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MERGER PROPOSED - YOUR VOTE IS VERY IMPORTANT

Yuma Energy, Inc., which we refer to as Yuma, and Pyramid Oil Company, which we refer to as Pyramid, have entered into an amended and restated agreement and plan of merger and reorganization dated as of August 1, 2014, as it may be amended from time to time, which we refer to as the merger agreement, and which is attached as Annex A to this proxy statement/prospectus and incorporated herein by reference.

Upon the terms and subject to the conditions set forth in the merger agreement, Pyramid Merger Subsidiary, Inc., a Delaware corporation and wholly-owned subsidiary of Pyramid, referred to herein as "Merger Subsidiary," shall be merged with and into Yuma in accordance with the Delaware General Corporation Law, which we refer to as the DGCL. Upon the merger, the separate corporate existence of Merger Subsidiary of Pyramid. Pyramid's name will be changed to Yuma Energy, Inc. as part of the merger. The obligations of Pyramid and Yuma to effect the merger are subject to the satisfaction or waiver of several conditions set forth in the merger agreement. If the merger is completed pursuant to the merger agreement, Yuma stockholders will receive an aggregate of 66,336,701 shares of Pyramid common stock and preferred stock (on an as converted to common stock basis) held immediately prior to the effective time. The merger consideration is fixed and will not be adjusted to reflect changes in the stock price of Pyramid common stock. The dollar value of this Pyramid common stock will change depending on fluctuations in the market price and will not be known at the time Yuma stockholders vote on the merger.

In connection with the proposed transaction, Pyramid and Yuma will each hold a special meeting of their respective stockholders. At Pyramid's special meeting, Pyramid stockholders will be asked to vote on (i) a proposal to approve and adopt the merger agreement; (ii) the proposals related to certain amendments to the Pyramid restated articles of incorporation; (iv) a proposal to approve and adopt the Pyramid Oil Company 2014 Long-Term Incentive Plan; and (v) a proposal to adjourn the special meeting, if necessary or appropriate, to solicit additional proxies in favor of the proposals listed above.

At Yuma's special meeting, Yuma stockholders will be asked to vote on (a) a proposal to approve and adopt the merger agreement; and (b) a proposal to adjourn the special meeting, if necessary or appropriate, to solicit additional proxies in favor of the proposal to approve and adopt the merger agreement. Based on 57,493 shares of Yuma common stock (including Yuma restricted stock awards), 16,531 shares of Yuma Series A preferred stock and 20,192 shares of Yuma Series B preferred stock that are expected to be outstanding and exchanged in the merger, holders of Yuma common stock would receive approximately 43,484,014 shares of Pyramid common stock (plus cash in lieu of any fractional shares), holders of Yuma Series A preferred stock would receive approximately 15,091,925 shares of Pyramid common stock (plus cash in lieu of any fractional shares), and holders of Yuma Series B preferred stock would receive approximately 7,760,762 shares of Pyramid common stock (plus cash in lieu of any fractional shares), subject to a downward adjustment as described in the merger agreement and further described herein, for shares of Yuma common stock, Yuma Series A preferred stock or Yuma Series B preferred stock, respectively, they own.

Additionally, the pro rata portion of the merger consideration to be received is dependent upon the number of shares of Yuma common stock and preferred stock issued and outstanding immediately prior to the effective time of the merger and whether the downward adjustment to the merger consideration provided in the merger agreement occurs for dissenting shares. Consequently, the exact number of shares of Pyramid common stock to be received as a result of the merger by holders of Yuma common stock and preferred stock will not be known at the time Yuma stockholders vote on the merger agreement.

The board of directors of Pyramid unanimously: (i) has determined that the merger agreement and the transactions contemplated thereby, including the merger, are fair to, and in the best interests of, Pyramid and its stockholders; (ii) has approved the merger agreement and the other transactions contemplated thereby; (iii) has approved the amendments to the Pyramid restated articles of incorporation; (iv) recommends that the stockholders of Pyramid vote "FOR" the proposal to approve and adopt the merger agreement and the actions contemplated thereby; (v) recommends that the stockholders of Pyramid vote "FOR" the proposals related to the restated articles of incorporation of Pyramid; (vi) recommends that the stockholders of Pyramid vote "FOR" the proposal to approve and adopt the Pyramid Oil Company 2014 Long-Term Incentive Plan; and (vii) recommends that the stockholders of Pyramid vote "FOR" any proposal to authorize the Pyramid board of directors, in its discretion, to adjourn the special meeting. Approval and adoption of the merger agreement and approval of the proposals related to the restated articles of incorporation of Pyramid each requires the affirmative vote of a majority of the issued and outstanding shares of Pyramid common stock. Approval and adoption of the Pyramid Oil Company 2014 Long-Term Incentive Plan and approval of the proposal to authorize Pyramid's board of directors to adjourn the special meeting each requires the affirmative vote of a majority of the shares represented and voting in person or by proxy at the Pyramid special meeting. Because of their mutual dependence, if the proposal to approve and adopt the merger agreement or the proposals related to the restated articles of incorporation of Pyramid are not all approved, then none will be deemed to have been approved.

