

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, DC 20549

SCHEDULE 13G

Under the Securities Exchange Act of 1934
(Amendment No.)*

Atomera Incorporated

(Name of Issuer)

Common Stock, par value \$0.001 per share

(Title of Class of Securities)

04965B100

(CUSIP Number)

May 18, 2020

(Date of Event Which Requires Filing of this Statement)

Check the appropriate box to designate the rule pursuant to which this Schedule is filed:

- Rule 13d-1(b)
- Rule 13d-1(c)
- Rule 13d-1(d)

* The remainder of this cover page shall be filled out for a reporting person's initial filing on this form with respect to the subject class of securities, and for any subsequent amendment containing information which would alter disclosures provided in a prior cover page.

The information required on the remainder of this cover page shall not be deemed to be "filed" for the purpose of Section 18 of the Securities Exchange Act of 1934 ("Act") or otherwise subject to the liabilities of that section of the Act but shall be subject to all other provisions of the Act (however, see the Notes).

| | |
|---|--|
| 1 | Name of Reporting Persons Peter A. Appel |
| 2 | Check the Appropriate Box if a Member of a Group (a) <input type="checkbox"/> (b) <input type="checkbox"/> |
| 3 | SEC Use Only |
| 4 | Citizenship or Place of Organization United States |
| | 5 Sole Voting Power 1,370,902 |
| Number of Shares Beneficially Owned by Each Reporting Person With | 6 Shared Voting Power 0 |
| | 7 Sole Dispositive Power 1,370,902 |
| | 8 Shared Dispositive Power 0 |
| | 9 Aggregate Amount Beneficially Owned by Each Reporting Person 1,370,902 |
| 10 | Check Box if the Aggregate Amount in Row (9) Excludes Certain Shares <input type="checkbox"/> |
| 11 | Percent of Class Represented by Amount in Row 9 7.04% |
| 12 | Type of Reporting Person IN |

SCHEDULE 13G

Item 1(a) Name of Issuer.

Atomera Incorporated.

Item 1(b) Address of Issuer's Principal Executive Offices.

750 University Avenue, Suite 280
Los Gatos, California 95032

Item 2(a) Name of Person Filing.

This statement is filed by Peter A. Appel with respect to shares of Common Stock, \$0.001 par value per share (the "Shares"), of the Issuer beneficially owned thereby.

Item 2(b) Address of Principal Business Office.

The address of the principal business office of Mr. Appel is 3505 Main Lodge Drive, Coconut Grove, FL 33133.

Item 2(c) Citizenship.

Mr. Appel is a United States citizen.

Item 2(d) Title of Class of Securities.

Common Stock, par value \$0.001 per share.

Item 2(e) CUSIP Number.

04965B100.

Item 3 If this statement is filed pursuant to §§240.13d—1(b) or 240.13d—2(b) or (c), check whether the person filing is a:

Not Applicable

Item 4 Ownership.

The percentages used herein are calculated based on 19,485,435 issued and outstanding Shares as of the close of business on May 26, 2020. Such amount of Shares issued and outstanding represents the sum of (i) 17,725,435 issued and outstanding Shares as of March 31, 2020, as reported in the Issuer's Quarterly Report filed with the SEC on May 11, 2020 and (ii) 1,760,000 additional Shares issued in connection with the Issuer's offering of Shares (the "Offering"), which was consummated on or around May 18, 2020, as set forth in the Issuer's Current Report filed with the SEC on May 13, 2020, with respect to the Offering. Such amount of Shares issued and outstanding assumes that National Securities Corporation (the "Underwriter") has not exercised its option to purchase up to 264,000 additional Shares of the Issuer pursuant to that certain Underwriting Agreement, dated as of May 13, 2020, between the Issuer and the Underwriter.

As of the close of business on May 26, 2020:

- (a) Amount beneficially owned: 1,370,902
- (b) Percent of class: 7.04%
- (c)(i) Sole power to vote or direct the vote: 1,370,902
- (ii) Shared power to vote or direct the vote: -0-
- (iii) Sole power to dispose or direct the disposition: 1,370,902
- (iv) Shared power to dispose or direct the disposition: -0-

Item 5 Ownership of Five Percent or Less of a Class.

If this statement is being filed to report the fact that as of the date hereof the reporting person has ceased to be the beneficial owner of more than 5 percent of the class of securities, check the following .

Item 6 Ownership of More than Five Percent on Behalf of Another Person.

Not applicable.

Item 7 Identification and Classification of the Subsidiary Which Acquired the Security Being Reported on By the Parent Holding Company.

Not applicable.

Item 8 Identification and Classification of Members of the Group.

Not applicable.

Item 9 Notice of Dissolution of Group.

Not applicable.

Item 10 Certification.

By signing below I certify that, to the best of my knowledge and belief, the securities referred to above were not acquired and are not held for the purpose of or with the effect of changing or influencing the control of the issuer of the securities and were not acquired and are not held in connection with or as a participant in any transaction having that purpose or effect, other than activities solely in connection with a nomination under § 240.14a-11.

SIGNATURES

After reasonable inquiry and to the best of my knowledge and belief, I certify that the information set forth in this statement is true, complete and correct.

Dated: May 26, 2020

By: /s/ Peter A. Appel

Name: Peter A. Appel