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CREDIT OPINION
6 November 2018

Update

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RATINGS

Volcan Compania Minera S.A.A. y Subsidiarias

Domicile	Peru
Long Term Rating	Ba2
Type	LT Corporate Family Ratings
Outlook	Stable

Please see the ratings section at the end of this report for more information. The ratings and outlook shown reflect information as of the publication date.

Contacts

Barbara Mattos, CFA +55.11.3043.7357
Senior Vice President
barbara.mattos@moodys.com

Mariano Ferreyra +54.115.129.2613
Associate Analyst
mariano.ferreyra@moodys.com

Marianna Waltz, CFA +55.11.3043.7309
MD-Corporate Finance
marianna.waltz@moodys.com

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Volcan Compania Minera S.A.A. y Subsidiarias

Update following upgrade to Ba2

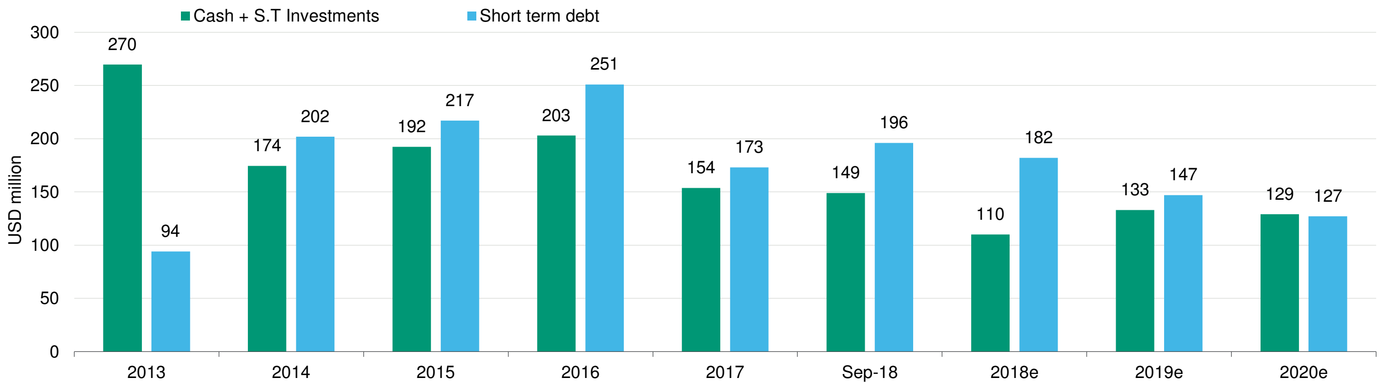
Summary

The upgrade in Volcan Compania Minera S.A.A. y Subsidiarias' (Volcan) ratings to Ba2 from Ba3 reflects the company's improvement in operating and liquidity profile over the past few quarters. Accordingly, the company increased the focus on profitability and cost reduction while investing in brownfield projects that will allow it to expand production and ore grades overtime. Besides, Glencore plc (Baa2 positive) has become a controlling shareholder in November 2017, with positive implications to Volcan's strategy, operations, corporate governance standards and financial policies. We expect that base metals prices in 2019 will be sustained close to average levels seen in 2017 and 2018, which, combined with ongoing cost reductions, will continue to support gradual deleveraging and a strengthening credit profile.

Volcan's Ba2 ratings incorporate the company's competitive cost position, its operational diversity in terms of metals produced and number of mines (12 mines distributed in five operating units), and its position as a leading producer of zinc, silver and lead globally.

However, Volcan's ratings continue to be constrained by the company's relative modest scale (revenues of USD 862 million in the 12 months ending June 2018) as compared to global peers and earnings volatility as a result of its exposure to commodity prices. The continued reliance on short term debt, with cash balances not enough to cover short term maturities, also constrains Volcan's ratings.