The board of directors of Yuma unanimously: (a) has determined that the merger agreement, the merger, in accordance with the terms of the merger agreement, and the other transactions contemplated thereby are advisable, fair to, and in the best interests of Yuma and its stockholders; (b) has approved and adopted the merger agreement and approved the merger and the other transactions contemplated thereby; (c) has directed that the merger agreement be submitted to a vote of the Yuma stockholders at the Yuma special meeting; (d) recommends that the stockholders of Yuma vote "FOR" the proposal to approve and adopt the merger agreement, and (e) recommends that the stockholders of Yuma vote "FOR" any proposal to authorize Yuma's board of directors, in its discretion, to adjourn the special meeting. Approval of the merger agreement requires the affirmative vote of the holders of at least a majority of the shares of Yuma common stock and at least two-thirds or 66 % of the shares of Yuma preferred stock voting together as a separate class, issued and outstanding and entitled to vote at the Yuma special meeting. The affirmative vote of a majority of the votes cast by holders of common stock and preferred stock at the Yuma special meeting is required to approve any proposal to adjourn the Yuma special meeting.

Your vote is important. The merger cannot be completed unless Yuma stockholders approve and adopt the merger agreement and Pyramid stockholders approve and adopt the merger agreement and approve the proposals related to the amendments to the Pyramid restated articles of incorporation at their respective stockholder meetings. The obligations of Pyramid and Yuma to complete the merger are also subject to the satisfaction or waiver of certain conditions. The places, dates and times of the respective stockholder meetings of Pyramid and Yuma are as follows:

For Pyramid stockholders: For Yuma stockholders:

Hotel Granduca Hotel Granduca

1080 Uptown Park Boulevard 1080 Uptown Park Boulevard

Houston, Texas 77056	Houston, Texas 77056
9:00 a.m. local time	10:00 a.m. local time
September 10, 2014	September 10, 2014

This proxy statement/prospectus gives you detailed information about the respective stockholder meetings of Pyramid and Yuma and the matters proposed to be considered and acted upon at the meetings. We urge you to read this proxy statement/prospectus carefully, including "Risk Factors" beginning on page 24 for a discussion of the risks relating to the merger and other matters. Whether or not you plan to attend your meeting, to ensure your shares are represented at the meeting, please vote as soon as possible by either completing and submitting the enclosed proxy card or voting using the telephone or Internet voting procedures described on your proxy card.

Pyramid's common stock is listed on the NYSE MKT under the symbol "PDO" and the closing price of Pyramid's common stock on August 8, 2014 was \$5.08 per share. Yuma is a privately held company and there is no public market for its securities.

Neither the Securities and Exchange Commission, which we refer to as the SEC, nor any state securities commission has approved or disapproved of the merger or the securities to be issued under this proxy statement/prospectus or has passed upon the adequacy or accuracy of the disclosures in this proxy statement/prospectus. Any representation to the contrary is a criminal offense.

This proxy statement/prospectus is dated August 11, 2014 and is first being mailed to Pyramid stockholders and Yuma stockholders on or about August 13, 2014.

PYRAMID OIL COMPANY

P. O. Box 832

Bakersfield, California 93302

(661) 325-1000

NOTICE OF SPECIAL MEETING OF STOCKHOLDERS

TO BE HELD ON SEPTEMBER 10, 2014

To the Stockholders of Pyramid Oil Company:

We are pleased to invite you to attend a special meeting of the stockholders of Pyramid Oil Company, a California corporation, which we refer to as Pyramid, which will be held at Hotel Granduca, 1080 Uptown Park Boulevard, Houston, Texas 77056, on September 10, 2014 at 9:00 a.m., local time, for the following purposes:

1. To consider and vote upon a proposal to approve and adopt the Amended and Restated Agreement and Plan of Merger and Reorganization dated as of August 1, 2014, as it may be amended from time to time, which we refer to as the merger agreement, by and among Pyramid, Pyramid Delaware Merger Subsidiary, Inc., a Delaware corporation and a wholly owned subsidiary of Pyramid, Pyramid Merger Subsidiary, Inc., a Delaware corporation, referred to as Merger Subsidiary, and Yuma Energy, Inc., a Delaware corporation, referred to as Yuma.

2. To consider and vote upon separate proposals to approve certain amendments to Pyramid's restated articles of incorporation, each to take effect only upon consummation of the merger, as follows:

• to increase the authorized shares of Pyramid common stock from 50,000,000 shares to 300,000,000 shares;

• to provide for the classification of the board of directors of Pyramid into two classes with staggered terms;

to eliminate cumulative voting in the election of directors; and

to change the name of the Pyramid to "Yuma Energy, Inc." after the merger.

