

**SUPPLEMENT TO PROXY STATEMENT
FOR
2019 ANNUAL MEETING OF SHAREHOLDERS
To Be Held Tuesday, November 5, 2019**

This Proxy Statement Supplement (the “Supplement”) supplements and amends the original definitive proxy statement of Mesa Laboratories, Inc. (the “Company”, “we”, or “our”), dated September 25, 2019 (the “Proxy Statement”) for the Company’s 2019 Annual Meeting of Shareholders (the “Annual Meeting”) to, (i) add a new Proposal 4 to the Proxy Statement that provides for a non-binding, advisory vote of Company shareholders on the frequency with which the Company’s shareholders shall have the advisory say-on-pay vote on compensation paid to our named executive officers (“Proposal 4”); (ii) update the Notice of the Annual Meeting to add the new Proposal 4 (the Updated Notice), along with a new proxy card and conforming changes to each. The Annual Meeting is being held at 12100 West Sixth Avenue, Lakewood, Colorado 80228 at 9:00 a.m. local time.

This Supplement relates to the new Proposal 4 to be considered by shareholders at the Annual Meeting and does not provide all of the information that is important to your decisions with respect to voting on all of the proposals that are being presented to shareholders for their vote at the Annual Meeting. Additional information is contained in the Proxy Statement, which was previously made available to you or mailed to you, if you requested a hard copy. To the extent that the information in this Supplement differs from, updates or conflicts with the information contained in the Proxy Statement, the information in this Supplement shall amend and supersede the information in the Proxy Statement. Except as so amended or superseded, all information set forth in the Proxy Statement remains unchanged and important for you to review, and are incorporated by reference. Accordingly, we urge you to read this Supplement carefully, and in its entirety together with the Proxy Statement.

This Supplement relates to the solicitation of proxies by our Board of Directors (the “Board”) for use at the Annual Meeting. On or about October 4, 2019, we mailed this Supplement, the Updated Notice of Annual Meeting attached hereto as Appendix A and the new proxy card in the form set forth in Appendix B to all shareholders entitled to vote at the Annual Meeting.

**IMPORTANT NOTICE REGARDING THE AVAILABILITY OF PROXY MATERIALS
FOR THE ANNUAL MEETING TO BE HELD ON NOVEMBER 5, 2019.**

This Supplement, the Proxy Statement, Proxy Card, as revised, and our Annual Report on Form 10-K, as amended are available at are available on our website at www.mesalabs.com/investor-relations/ or www.edocumentview.com/MLAB.

Additionally, you can find a copy of our Annual Report on Form 10-K, as amended on the website of the Securities and Exchange Commission (“SEC”) at www.sec.gov.

PROPOSALS TO BE VOTED UPON BY SHAREHOLDERS

Information contained in this Supplement relates to Proposal 4 that will be presented to shareholders at the Annual Meeting. Information regarding Proposals 1, 2, and 3 that will be presented to shareholders at the Annual Meeting can be found in the Proxy Statement as originally filed with the SEC on September 25, 2019, and which was previously made available to you or mailed to you, if you requested a hard copy.

Please note that if you have already voted your shares by one of the methods described in the Proxy Statement, we strongly encourage you to read this Supplement and to also vote on Proposal 4. It is important to indicate your vote on each proposal on the revised proxy card.

Beneficial owners: If you own your shares through a broker-dealer or another nominee, you must vote your shares as instructed by that broker-dealer or other nominee. If you own your shares through a nominee, you are not considered to be a shareholder of record, and you will not be permitted to vote your shares in person at the Annual Meeting unless you have obtained a “Legal Proxy” for those shares from the entity who holds your shares of record.

Revocation of Proxies/Voting of Shares

Execution and return of the enclosed proxy will not affect a shareholder's right to attend the meeting and to vote in person. Any shareholder executing a proxy retains the right to revoke it at any time prior to exercise at the meeting. A proxy may be revoked by delivery of written notice of revocation to the Secretary of the Company, by execution and delivery of a later proxy or by voting the shares in person at the meeting. A proxy, when executed and not revoked, will be voted in accordance with the instructions thereon. In the absence of specific instructions, proxies will be voted by the person named in the proxy "FOR" the items described in this Proxy Statement and in accordance with his best judgment on all other matters that may properly come before the meeting.

PROPOSAL 4: NON-BINDING, ADVISORY VOTE REGARDING THE FREQUENCY OF VOTING ON THE COMPENSATION PAID TO THE COMPANY'S NAMED EXECUTIVE OFFICERS

As required by Section 14A of the Exchange Act, the Company is providing shareholders with a non-binding, advisory vote on the frequency with which the Company's shareholders shall have the advisory, non-binding "say-on-pay" vote on compensation paid to our named executive officers provided for in Proposal 2, as set forth in the Proxy Statement.

Our shareholders voted on a similar proposal at our annual meeting of shareholders in 2013, with a majority of the votes cast voting to hold the say-on-pay vote every year. Since 2013, we have held the say-on-pay vote at every annual meeting, including this Annual Meeting.