Exhibit 1
A combination of healthy cash position and short-term debt reduction will improve liquidity
Evolution of cash, short-term investments and short-term debt



All figures are calculated using Moody's estimates and standard adjustments. Moody's forecasts (f) or projections (proj.) are Moody's opinions and do not represent the views of the issuer. Periods are financial year-end unless indicated. LTM = Last 12 months.
Zinc price assumption = $1.30/lb for 2018 and $1.10/lb for 2019-20.
Sources: Moody's Financial Metrics™ (historical), Moody's Investors Service (forecast)

Credit strengths

» Leading producer of zinc, lead and silver globally, with good diversification of metals and mines

» Competitive cost position within the first quartile of the cash cost curve (for zinc and silver)

» Cost reduction efforts and more favorable market fundamentals support deleveraging

» Glencore as a controlling shareholder enhances technical and financial policies and processes

Credit challenges

» Relatively modest revenue size compared with that of its global peers and low geographic diversification

» Exposure to commodity prices creates earnings volatility

» Liquidity risk, which is represented by reliance on short-term debt

Rating outlook

The stable outlook is supported by our view that Volcan will be able to improve its liquidity by reducing the relative reliance on short term debt and sustain adequate credit metrics. The stable outlook also considers that Volcan´s growth strategy will focus on brownfield projects, maintaining its discipline regarding costs, capex and dividend distribution. The outlook assumes that should prices retreat, the company will make the necessary adjustments in its operations and capital spending to maintain its financial profile.

Factors that could lead to an upgrade

An upward rating movement would require Volcan to (1) materially improve its liquidity cushion by reducing short-term debt levels, (2) maintain its competitive cost position, and (3) continue to invest for growth, achieving higher size and scale, without jeopardizing its liquidity and credit metrics. Volcan's ratings could be also upgraded if the company is able to

» maintain strong cash flow metrics — namely adjusted (cash flow from operations - dividends)/debt — above 30% on a sustained basis (45.9% in the 12 months ended June 2018)

Factors that could lead to a downgrade

Volcan's ratings could be downgraded if its profitability and cash flow from operations weaken. A marked deterioration in the company's liquidity position could also precipitate a downgrade. Specifically, ratings could be downgraded if its

» adjusted EBIT margin falls below 12% (26.3% in the 12 months ended June 2018), coupled with negative free cash flow

» debt levels increase, leading to total adjusted debt to EBITDA above 3x on a sustained basis (2.1x in the 12 months ended June 2018)

Key indicators

Exhibit 2

Volcan Compania Minera S.A.A. y Subsidiarias

$ Millions	Dec-13	Dec-14	Dec-15	Dec-16	Dec-17	LTM (Jun-18)	2018-proj.	2019-proj.
Revenue	1,162.8	1,042.4	794.5	821.5	856.7	861.9	786.0	778.0
EBIT Margin %	24.0%	18.3%	6.8%	14.6%	25.5%	26.3%	20.7%	19.9%
EBIT / Interest Expense	13.5x	6.4x	1.4x	3.2x	5.5x	5.9x	4.2x	4.1x
Debt / EBITDA	1.8x	2.3x	3.9x	3.2x	2.2x	2.1x	2.5x	2.5x
Debt / Book Capitalization	30.4%	32.9%	42.3%	38.9%	47.8%	45.9%	45.6%	44.0%
(CFO - Dividends) / Debt	28.4%	20.1%	21.4%	22.5%	41.0%	45.9%	27.8%	25.9%

All figures are calculated using Moody's estimates and standard adjustments. Moody's forecasts (f) or projections (proj.) are Moody's opinions and do not represent the views of the issuer. Periods are financial year-end unless indicated. LTM = Last 12 months.
Zinc price assumption = $1.30/lb for 2018 and $1.10/lb for 2019.
Source: Moody's Financial Metrics™

Profile

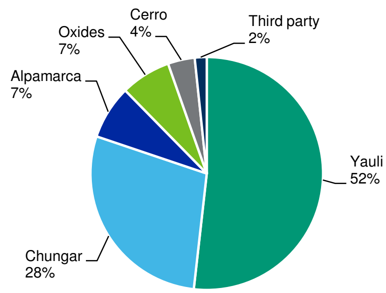
Volcan Compania Minera S.A.A. y Subsidiarias (Volcan) is a Peruvian mining company with exploration, mining, concentrating and commercial operations. It primarily produces zinc and lead concentrate and some copper concentrate, all with high silver content. The company operates through five operational complexes with a total of 12 mines, seven concentrate plants and one leaching plant for silver oxide production. All of Volcan's operations are located in Peru (A3 stable) and, for the 12 months ended June 2018, it reported revenue of $862 million. Volcan is a holding company listed in the stock exchanges of Lima and Chile, and in Madrid's Latibex. Since November 2017, Glencore has a controlling stake of 55% in Class A voting shares, which is equivalent to a 23.3% economic interest in Volcan.