3. To approve and adopt the Pyramid Oil Company 2014 Long-Term Incentive Plan.

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4. To consider and vote on any proposal to authorize Pyramid's board of directors, in its discretion, to adjourn the special meeting to a later date or dates, if necessary or appropriate, to solicit additional proxies in favor of the proposals listed above at the time of the special meeting.

We do not expect to transact any other business at the special meeting. Pyramid's board of directors has fixed the close of business on August 11, 2014 as the record date for determining those Pyramid stockholders entitled to vote at the special meeting and any adjournment or postponement thereof. Accordingly, only Pyramid stockholders of record at the close of business on that date are entitled to notice of, and to vote at, the special meeting. A complete list of the Pyramid stockholders will be available for examination at the offices of Pyramid in Bakersfield, California, during ordinary business hours for a period of 10 days prior to the special meeting.

The board of directors of Pyramid recommends that Pyramid stockholders vote "FOR" each of the proposals to be voted on at the special meeting. Because of their mutual dependence, if the proposal to approve and adopt the merger agreement or the proposals related to the restated articles of incorporation of Pyramid are not all approved, then none will be deemed to have been approved.

We cordially invite you to attend the special meeting in person. However, to ensure your representation at the special meeting, please complete and promptly mail your proxy card in the return envelope enclosed, or authorize the individuals named on your proxy card to vote your shares by calling the toll-free telephone number or by using the Internet as described in the instructions included with your proxy card or voting instruction card. This will not prevent you from voting in person, but will help to secure a quorum and avoid added solicitation costs. If your shares are held in "street name" by your broker or other nominee, only that holder can vote your shares and the vote cannot be cast unless you provide instructions to your broker. You should follow the directions provided by your broker regarding how to instruct your broker to vote your shares. Your proxy may be revoked at any time before it is voted. Please review the proxy statement/prospectus accompanying this notice for more complete information regarding the matters to be voted on at the meeting.

By Order of the Board of Directors

/s/ Michael D. Herman

Michael D. Herman

Chairman, Interim President and Chief Executive Officer

Bakersfield, California

August 13, 2014

IMPORTANT: WHETHER OR NOT YOU PLAN TO ATTEND THE SPECIAL MEETING, WE ASK YOU TO COMPLETE AND PROMPTLY RETURN THE ENCLOSED PROXY CARD IN THE ENVELOPE PROVIDED OR TO VOTE BY TELEPHONE OR ON THE INTERNET USING THE INSTRUCTIONS ON THE PROXY CARD.

YUMA ENERGY, INC.

1177 West Loop South, Suite 1825

Houston, Texas 77027

(713) 968-7000

NOTICE OF SPECIAL MEETING OF STOCKHOLDERS

TO BE HELD ON SEPTEMBER 10, 2014

To the Stockholders of Yuma Energy, Inc.:

We are pleased to invite you to attend a special meeting of the stockholders of Yuma Energy, Inc., a Delaware corporation, which we refer to as Yuma, which will be held at Hotel Granduca, 1080 Uptown Park Boulevard, Houston, Texas 77056, on September 10, 2014 at 10:00 a.m., local time, for the following purposes:

1. To consider and vote upon a proposal to approve and adopt the Amended and Restated Agreement and Plan of Merger and Reorganization dated as of August 1, 2014, as it may be amended from time to time, which we refer to as the merger agreement, by and among Pyramid Oil Company, two wholly owned subsidiaries of Pyramid, and Yuma.

2. To consider and vote on any proposal to authorize Yuma's board of directors, in its discretion, to adjourn the special meeting to a later date or dates, if necessary or appropriate, to solicit additional proxies in favor of the proposal to approve and adopt the merger agreement.

We do not expect to transact any other business at the special meeting. Yuma's board of directors has fixed the close of business on August 11, 2014 as the record date for determining those Yuma stockholders entitled to vote at the special meeting and any adjournment or postponement thereof. Accordingly, only Yuma stockholders of record at the close of business on that date are entitled to notice of, and to vote at, the special meeting. A complete list of the Yuma stockholders will be available for examination at the offices of Yuma in Houston, Texas, during ordinary business hours for a period of 10 days prior to the special meeting.

The board of directors of Yuma recommends that Yuma stockholders vote "FOR" each of the proposals to be considered at the special meeting.

Under the Delaware General Corporation Law ("DGCL"), if the merger is completed, holders of Yuma common stock or preferred stock who do not vote in favor of approval and adoption of the merger agreement will have the right to seek appraisal of the fair value of their shares, but only if they submit a written demand for such an appraisal prior to the vote on the merger agreement and they comply with the other DGCL procedures and requirements explained in the accompanying proxy statement/prospectus. A copy of Section 262 of the DGCL is attached to the proxy statement/prospectus as Annex E.

We cordially invite you to attend the special meeting in person. However, to ensure your representation at the special meeting, please complete and promptly mail your proxy card in the return envelope enclosed. This will not prevent you from voting in person, but will help to secure a quorum and avoid added solicitation costs. Your proxy may be revoked at any time before it is voted. Please review the proxy statement/prospectus accompanying this notice for more complete information regarding the matters to be voted on at the meeting.

