 figures.

We don't incorporate the potential transaction in our current credit analysis, because there is no formal proposal yet. However, if 3R engages in new mergers or acquisitions, we expect it to maintain net debt over EBITDA below 2x, in line with management's expectations.

Outlook

The stable outlook reflects our expectation that 3R will gradually increase daily production throughout 2024 and 2025. We also expect significant lower leverage in the next two years from higher cash generation and adequate liquidity. As a result, we expect gross debt to EBITDA of around 2.5x in 2024, FFO to debt of 30%, but free operating cash flow to remain constrained by high capex.

Downside scenario

We could lower the ratings if production is significantly lower than we expect due to delays or operational problems in the revitalization process, or if oil prices remain below our current expectation for a prolonged period, resulting in lower EBITDA generation.

We could also downgrade 3R if the company demonstrates a more aggressive acquisition or growth strategy, significantly increasing leverage and reducing free operating cash flow. In these scenarios, we would see gross debt to EBITDA above 3.0x, FFO to debt below 30%, and negative free operating cash flow.

Upside scenario

Although unlikely in the next 12-18 months, we could raise the ratings if 3R posts higher production levels, in line with higher rated peers, while maintaining a prudent approach to debt. In this scenario, we would expect gross debt to EBITDA comfortably below 3.0x and FFO to debt above 30%.

Company Description

3R is a Brazilian oil and natural gas producer focused on revitalizing mature oil fields. Its portfolio consists of nine assets acquired since 2019 and located in the states of Rio Grande do Norte, Ceara, Bahia, Espirito Santo, and Rio de Janeiro. The company operates through clusters:

- Potiguar, with Macau, Areia Branca, Fazenda Belem, Potiguar, and 35% of Pescada (which is operated by Petrobras);
- Reconcavo, with Rio Ventura and Reconcavo; and
- Offshore, with Peroa and Papa-Terra.

In December 2023, 3R had a total production capacity of around 46,999 boe/day and total net proved reserves of 368.2 million/boe. Its shares have been traded on the Brazilian stock market since 2020, and the company has no controlling shareholder.

Our Base-Case Scenario

Assumptions

- Brent oil price at US$85 for 2024 and 2025.
- Organic production growth in 2024. We expect oil average daily production of around 42,100 boe in 2024 and 57,600 in 2025, because of operational improvement projects in the acquired fields and limited drilling of new wells. Relatively stable gas production of around 8,000 boe/day over the next two years.
- Fixed discounts on the Brent price of US$1.50-US$14.00, depending on the oil quality of each field.
- Lifting costs of around US$18/boe in 2024 and US$16/boe in 2025, compared with US$22 in 2023, mainly due to operational improvements and contract renegotiations.
- As a result, we expect the exploration and production segment to have an EBITDA margin of around 57% in 2024 and 60%-65% in 2025.
- Refining capacity of 37,000-40,000 boe/day. Still high crack spreads in 2024 due to high

gasoline prices but normalizing in 2025, with prices closer to Brent and positive crack spreads. We expect 3R to sell oil derivatives, kerosene, and diesel.

- Mid and downstream EBITDA margin around 4.5%-5.0% in 2024 due to still high crack spreads but normalizing to around 3.5% in 2025.
- We exclude intercompany transactions from consolidated revenue and costs relating to the sale of oil and other services.
- Annual capex of approximately R$2.3 billion-R$2.5 billion in 2024 and 2025, for revitalization processes and operational improvements.
- Total payments for the acquired fields of around US$115.7 million in 2024 and US$137 million in 2025.
- The fourth senior unsecured debenture will be issued for R$900 million in January 2024, with proceeds used to finance payments to Petrobras relating to acquisitions and refinancing in the coming years. We also assume the company will issue US$500 million of senior secured notes to refinance the syndicated loan that was originally due in February 2027.
- As a result, 3R will maintain total financial debt at around R$7.0 billion-R$7.5 billion in the next two years.
- Dividend payment in 2025 of 50% of previous year net income.