Detailed credit considerations

Diversification of metals and mines and low cost position support business model

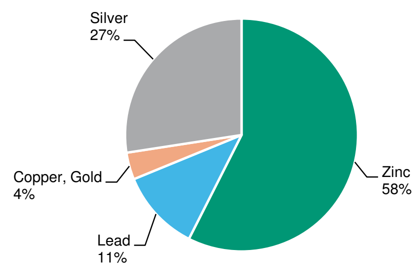
Volcan is the leading producer of zinc, silver and lead in Peru, and a major participant for these metals globally. Moreover, the company has a favorable mix of metals, which provides good diversification and low price correlations in a normalized environment. Volcan also enjoys good operational diversification, with five main operational units at Yauli, Chungar, Cerro de Pasco, Oxides and Alpamarca-Rio Pallanga, in the central region of Peru. It produces its metals from 12 different mines and also has seven concentrate plants and one leaching plant for silver oxides production.

Exhibit 3
Sales by origin for the 12 months ended June 2018



Source: Volcan quarterly Management Discussion & Analysis

Exhibit 4
Sales by product for the 12 months ended June 2018

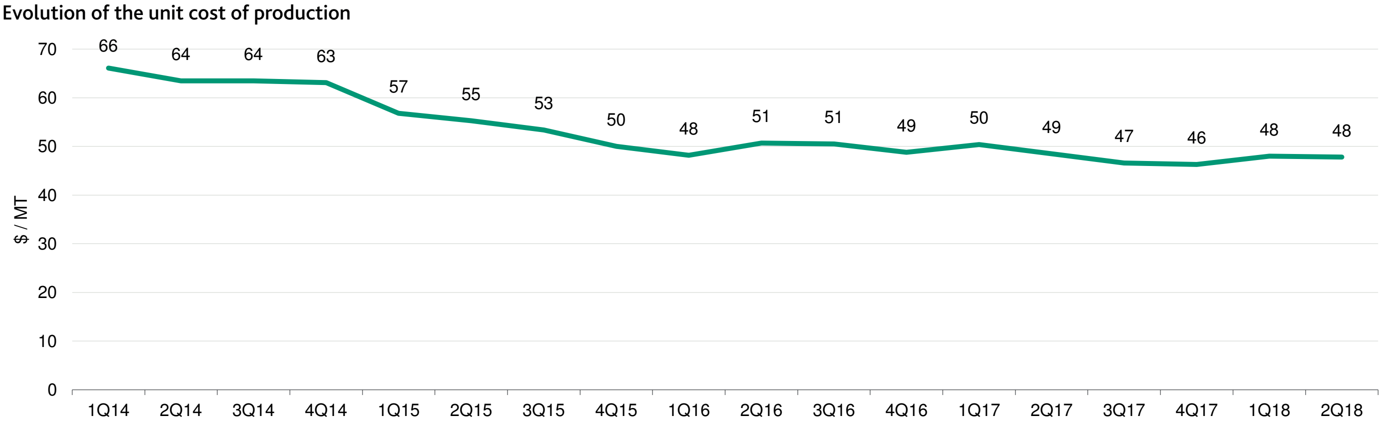


Source: Volcan quarterly Management Discussion & Analysis

Volcan has posted a significant recovery in its credit metrics since 2016 and through the 12 months ended June 2018, reflecting a combination of higher zinc prices and reductions in costs over time. Efficiencies have been gained through multiple channels, including mine optimization, review of scope and the number of contractors, rationalization of inputs/raw materials (including energy) and the ramp-up of low-cost units, such as Oxides plant and Alpamarca. Adjusted EBIT margin increased to 26.3% during the 12 months ended June 2018 from 25.5% in 2017 and 14.6% in 2016. At the same time, the unit cost of production has demonstrated a steady decline, falling by 24% since year-end 2014.