By Order of the Board of Directors

/s/ Sam L. Banks

Sam L. Banks

Chairman and Chief Executive Officer

Houston, Texas

August 13, 2014

IMPORTANT: WHETHER OR NOT YOU PLAN TO ATTEND THE SPECIAL MEETING, WE ASK YOU TO COMPLETE AND PROMPTLY RETURN THE ENCLOSED PROXY CARD IN THE ENVELOPE PROVIDED.

ADDITIONAL INFORMATION

This proxy statement/prospectus incorporates important business and financial information about Pyramid and Yuma that is not included in or delivered with this proxy statement/prospectus. See "Where You Can Find More Information" on page 152. This information is available to you without charge upon your written or oral request to:

Pyramid Oil Company	Yuma Energy, Inc.
P. O. Box 832	1177 West Loop South, Suite 1825
Bakersfield, California 93302	Houston, Texas 77027
(661) 325-1000	(713) 968-7000
Attention: Corporate Secretary	Attention: Corporate Secretary

You also may obtain certain documents relating to Pyramid at the Securities and Exchange Commission's website, www.sec.gov, and you may obtain certain of these documents at Pyramid's website, www.pyramidoil.com, by selecting "Investors," then selecting "SEC Filings." Information contained on the Pyramid website is expressly not incorporated by reference into this proxy statement/prospectus. To receive timely delivery of the documents in advance of the Pyramid special meeting of stockholders, your request should be received no later than September 3, 2014.

Yuma's board of directors is using this proxy statement/prospectus to solicit proxies from Yuma's stockholders in connection with the merger agreement and the merger. Pyramid's board of directors is using this proxy statement/prospectus to solicit proxies from Pyramid's stockholders in connection with the merger agreement, the merger and the amendments to the restated articles of incorporation of Pyramid, and also as a prospectus for stockholders of Yuma because Pyramid is offering shares of its common stock to be issued in exchange for shares of Yuma common stock and preferred stock in the merger.

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Annex A Mended and Restated Agreement and Plan of Merger and Reorganization dated as of August 1, 2014, by and among Yuma Energy, Inc., Pyramid Oil Company, Pyramid Delaware Merger Subsidiary, Inc., and Pyramid Merger Subsidiary, Inc.

Annex B Amended and Restated Voting Agreement – Michael D. Herman

Annex C Amended and Restated Voting Agreement – Yuma Stockholders

Annex D Opinion of ROTH Capital Partners, LLC

Annex E Section 262 of the Delaware General Corporation Law

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Annex F Proposed Restated Articles of Incorporation of Pyramid Oil Company

Annex G Pyramid Oil Company 2014 Long-Term Incentive Plan

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Annex H Pyramid Oil Company Amended and Restated Bylaws

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QUESTIONS AND ANSWERS ABOUT THE MERGER

Q: What is the proposed merger transaction?

Pyramid Oil Company, which we refer to as "Pyramid," and Yuma Energy, Inc., which we refer to as "Yuma," have entered into a merger agreement pursuant to which Pyramid Merger Subsidiary, Inc., a wholly owned subsidiary of Pyramid, which we refer to as Merger Subsidiary, will merge with and into Yuma with Yuma surviving the merger as a wholly owned subsidiary of Pyramid, and Yuma will change its name to "The Yuma Companies, Inc." We refer to this as the merger. As part of the merger, Pyramid's name will be changed to "Yuma Energy, Inc." At the effective A: time of the merger, each issued and outstanding share of Yuma's common stock and preferred stock (other than dissenting shares) will be converted automatically into the right to receive a pro rata portion of 66,336,701 shares of Pyramid common stock, no par value per share, as described under "The Merger Agreement—Merger Consideration" beginning on page 61. After the merger, former holders of Yuma common stock and preferred stock will own approximately 93% of Pyramid's common stock then outstanding and holders of Pyramid's common stock will own approximately 7% of Pyramid's common stock then outstanding.

O:

Why are Pyramid and Yuma proposing the merger?

A: The boards of directors of Pyramid and Yuma have each concluded that the merger is in the best interests of their stockholders.

As set forth in greater detail elsewhere in this proxy statement/prospectus, Pyramid's board of directors considered many factors in making its recommendations to Pyramid's stockholders. Among the factors considered by Pyramid's board of directors were:

the combination will greatly diversify and increase estimated proved reserves;

the combined entity's market capitalization and its expected enhanced access to debt and equity capital markets, •which the Pyramid board of directors believes will enhance the ability to finance development and production of the combined entity's increased scale of operations;

the combination will provide Pyramid with a larger portfolio of exploitation and exploration opportunities in liquids prone resource plays within areas targeted by Yuma; and

•the presentation and opinion of ROTH Capital Partners, LLC, referred to herein as "ROTH," Pyramid's financial advisor, to the effect that, as of the date of the opinion and based upon the assumptions, limitations, qualifications and conditions stated in the opinion letter, the merger exchange ratio of the merger as between Pyramid and Yuma stockholders is fair to Pyramid and its stockholders, from a financial point of view, as more fully described below

under the caption "The Merger - Opinion of ROTH Capital Partners to the Pyramid Board of Directors."

