UNITED STATES SECURITIES AND EXCHANGE COMMISSION Washington, D.C. 20549

Form 6-K

Report of Foreign Private Issuer Pursuant to Rule 13a-16 or 15d-16 under the Securities Exchange Act of 1934

For the month of October 2023

Commission file number: 001-41334

RAIL VISION LTD.

(Translation of registrant's name into English)

15 Ha'Tidhar St Ra'anana, 4366517 Israel

(Address of principal executive offices)

Indicate by check mark whether the registrant files or will file annual reports under cover of Form 20-F or Form 40-F.

Form 20-F \boxtimes Form 40-F \square

The first, third and fourth paragraphs in the press release attached as Exhibit 99.1, Exhibit 99.2, Exhibit 99.3, are incorporated by reference into the Registrant's Registration Statements on Form F-3 (File Nos. 333-271068 and 333-272933) and Form S-8 (Registration No. 333-265968), to be a part thereof from the date on which this report is submitted, to the extent not superseded by documents or reports subsequently filed or furnished.

CONTENTS

Attached hereto and incorporated herein is the Registrant's press release issued on October 17, 2023, titled "Rail Vision Receives \$500,000 Order from a Leading Latin America Mining Company."

EXHIBIT INDEX

Exhibit No. 99.1

Description
Press Release issued by Rail Vision Ltd. on October 17, 2023, titled "Rail Vision Receives \$500,000 Order from a Leading Latin America Mining Company."

SIGNATURES

Pursuant to the requirements of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

Rail Vision Ltd.

Date: October 17, 2023 By: /s/ Ofer Naveh

Name: Ofer Naveh

Title: Chief Financial Officer

Rail Vision Receives \$500,000 Order from a Leading Latin America Mining Company

Delivery of the AI enabled obstacle detection MainLine system expected in Q4 2023

Ra'anana, Israel, Oct. 17, 2023 (GLOBE NEWSWIRE) -- Rail Vision Ltd. (the "Company") (Nasdaq: RVSN), a technology company that is seeking to revolutionize railway safety and the data-related market, received a \$500,000 purchase order for a single MainLine system and related services from a leading Latin American (LATAM) mining company. This MainLine system is expected to be delivered to the new customer during the fourth quarter of 2023.

"We have now expanded our global footprint into the massive LATAM market with this purchase order from a leading multinational mining company," said Shahar Hania, CEO of Rail Vision. "This is the second major mining company to use Rail Vision's innovative AI-enabled obstacle detection solutions, strengthening our foothold in an attractive market segment. We are confident that our MainLine system will bring significant value to this customer by enhancing their safety and operational efficiency."

The MainLine system, designed to overcome the challenges of the modern train industry, supports operators in identifying potential obstacles on the tracks, such as people, rocks, debris, and vehicles, at a distance of up to two kilometers (1.2 miles), even in challenging weather and light conditions, improving the safety of train operations, preventing collisions, and reducing downtime. Rail Vision's products combines sensitive imaging sensors with artificial intelligence and deep learning technologies to detect and classify obstacles on and near the tracks generating real-time visual and acoustic alerts for the driver and the operator's command-and-control center.

The LATAM mining company will benefit from Rail Vision's robust MainLine Advance Driver Assistance System (ADAS) which uses high end electrooptical sensors, machine learning algorithms, and edge computing capabilities to improve safety of train operations, providing operators with accurate and
timely information to make informed decisions. Rail Vision will also provide supervision, guidance, and training, services as part of the purchase order.
This comprehensive approach ensures that the MainLine system is seamlessly integrated into the customer's existing infrastructure and operations,
minimizing disruption and downtime during implementation.

About Rail Vision Ltd.

Rail Vision is a technology company that is seeking to revolutionize railway safety and the data-related market. The Company has developed cutting-edge, artificial intelligence based, industry-leading technology specifically designed for railways. The Company has developed its railway detection and systems to save lives, increase efficiency, and dramatically reduce expenses for the railway operators. Rail Vision believes that its technology will significantly increase railway safety around the world, while creating significant benefits and adding value to everyone who relies on the train ecosystem: from passengers using trains for transportation to companies that use railways to deliver goods and services. In addition, the company believes that its technology has the potential to advance the revolutionary concept of autonomous trains into a practical reality. For more information please visit https://www.railvision.io/

Forward-Looking Statements

This press release contains "forward-looking statements" within the meaning of the Private Securities Litigation Reform Act and other securities laws. Words such as "expects," "anticipates," "intends," "plans," "believes," "seeks," "estimates" and similar expressions or variations of such words are intended to identify forward-looking statements. For example, the Company is using forward-looking statements when it discusses the purchase order, timing of the delivery of delivery of the MainLine system, expanding to LATAM, bringing significant value to the customer by enhancing their safety and operational efficiency, and providing services to the customer. Forward-looking statements are not historical facts, and are based upon management's current expectations, beliefs and projections, many of which, by their nature, are inherently uncertain. Such expectations, beliefs and projections are expressed in good faith. However, there can be no assurance that management's expectations, beliefs and projections will be achieved, and actual results may differ materially from what is expressed in or indicated by the forward-looking statements. Forward-looking statements are subject to risks and uncertainties that could cause actual performance or results to differ materially from those expressed in the forward-looking statements. For a more detailed description of the risks and uncertainties affecting the Company, reference is made to the Company's reports filed from time to time with the Securities and Exchange Commission ("SEC"), including, but not limited to, the risks detailed in the Company's annual report on Form 20-F filed with the SEC on March 23, 2023. Forward-looking statements speak only as of the date the statements are made. The Company assumes no obligation to update forward-looking statements to reflect actual results, subsequent events or circumstances, changes in assumptions or changes in other factors affecting forward-looking information except to the extent required by applicable securities laws. If the Company does update one or more forward-looking statements, no inference should be drawn that the Company will make additional updates with respect thereto or with respect to other forward-looking statements. References and links to websites have been provided as a convenience, and the information contained on such websites is not incorporated by reference into this press release. Rail Vision is not responsible for the contents of third-party websites.

Contacts

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SOURCE: Rail Vision Ltd.