We expect further unit cost decline in 2018 and 2019 as Volcan processes higher low-cost volumes of stockpiles at Cerro de Pasco. Moreover, the company has reassessed its mining plan and is focusing on processing higher ore grades rather than focusing on increasing production volumes. We expect to see further decline in unit costs overtime.

Exhibit 5
Unit cost of production demonstrates sustained downward trend, in line with greater operational efficiencies
Evolution of the unit cost of production



Source: Volcan quarterly Management Discussion & Analysis

Because cost reduction efforts and current market fundamentals support stable EBITDA generation, we believe Volcan will focus its excess cash toward debt reduction and investments, without jeopardizing leverage or liquidity. With zinc prices remaining rangebound, we expect to see positive free cash flow generation in 2019-20 with the company being able to focus on some debt reduction, in particular short-term instruments, which will keep its adjusted leverage in the range of 1.5x-2.5x over the next through 2020.

Reserve position aided by valuable exploration properties and expansion projects

Volcan has a reserve position of around 50 million tons — around seven years of reserves at 2017 production levels — and close to 15 years considering reserves and inferred resources, which amount to 158 million tons. However, the company holds significant exploration properties in mineral rich locations and has a high potential to improve over time as long as it continues its exploration activities and strategic investments.

In the low-price environment observed in 2015/early 2016, Volcan suspended expansion/exploration investments to preserve its liquidity, and after reaching a low of close to $120 million in capital spending in 2016, investments were resumed in 2017, reaching around $230 million. With Volcan focusing mainly in investing in current operations and mine infrastructure in the medium term, we expect the company's capital spending to average around $200 million per year through 2020.

Exploration projects comprise brownfield and greenfield explorations distributed along the existing mining units (Yauli, Chungar, Oxides, Cerro de Pasco and Alpamarca), with a focus on Yauli and Chungar, which currently account for 83% of Volcan's revenue. Moreover, to take advantage of the current infrastructure in its existing mines, Volcan continues to invest in Romina, Carhuacayán and Zoraida pollymetallic projects (zinc, lead and silver) which are close to Alpamarca and Yauli mines. While Romina has around 12 million tons of estimated resources (3.62% zinc, 1.93% lead and 0.95 ounces per ton of silver) and potential additional of 14 million tons, Carhuacayán's resources are still being estimated. On the other hand, Zoraida, which is close to the Yauli unit, has recently started drilling activities over 15,000 meters of land and has potential resource of 4 million tons.

Other relevant development projects include Palma, located 60 km away from Lima, which is a zinc, lead and silver project with estimated resources of 12 million tons (4.76% zinc, 1.05% lead and 27 grams per ton of silver). Any further expansion will be analyzed in a selective manner and will depend on market conditions.

Although exposure to commodity prices creates earnings volatility, current market fundamentals are still supportive of zinc prices

Higher sustained zinc prices through 2017/early 2018 reflect the positive market fundamentals following the closure of mines, which led to a decline in production and deficits in the market. Zinc prices started to show a downward trend in July, mostly driven by sentiment toward commodities (US-China trade disputes and potential deceleration of economic growth in China) and also by market fundamentals. As of late October 2018, zinc prices were back to levels close to $1.20/lb, below the year-average price of $1.34/lb, but still well-above average prices between 2012-2016, when zinc average prices remained below $1.00/lb.

Reopening of mines and greenfield projects will rapidly increase supply in the coming years, generating surpluses overtime. The International Lead and Zinc Study Group (ILZSG) forecast points to a global zinc metal supply growth of 1.4% in 2018 and 3% in 2019, with the incremental growth coming mostly from Canada and Australia (Coeur Mining project in Canada and New Century Resources tailings project in Australia). However, we could see further mine closures in China (about 40% of the global zinc supply) for environmental reasons, which will help offset market imbalances related to additional new capacity.

At the same time, growth in zinc consumption remains supported by infrastructure spending, particularly in China (which accounts for nearly half of the global demand for zinc), as well as automotive industry growth. However, we are currently observing mixed indicators in China, with a decline in galvanization activity combined with an improvement in property investments. The ILZSG forecasts point to a global demand growth for zinc metal of 0.4% in 2018 and 1.1% in 2019.