For more detailed information regarding the factors considered by Pyramid's board of directors, see "The Merger—Recommendation of Pyramid's Board of Directors and Reasons for the Merger" beginning on page 51.

As set forth in greater detail elsewhere in this proxy statement/prospectus, Yuma's board of directors considered many factors in making its recommendations to Yuma's stockholders. Among the factors considered by Yuma's board of directors were:

Yuma's stockholders would receive an aggregate of 66,336,701 shares of Pyramid common stock and that receipt of these shares would not be a taxable transaction for Yuma's stockholders;

Pyramid's common stock is traded on the NYSE MKT, and the shares to be issued to Yuma's stockholders will also be listed on the NYSE MKT thereby providing liquidity which Yuma's privately held shares do not presently have; and

Yuma's stockholders will have the opportunity to participate in the combined company's growth and share appreciation in the future should they retain their Pyramid common stock after the merger.

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For more detailed information regarding the factors considered by Yuma's board of directors, see "The Merger—Recommendation of Yuma's Board of Directors and Reasons for the Merger" beginning on page 53.

Q: Why am I receiving this proxy statement/prospectus?

Pyramid's and Yuma's boards of directors are using this proxy statement/prospectus to solicit proxies of Pyramid and
A: Yuma stockholders in connection with the merger agreement and the merger. In addition, Pyramid is using this proxy statement/prospectus as a prospectus for Yuma stockholders because Pyramid is offering shares of its common stock to be issued in exchange for shares of Yuma common stock and preferred stock in the merger.

In order to complete the merger, Pyramid stockholders must vote to (i) approve and adopt the merger agreement; (ii) approve all of the proposals related to certain amendments to the Pyramid restated articles of incorporation; and Yuma stockholders must vote to approve and adopt the merger agreement.

Pyramid and Yuma will hold separate special meetings of their respective stockholders to obtain these approvals. This proxy statement/prospectus contains important information about the merger and the special meetings of the stockholders of Pyramid and Yuma, and you should read it carefully. The enclosed voting materials allow you to vote your shares of Pyramid common stock and/or Yuma common stock and preferred stock without attending the applicable special meetings.

We encourage you to submit your proxy as promptly as possible.

Q: When and where is the special meeting of Pyramid stockholders?

A: Pyramid's special meeting will be held at Hotel Granduca, 1080 Uptown Park Boulevard, Houston, Texas 77056, on September 10, 2014 at 9:00 a.m., local time.

Q: When and where is the special meeting of Yuma stockholders?

A: Yuma's special meeting will be held at Hotel Granduca, 1080 Uptown Park Boulevard, Houston, Texas 77056, on September 10, 2014 at 10:00 a.m., local time.

Q:

Who can vote at the special meeting?

A:

All Pyramid stockholders of record as of the close of business on August 11, 2014, the record date for determining stockholders entitled to notice of and to vote at Pyramid's special meeting, are entitled to receive notice of and to vote at Pyramid's special meeting. As of the record date, there were 4,788,085 shares of Pyramid common stock outstanding and entitled to vote at the Pyramid special meeting, held by approximately 189 holders of record. Each share of Pyramid common stock is entitled to one vote on each proposal presented at Pyramid's special meeting.

All Yuma stockholders of record as of the close of business on August 11, 2014, the record date for determining stockholders entitled to notice of and to vote at Yuma's special meeting, are entitled to receive notice of and to vote at Yuma's special meeting. As of the record date, there were 57,493 shares of Yuma's common stock outstanding and 36,723 shares of its preferred stock outstanding and entitled to vote at the Yuma special meeting, held by approximately 152 holders of record. Each share of Yuma common stock and each share of preferred stock is entitled to one vote on each proposal presented at Yuma's special meeting. The Yuma common stock and preferred stock will each be voted and counted as separate classes of stock.

Q:

What constitutes a quorum?

A: The Pyramid bylaws provide that a majority of the outstanding shares of Pyramid common stock entitled to vote at the meeting, represented in person or by proxy, constitutes a quorum at a meeting of its stockholders.

The Yuma bylaws provide that a majority of the outstanding shares of Yuma common stock and preferred stock entitled to vote, represented in person or by proxy, constitutes a quorum at a meeting of its stockholders.

Shares that are voted and shares abstaining from voting are treated as being present at each of the Pyramid special meeting and the Yuma special meeting, as applicable, for purposes of determining whether a quorum is present.

Q: What vote is required to approve the proposals at Pyramid's special meeting and Yuma's special meeting?