Key metrics

Table 1

3R Petroleum Oleo e Gas S.A.--Forecast summary

Industry sector: Oil and gas exploration and production

	--Fiscal year ended Dec. 31--							
(Mil. R$)	**2020a**	**2021a**	**2022a**	**2023f**	**2024e**	**2025f**	**2026f**	**2027f**
Revenue	204	728	1,722	5,494	10,377	12,115	13,126	13,135
EBITDA (reported)	-133	532	674	1,882	4,166	6,081	7,755	8,673
Plus/(less): Other	195	-157	34	100	--	--	--	--
EBITDA	63	375	707	1,982	4,166	6,081	7,755	8,673
Less: Cash interest paid	-61	-116	-27	-431	-723	-683	-679	-602
Less: Cash taxes paid	-2	-37	-87	-110	-453	-730	-960	-998
Funds from operations (FFO)	-1	223	594	1,441	2,990	4,668	6,116	7,073
Cash flow from operations (CFO)	-6	-53	63	843	2,927	4,565	6,025	7,054
Capital expenditure (capex)	881	367	356	1,403	2,311	2,437	2,780	2,593
Free operating cash flow (FOCF)	-886	-420	-293	-560	616	2,128	3,245	4,461
Dividends	--	--	--	--	--	1,056	1,682	2,315
Discretionary cash flow (DCF)	-886	-420	-293	-560	616	1,073	1,563	2,146
Debt (reported)	633	48	1,052	7,298	7,159	7,159	7,068	5,793
Plus: Lease liabilities debt	1	26	51	51	51	51	51	51
Plus/(less): Other	2,186	3,010	8,143	3,331	2,741	2,028	1,684	1,475
Debt	2,821	3,084	9,245	10,679	9,950	9,238	8,803	7,319

Table 1

3R Petroleum Oleo e Gas S.A.--Forecast summary (cont.)

Industry sector: Oil and gas exploration and production

	--Fiscal year ended Dec. 31--							
(Mil. R$)	2020a	2021a	2022a	2023f	2024e	2025f	2026f	2027f
Cash and short-term investments (reported)	705	2,508	832	1,625	1,509	1,865	2,990	3,532
Adjusted ratios								
Debt/EBITDA (x)	45.1	8.2	13.1	5.4	2.4	1.5	1.1	0.8
FFO/debt (%)	0.0	7.2	6.4	13.5	30.0	50.5	69.5	96.6
CFO/debt (%)	-0.2	-1.7	0.7	7.9	29.4	49.4	68.4	96.4
FOCF/debt (%)	-31.4	-13.6	-3.2	-5.2	6.2	23.0	36.9	61.0
DCF/debt (%)	-31.4	-13.6	-3.2	-5.2	6.2	11.6	17.8	29.3
Annual revenue growth (%)	530.4	256.3	136.7	219.0	88.9	16.8	8.3	0.1
EBITDA margin (%)	30.6	51.6	41.1	36.1	40.2	50.2	59.1	66.0

All figures are adjusted by S&P Global Ratings, unless stated as reported. We add obligations payable, asset retirement obligations, and leases to 3R's reported debt. a--Actual. f--Forecast.

Liquidity

We view 3R's liquidity as adequate. We expect the company's sources over uses of cash to be around 1.4x over the next 12 months. We expect the company to maintain high cash levels of around R$1.5 billion over the next few years, a smooth debt maturity profile, and good access to funding sources. We believe that 3R will continue to refinance its upcoming debt maturities through long-term credit lines.

Principal liquidity sources

- Cash position of R$1 billion as of Sept. 30, 2023
- Cash FFO of around R$2.5 billion in the 12 months from September 2023
- New debentures totaling R$1.9 billion, the third debentures already disbursed in October 2023 and the fourth, which has a firm commitment from the banks, to be issued in January 2024

Principal liquidity uses

- Short-term debt of R$613.2 million as of Sept. 30, 2023
- Payment for acquisitions of R$808.9 million in the short term as of Sept. 30, 2023
- Working capital needs of R$300 million in the next 12 months, considering potential peaks between quarters
- Capex of around R$2 billion over the next 12 months

Covenants

3R is subject to restrictive financial covenants of incurrence on its debentures, syndicated loan, and the proposed senior notes. We expect the company to maintain a large cushion of over 50% on these covenants in 2024 and 2025. The covenants require:

- Net debt to EBITDA below 3.5x at the end of 2023, below 3.0x in 2024, and 2.5x from 2025 onward; and
- Asset coverage above 1.5x, calculated considering net proved reserves over total gross debt.

Environmental, Social, And Governance

Environmental factors are a negative consideration in our credit analysis of 3R because of the downside risks for profitability and product demand amid the transition to renewable energy sources. Still, the company's focus on mature oil fields, with relatively lower production costs than exploratory players, makes it more resilient. 3R has some environmental projects related to renewable energy for its operations and the reduction of gas emissions, although they are at early stages.

Issue Ratings--Recovery Analysis

Key analytical factors

We assigned a 'BB-' rating to 3R's proposed senior secured notes. The notes will be issued by 3R Lux S.a.r.l. (not rated), and unconditionally and irrevocably guaranteed by 3R Petroleum Oleo e Gas S.A. and some of its subsidiaries.