Exhibit 6
Zinc price evolution with Moody's forecast price sensitivities ($/lb)

Sources: Moody's Investors Service, London Metal Exchange (LME)

Glencore's increased participation in Volcan is credit positive

In November 2017, Glencore raised its participation in Volcan to a controlling 55% stake in Class A voting shares, from the 18% previously. Taking into consideration the non-voting Class B shares, Glencore has a 23.3% economic interest in Volcan. As the controlling shareholder, Glencore's strong credit profile, industry expertise and financial strength results in synergies and other operational benefits to Volcan, the credit implications of which will become more evident overtime.

Glencore is a leading publicly listed natural resources group domiciled in Switzerland that combines a large and well-diversified portfolio of mining assets with an extensive third-party marketing business. The activities of the group are organized around three main business groups (Metals & Minerals, Energy Products and Agricultural Products), which are in turn subdivided into several commodity departments. These departments are responsible for managing the production, sourcing, hedging, logistics and marketing activities related to their respective commodities. The company is active in all key base metals (copper, zinc, cobalt, nickel, aluminum), thermal and metallurgical coal, as well as in oil and agricultural commodities (grains, oilseeds, cotton and sugar). In the 12 months ended June 2018, Glencore generated revenue of around $214 billion and Moody's-adjusted EBITDA of $14.9 billion.

Liquidity analysis

Volcan has operated with a tight liquidity position in the past but, more recently, management has focused on maintaining an adequate liquidity position, with a minimum cash balance of $100 million (average cash balance has been around $150 million), and reducing short-term debt gradually. Although Volcan has easy access to low-cost short-term credit lines with local banks in Peru, the concentration of debt in the short-term increases the company's liquidity risk. Going forward, we anticipate more conservative liquidity management, with focus on a lower short-term debt exposure. As of September 2018, the company had a cash and equivalents balance of $149 million and has maintained its cash coverage of short-term debt slightly above 0.75x.

Aside from short-term maturities, Volcan has a comfortable debt maturity profile, with the bonds due 2022 representing 68% of its total debt as of September 2018. Moreover, we expect the company to direct its cash flow toward its projects pipeline, maintaining proven discipline regarding costs, capital spending and dividend distribution, while also generating free cash flow and maintaining a minimum cash balance of around $100 million for operational purposes.

Rating methodology and scorecard factors

Based on our Mining rating methodology published in September 2018, Volcan's grid-indicated rating maps to a Ba2 rating category as of the 12 months ended June 30, 2018, which maps with Volcan's current rating. The mapped rating is driven by Volcan's solid EBIT margins, and adequate leverage and coverage metrics. The forward-looking grid reflects tighter credit metrics because of lower zinc prices compared with 2017-18 averages.

Exhibit 7

Rating factors

Volcan Compania Minera S.A.A. y Subsidiarias

Mining Industry Grid	Current LTM 6/30/2018		Moody's 12-18 Month Forward View As of 11/6/2018	
Factor 1 : Scale (20%)	**Measure**	**Score**	**Measure**	**Score**
a) Revenues (USD Billion)	$0.9	Ca	$0.8	Ca
Factor 2 : Business Profile (25%)				
a) Business Profile	Ba	Ba	Ba	Ba
Factor 3 : Profitability and Efficiency (10%)				
a) EBIT Margin (EBIT / Revenue)	26.3%	A	20.3%	A
Factor 4 : Leverage and Coverage (30%)				
a) EBIT / Interest Expense	5.9x	Baa	4.1x	Ba
b) Debt / EBITDA	2.1x	Baa	2.5x	Baa
c) Debt / Total Capital	45.9%	Baa	44.8%	Baa
d) (CFO - Dividends) / Debt	45.9%	A	26.9%	Ba
Factor 5 : Financial Policy (15%)				
a) Financial Policy	Ba	Ba	Ba	Ba
Rating:				
a) Indicated Outcome from Scorecard		Ba2		Ba3
b) Actual Rating Assigned				Ba2

All ratios are based on 'Adjusted' financial data and incorporate Moody's Global Standard Adjustments for Non-Financial Corporations. This represents Moody's forward view, not the view of the issuer, and unless noted in the text, does not incorporate significant acquisitions and divestitures.
Zinc price assumption = $1.30/lb for 2018 and $1.10/lb for 2019.
Source: Moody's Financial Metrics™