Approval of the proposal to approve and adopt the merger agreement and the proposals related to the Pyramid restated articles of incorporation each requires the affirmative vote of the holders of at least a majority of the issued and outstanding shares of Pyramid common stock. Approval of the proposal of Pyramid to approve and adopt the Pyramid 2014 Long-Term Incentive Plan and approval of the proposal of Pyramid to authorize Pyramid's board of A: directors, in its discretion, to adjourn the special meeting, if necessary or appropriate, to solicit additional proxies in favor of the proposals listed above each requires the affirmative vote of the holders of at least a majority of the shares of Pyramid common stock represented in person or by proxy at the special meeting and voting on each such proposal, provided that such shares voting affirmatively must also constitute a majority of the required quorum for the meeting.

Approval of the proposal by Yuma to approve and adopt the merger agreement requires the affirmative vote of the holders of at least a majority of the outstanding shares of Yuma common stock and at least two-thirds or 66 % of Yuma's outstanding Series A and Series B preferred stock voting together as a separate class. The proposal to authorize Yuma's board of directors, in its discretion, to adjourn the special meeting, if necessary or appropriate, to solicit additional proxies in favor of the proposal to approve and adopt the merger agreement at the time of the special meeting each requires the affirmative vote of the holders of at least a majority of each class of the shares of Yuma common stock and preferred stock represented in person or by proxy at the special meeting and entitled to vote on such proposal.

Your vote is important. We encourage you to submit your proxy as promptly as possible.

Q. How will Pyramid's significant shareholder vote the shares owned by him?

A. Yuma has entered into a voting agreement with Michael D. Herman, Chairman and Interim President and Chief Executive Officer of Pyramid, who currently beneficially owns 1,952,580 shares of Pyramid common stock (which excludes stock options exercisable for 50,000 shares of Pyramid common stock) or approximately 40.8% of the outstanding Pyramid common stock. The voting agreement provides that Mr. Herman will vote his shares of Pyramid common stock in favor of the proposal to approve and adopt the merger agreement and the proposals related to the Pyramid restated articles of incorporation.

Q. How will Yuma's directors vote their shares owned by them?

A. Pyramid has entered into a voting agreement with the directors of Yuma, who currently own an aggregate of 54,736 shares of Yuma common stock or approximately 95.2% of the outstanding Yuma common stock, an aggregate of 471 shares of Yuma Series A preferred stock or approximately 2.8% of the outstanding Yuma Series A preferred

stock, and an aggregate of 1,909 shares of Yuma Series B preferred stock or approximately 9.4% of the outstanding Yuma Series B preferred stock. The voting agreement provides that the Yuma directors will vote their shares of Yuma preferred stock and common stock in favor of the proposal to approve and adopt the merger agreement.

If my shares of Pyramid common stock are held in "street name" by my broker or other nominee, will my Q: broker or other nominee vote my shares of Pyramid common stock for me? What happens if I do not vote for a proposal?

Unless you instruct your broker or other nominee how to vote your shares of Pyramid common stock held in street name, your shares will NOT be voted. This is referred to as a "broker non-vote." If you hold your shares in a stock brokerage account or if your shares are held by a bank or other nominee (that is, in street name), you must provide A: your broker or other nominee with instructions on how to vote your shares. Please follow the voting instructions provided by your broker or other nominee on the enclosed voting instruction card. You should also be aware that you may not vote shares of Pyramid common stock held in street name by returning a proxy card directly to Pyramid or Yuma or by voting in person at the Pyramid or Yuma special meetings unless you provide a "legal proxy," which you must obtain from your broker or other nominee.

If you are a Pyramid stockholder, abstentions will be counted in determining the presence of a quorum and broker non-votes will be counted in determining the presence of a quorum. Broker non-votes will not be counted as votes cast with regard to the proposal to approve and adopt the merger agreement and the proposals related to the Pyramid restated articles of incorporation, and as such, broker non-votes could result in there not being sufficient votes cast for such proposals. With respect to the proposal to approve and adopt the Pyramid 2014 Long-Term Incentive Plan and the proposal to authorize Pyramid's board of directors, in its discretion, to adjourn the special meeting, if necessary or appropriate, to solicit additional proxies in favor of the proposals listed above, broker non-votes and abstentions could prevent the proposals from receiving the required affirmative vote of (i) a majority of the shares represented in person or by proxy and voting on the proposals and (ii) a majority of the shares required to constitute the quorum.

If you are a Yuma stockholder, abstentions will be counted in determining the presence of a quorum. Abstentions will have the same effect as votes cast AGAINST (i) the proposal to approve and adopt the merger agreement, and (ii) the proposal to authorize Yuma's board of directors, in its discretion, to adjourn the special meeting, if necessary or appropriate, to solicit additional proxies in favor of the proposal to approve and adopt the merger agreement at the time of the special meeting.

Q: If I am a Yuma stockholder, should I send in my stock certificates with my proxy card?

A: NO. Please DO NOT send your Yuma stock certificates with your proxy card. If the merger is approved and adopted, you will be sent written instructions for exchanging your stock certificates.