The issue-level rating is one notch above the issuer credit rating, given its collateral package and our expectation of substantial recovery (rounded at 85% given our cap when assigning recovery ratings for entities under the Brazilian jurisdiction). The collateral package will include the concession rights on Potiguar, Macau, Areia Branca, Reconcavo, and Rio Ventura and equity interest on 3R Potiguar S.A., 3R RNCE S.A., 3R Bahia S.A., and 70% of 3R Offshore.

The 'brA+' rating on 3R's senior unsecured debentures remains unchanged and at the same level as the company's long-term issuer credit rating on the Brazil national scale. The '3' recovery rating on the debentures indicates our expectation of a significant recovery, around 65%, for the creditors of this debt.

Our simulated default scenario for 3R assumes a sustained period of low commodity prices and high capex to support the company's growth strategy. This scenario is consistent with the conditions of previous defaults in this sector that would create incentives for a debt restructuring, even before the notes mature.

We based our valuation of 3R's reserves on a company-provided proved reserves report as of December 2022, using a price deck assumption of about $55/barrel for crude oil and a discount rate of 15%. In our view, Brazil is a less creditor-friendly jurisdiction than other countries such as the U.S., where we use a 10% discount rate.

Simulated default assumptions

- Simulated default year: 2028
- Jurisdiction: Brazil

Simplified waterfall

- Net enterprise value (EV) after 5% administrative costs: $1.6 billion
- Senior secured debt: $1 billion (including the proposed senior secured notes)
- Recovery expectations on the proposed secures notes: 85%
- Senior unsecured debt: $455 million (debentures and other bank loans)
- Expected recovery of senior unsecured debt: 65%

*All debt amounts include six months of prepetition interest.

Ratings Score Snapshot

Issuer Credit Rating	B+/Stable/—
Business risk:	Weak
Country risk	Moderately negative
Industry risk	Moderately negative
Competitive position	Weak
Financial risk:	Aggressive
Cash flow/leverage	Aggressive
Anchor	b+
Modifiers:	
Diversification/Portfolio effect	Neutral (no impact)
Capital structure	Neutral (no impact)
Financial policy	Neutral (no impact)
Liquidity	Adequate (no impact)
Management and governance	Neutral (no impact)
Comparable rating analysis	Neutral (no impact)

Related Criteria

- Criteria | Corporates | General: Methodology: Management And Governance Credit Factors For Corporate Entities, Jan. 7, 2024
- Criteria | Corporates | General: Corporate Methodology, Jan. 7, 2024
- General Criteria: National And Regional Scale Credit Ratings Methodology, June 8, 2023

- General Criteria: Environmental, Social, And Governance Principles In Credit Ratings, Oct. 10, 2021
- General Criteria: Group Rating Methodology, July 1, 2019
- Criteria | Corporates | General: Corporate Methodology: Ratios And Adjustments, April 1, 2019
- Criteria | Corporates | General: Recovery Rating Criteria For Speculative-Grade Corporate Issuers, Dec. 7, 2016
- General Criteria: Guarantee Criteria, Oct. 21, 2016
- Criteria | Corporates | Recovery: Methodology: Jurisdiction Ranking Assessments, Jan. 20, 2016
- Criteria | Corporates | General: Methodology And Assumptions: Liquidity Descriptors For Global Corporate Issuers, Dec. 16, 2014
- General Criteria: Country Risk Assessment Methodology And Assumptions, Nov. 19, 2013
- General Criteria: Methodology: Industry Risk, Nov. 19, 2013
- Criteria | Corporates | Industrials: Revised Assumptions For Assigning Recovery Ratings To The Debt Of Oil And Gas Exploration And Production Companies, Sept. 14, 2012
- General Criteria: Principles Of Credit Ratings, Feb. 16, 2011

Ratings List

New Rating; CreditWatch/Outlook Action	
3R Petroleum Oleo e Gas S.A.	
Issuer Credit Rating	B+/Stable/--
New Rating	
3R Lux Sarl	
Senior Secured	BB-
Recovery Rating	2(85%)

Certain terms used in this report, particularly certain adjectives used to express our view on rating relevant factors, have specific meanings ascribed to them in our criteria, and should therefore be read in conjunction with such criteria. Please see Ratings Criteria at www.spglobal.com/ratings for further information. Complete ratings information is available to RatingsDirect subscribers at www.capitaliq.com. All ratings affected by this rating action can be found on S&P Global Ratings' public website at www.spglobal.com/ratings.