Appendix

Exhibit 8

Peer comparison table

	Volcan Compania Minera S.A.A Ba2 Stable			Fresnillo plc Baa2 Positive			Compania de Minas Buenaventura Ba2 Positive			Nexa Resources S.A. Ba2 Stable			Minsur S.A. Ba3 Stable		
(in US millions)	FYE Dec-16	FYE Dec-17	LTM Jun-18	FYE Dec-16	FYE Dec-17	LTM Jun-18	FYE Dec-16	FYE Dec-17	LTM Jun-18	FYE Dec-16	FYE Dec-17	LTM Jun-18	FYE Dec-16	FYE Dec-17	LTM Jun-18
Revenue	$822	$857	$862	$1,906	$2,093	$2,213	$1,069	$1,274	$1,379	$1,965	$2,449	$2,641	$617	$672	$695
EBITDA	$255	$362	$375	$1,029	$1,060	$1,080	$378	$389	$440	$496	$696	$776	$199	$244	$259
Total Debt	$818	$808	$801	$821	$811	$811	$831	$1,018	$993	$1,144	$1,447	$1,421	$552	$590	$600
EBIT Margin	14.6%	25.5%	26.3%	35.3%	32.9%	30.9%	16.5%	12.1%	12.4%	11.3%	17.4%	19.0%	22.1%	25.5%	27.0%
EBIT / Int. Exp.	3.2x	5.5x	5.9x	14.0x	14.5x	14.4x	5.4x	3.6x	3.8x	3.5x	4.3x	4.8x	3.8x	4.5x	4.7x
Debt / EBITDA	3.2x	2.2x	2.1x	0.8x	0.8x	0.8x	2.2x	2.6x	2.3x	2.3x	2.1x	1.8x	2.8x	2.4x	2.3x
Total Debt/Capital	38.9%	47.8%	45.9%	20.6%	18.6%	18.4%	21.4%	24.9%	23.9%	23.9%	31.0%	31.2%	30.9%	31.1%	28.2%
(CFO - Dividends) / Debt	22.5%	41.0%	45.9%	94.7%	61.1%	55.2%	46.4%	20.2%	39.7%	39.2%	-8.5%	2.6%	26.7%	5.9%	4.3%

All figures and ratios are calculated using Moody's estimates and standard adjustments.
Source: Moody's Financial Metrics™

Exhibit 9

Volcan's Moody's-adjusted debt breakdown

(in US Millions)	FYE Dec-13	FYE Dec-14	FYE Dec-15	FYE Dec-16	FYE Dec-17	LTM Ending Jun-18
As Reported Debt	**706.5**	**822.0**	**840.6**	**813.4**	**802.4**	**795.8**
Operating Leases	4.6	3.4	2.4	4.6	5.5	5.5
Moody's-Adjusted Debt	**711.1**	**825.4**	**842.9**	**818.0**	**807.9**	**801.3**

All figures and ratios are calculated using Moody's estimates and standard adjustments.
Source: Moody's Financial Metrics™

Exhibit 10

Volcan Moody's adjusted EBITDA breakdown

(in US Millions)	FYE Dec-13	FYE Dec-14	FYE Dec-15	FYE Dec-16	FYE Dec-17	LTM Ending Jun-18
As Reported EBITDA	**394.1**	**265.7**	**138.6**	**304.3**	**415.6**	**426.0**
Operating Leases	1.5	1.1	0.8	1.5	1.8	1.8
Unusual	2.7	86.6	78.9	-51.3	-55.2	-53.2
Moody's-Adjusted EBITDA	**398.3**	**353.4**	**218.3**	**254.6**	**362.3**	**374.6**

All figures and ratios are calculated using Moody's estimates and standard adjustments.
Source: Moody's Financial Metrics™

Ratings

Exhibit 11

Category	Moody's Rating
VOLCAN COMPANIA MINERA S.A.A. Y SUBSIDIARIAS	
Outlook	Stable
Corporate Family Rating	Ba2
Senior Unsecured	Ba2

Source: Moody's Investors Service

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Contacts

Barbara Mattos, CFA +55.11.3043.7357
Senior Vice President
barbara.mattos@moodys.com

Mariano Ferreyra +54.115.129.2613
Associate Analyst
mariano.ferreyra@moodys.com

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