Q: If I am a Pyramid stockholder, should I send in my stock certificates with my proxy card?

A: NO. Please DO NOT send your Pyramid stock certificates with your proxy card.

Q: What are the tax consequences of the merger?

The merger is intended to qualify as a reorganization pursuant to Section 368(a) of the Internal Revenue Code of 1986, as amended, which we refer to as the Code. Subject to the discussion set forth in "Material U.S. Federal A: Income Tax Consequences" beginning on page 72, a Yuma stockholder will not recognize (i.e., take into account for tax purposes) gain or loss as a result of the merger. A taxable gain or loss may be recognized on the subsequent sale or disposition by a person receiving stock in the merger.

If you are a non-U.S. holder of Yuma common stock, your tax treatment and whether you are taxable as a result of the merger will differ from what is described above and will depend on the percentage of Yuma common stock that you own and your individual circumstances at the effective time of the merger.

Tax matters are very complicated, and the tax consequences of the merger to a particular stockholder will depend on such stockholder's circumstances. Accordingly, Yuma and Pyramid urge you to consult your tax advisor for a full understanding of the tax consequences of the merger to you, including the applicability and effect of U.S. federal, state, local and foreign income and other tax laws. For a more complete discussion of the material U.S. federal income tax consequences of the merger, see "Material U.S. Federal Income Tax Consequences."

It is a condition to Yuma's obligations to complete the merger that the Yuma board of directors has a good faith belief that the merger will qualify as a "reorganization" within the meaning of Section 368(a) of the Code. This condition may be waived by Yuma, and in such event Yuma will undertake to recirculate and re-solicit its stockholders if the condition is waived and the change in tax consequences is material.

Q:

Are Yuma stockholders entitled to appraisal rights?

A: Yes. Common and preferred stockholders of Yuma who do not vote in favor of the proposal of Yuma to approve and adopt the merger agreement will be entitled to dissent to the merger pursuant to Section 262 of the Delaware General Corporation Law, which we refer to as the DGCL, and obtain the fair value of the stockholders' shares if

such rights are properly demanded and perfected and not withdrawn or lost and the merger is completed.

Q:	Are Pyramid stockholders entitled to appraisal rights?	
	A:	No.

Q: How does Pyramid's board of directors recommend that Pyramid stockholders vote?

Pyramid's board of directors has unanimously (i) determined that the merger agreement, the merger, the other transactions contemplated thereby, and the restated articles of incorporation of Pyramid are advisable, fair to, and in A: the best interests of Pyramid and its stockholders, (ii) approved the merger agreement, the merger, the other

A: transactions contemplated thereby, and the restated articles of incorporation of Pyramid, (iii) approved the Pyramid 2014 Long-Term Incentive Plan, and (iv) approved the proposal to authorize Pyramid's board of directors, in its discretion, to adjourn the special meeting, if necessary or appropriate, to solicit additional proxies.

Pyramid's board of directors unanimously recommends that Pyramid stockholders vote "FOR" the proposal to approve and adopt the merger agreement, "FOR" all of the proposals related to the restated articles of incorporation of Pyramid, "FOR" the proposal to approve and adopt the Pyramid 2014 Long-Term Incentive Plan, and "FOR" any proposal to authorize Pyramid's board of directors to adjourn the special meeting. For a more complete description of the recommendation of Pyramid's board of directors, see "The Merger — Recommendation of Pyramid's Board of Directors and Reasons for the Merger" beginning on page 51.

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Q: How does Yuma's board of directors recommend that Yuma's stockholders vote?

Yuma's board of directors has unanimously (i) determined that the merger agreement, the merger and the other transactions contemplated thereby are advisable, fair to, and in the best interests of Yuma and its stockholders, A:(ii) approved the merger agreement, the merger and the other transactions contemplated by the merger agreement, and (iii) approved the proposal to authorize Yuma's board of directors, in its discretion, to adjourn the special meeting, if necessary or appropriate, to solicit additional proxies.

Yuma's board of directors unanimously recommends that Yuma's stockholders vote "FOR" the proposal to approve and adopt the merger agreement, and "FOR" any proposal to authorize Yuma's board of directors, in its discretion, to adjourn the special meeting, if necessary or appropriate, to solicit additional proxies in favor of the proposal to approve and adopt the merger agreement at the time of the special meeting. For a more complete description of the recommendation of Yuma's board of directors, see "The Merger — Recommendation of Yuma's Board of Directors and Reasons for the Merger" beginning on page 53.

Q: How will Pyramid stockholders be affected by the merger and share issuance?

After the merger, each Pyramid stockholder will continue to own the same number of shares of Pyramid common stock that the stockholder held immediately prior to the merger. However, because Pyramid will be issuing new shares of common stock to Yuma stockholders in the merger, each outstanding share of Pyramid common stock immediately prior to the merger will represent a smaller percentage of the aggregate number of shares of Pyramid common stock outstanding after the merger. As a result of the merger, each Pyramid stockholder will own a smaller percentage of shares in a larger company with more assets.