The Board believes that an annual shareholder vote on the compensation paid to our named executive officers represents a best practice in corporate governance and will provide the Board with current information on shareholder sentiment about our executive compensation program and enable the Board to respond timely, when deemed appropriate, to shareholder concerns about the program.

The Company is presenting this Proposal 4, which gives you as a shareholder the opportunity to inform the Company as to how often you wish us to include a proposal, similar to Proposal 2 above, in our proxy statement. In particular, we are asking whether the advisory vote should occur every year, every two years or every three years. The Company asks that you support a frequency period of every year for future non-binding, advisory shareholder votes on the compensation paid to our named executive officers. Shareholders are being asked to vote on the following non-binding advisory resolution:

RESOLVED, that the frequency of once every one, two or three years that receives the highest number of votes cast for this non-binding advisory resolution will be considered to be the preferred frequency of the shareholders with which the Company is to hold future non-binding shareholder advisory votes on the compensation paid to our named executive officers set forth in the Company's proxy statement.

Vote Required

As with your vote on Proposal 2, your vote on this Proposal 4 is an advisory vote, which means that the Company and the Board are not required to take any action based on the outcome of the vote. However, our Board and our Compensation Committee value the opinions of our shareholders and to the extent there is any significant vote in favor of one frequency over the other options, we will consider our shareholders' sentiment and the Board will evaluate any appropriate next steps.

Shareholders may vote for 1, 2 or 3 years, or may abstain. If there is no designation on any proxy as to how the shares represented should be voted, the proxy will be voted for a frequency of every year. The advisory vote on frequency will be determined based on the number of years which receives the most votes cast. Shares of common stock that are present at the Annual Meeting but abstain from voting on such proposal are not treated as votes cast and will have no effect on the outcome of the vote on this proposal. Also, broker non-votes will have no effect on the outcome of the vote on this proposal.

Board Recommendation

THE BOARD OF DIRECTORS RECOMMENDS A VOTE “FOR” A RESOLUTION THAT PROVIDES FOR A FREQUENCY OF EVERY YEAR FOR FUTURE NON-BINDING, ADVISORY SHAREHOLDER VOTES ON THE COMPENSATION PAID TO OUR NAMED EXECUTIVE OFFICERS.

MESA LABORATORIES, INC.

12100 West Sixth Avenue
Lakewood, Colorado 80228
Telephone: (303) 987-8000

**UPDATED NOTICE OF ANNUAL MEETING OF SHAREHOLDERS
Tuesday, November 5, 2019**

TO THE SHAREHOLDERS OF MESA LABORATORIES, INC.:

The Annual Meeting of Shareholders (“Annual Meeting”) of Mesa Laboratories, Inc. (“we”, “our”, the “Company”, or “Mesa”) will be held at our corporate offices at 12100 West Sixth Avenue, Lakewood, Colorado 80228, on Tuesday, November 5th, 2019 at 9:00 a.m. MDT, for the following purposes:

1. To elect eight directors to hold office for the term specified in the Proxy Statement or until their successors are elected and qualified;
2. To hold an advisory vote to approve executive compensation;
3. To ratify the appointment of Plante & Moran, PLLC as our independent registered public accounting firm for the year ending March 31, 2020 (the “Ratification of Auditors Proposal”);
4. To conduct a non-binding advisory vote on the frequency of future advisory votes on executive compensation; and
5. To transact such other business as may properly come before the meeting or any adjournment.

The discussion of the items set forth above is intended only as a summary and is qualified in its entirety by the information contained in the accompanying Proxy Statement. Only holders of record of our Common Stock on September 13, 2019 (the “Record Date”), will be entitled to notice of and to vote at this Annual Meeting, and any postponements or adjournments thereof.

Please vote your shares by signing and returning your proxy card, using telephone or internet voting, or at the Annual Meeting. This will assure that your shares will be voted, whether or not you attend the Annual Meeting. You may, of course, attend the Annual Meeting and vote in person even if you have previously granted a proxy.

The Proxy Statement Supplement contains additional information related to the new Proposal 4 to be considered by shareholders at the Annual Meeting. However, the Proxy Statement Supplement does not include all of the information provided in connection with the Annual Meeting. Accordingly, we urge you to read the Proxy Statement Supplement carefully and in its entirety together with the Proxy Statement.

Please note that if you have already voted your shares, we strongly encourage you to also vote on Proposal 4 which has been added for shareholders to consider and vote on at the Annual Meeting.

It is important to indicate your vote on each proposal on the revised proxy card.

By Order of the Board of Directors

/s/ Gary M. Owens

Gary M. Owens
Chief Executive Officer

October 4, 2019

The Mesa Laboratories, Inc. Proxy Statement, Proxy Card and Annual Report on Form 10-K, as amended for the year ended March 31, 2019 are available to view on the internet at: www.edocumentview.com/MLAB or www.mesalabs.com.