Q: What do I need to do now?

After you have carefully read this proxy statement/prospectus, please respond by completing, signing and dating your proxy card or voting instruction card and returning it in the enclosed preaddressed postage-paid envelope or, if A: available, by submitting your proxy by one of the other methods specified in your proxy card or voting instruction card as promptly as possible so that your shares of Pyramid common stock or Yuma common stock and preferred stock will be represented and voted at Pyramid's special meeting or Yuma's special meeting, as applicable.

Please refer to your proxy card or voting instruction card forwarded by your broker or other nominee to see which voting options are available to you.

The method by which you submit a proxy will in no way limit your right to vote at Pyramid's special meeting or Yuma's special meeting if you later decide to attend the meeting in person. However, if your shares of Pyramid common stock are held in the name of a broker or other nominee, you must obtain a legal proxy, executed in your favor, from your broker or other nominee, to be able to vote in person at Pyramid's special meeting.

Q: How will my proxy be voted?

All shares of Pyramid common stock entitled to vote and represented by properly completed proxies received prior to Pyramid's special meeting, and not revoked, will be voted at Pyramid's special meeting as instructed on the proxies. If you properly sign, date and return a proxy card, but do not indicate how your shares of Pyramid common stock should be voted on a matter, the shares of Pyramid common stock represented by your proxy will be voted as Pyramid's board of directors recommends and therefore "FOR" the proposal to approve and adopt the merger agreement, "FOR" all of the proposals related to the restated articles of incorporation of Pyramid, "FOR" the proposal to approve and adopt the Pyramid 2014 Long-Term Incentive Plan, and "FOR" any proposal to authorize Pyramid's board of directors to adjourn the special meeting. If you do not provide voting instructions to your broker or other nominee, your shares of Pyramid common stock will NOT be voted at the meeting and will be considered broker non-votes.

All shares of Yuma common stock and preferred stock entitled to vote and represented by properly completed proxies received prior to Yuma's special meeting, and not revoked, will be voted at Yuma's special meeting as instructed on the proxies. If you properly sign, date and return a proxy card to Yuma, but do not indicate how your shares of Yuma common stock and/or preferred stock should be voted on a matter, the shares of Yuma common stock and/or preferred stock represented by your proxy will be voted as Yuma's board of directors recommends and therefore "FOR" the proposal to approve and adopt the merger agreement and "FOR" any proposal to authorize Yuma's board of directors to adjourn the special meeting. If you do not provide voting instructions to Yuma, your shares of Yuma common stock and preferred stock will be voted "FOR" both proposals described above.

Q: Can I revoke my proxy or change my vote after I have delivered my proxy?

Yes. You may revoke your proxy or change your vote at any time before your proxy is voted at Pyramid's special A: meeting or Yuma's special meeting, as applicable. If you are a holder of record, you can do this in any of the three following ways:

by sending a written notice to the Corporate Secretary of Pyramid or the Corporate Secretary of Yuma, as applicable, \cdot at the address set forth below, in time to be received before Pyramid's special meeting or Yuma's special meeting, as applicable, stating that you would like to revoke your proxy;

by completing, signing and dating another proxy card and returning it by mail in time to be received before Pyramid's special meeting or Yuma's special meeting, as applicable, or by submitting a later dated proxy by the Internet or telephone (in the case of Pyramid stockholders) in which case your later-submitted proxy will be recorded and your earlier proxy revoked; or

by attending the Pyramid special meeting or the Yuma special meeting, as applicable, and voting in person. However, • simply attending Pyramid's special meeting or Yuma's special meeting without voting will not revoke your proxy or change your vote.

If your shares of Pyramid common stock are held in an account at a broker or other nominee and you desire to change your vote or vote in person, you should contact your broker or other nominee for instructions on how to do so.

Q: What should I do if I receive more than one set of voting materials for Pyramid's special meeting?

You may receive more than one set of voting materials for Pyramid's special meeting, including multiple copies of this proxy statement/prospectus and multiple proxy cards or voting instruction cards. For example, if you hold your shares of Pyramid common stock in more than one brokerage account, you will receive a separate voting instruction A: card for each brokerage account in which you hold shares of Pyramid common stock. If you are a holder of record and your shares of Pyramid common stock are registered in more than one name, you may receive more than one proxy card. Please complete, sign, date and return each proxy card and voting instruction card that you receive or if available, please submit your proxy by telephone or over the Internet.

Q: What happens if I am a stockholder of both Pyramid and Yuma?

You will receive separate proxy cards for each company and must complete, sign and date each proxy card and A: return each proxy card in the appropriate preaddressed postage-paid envelope or, if available, by submitting a proxy by one of the other methods specified in your proxy card or voting instruction card for each company.

Q: Who can I call with questions about the stockholders' meetings, the merger and the other matters to be voted upon?

If you have any questions about these matters or how to submit your proxy or voting instruction card, or if you need A: additional copies of this proxy statement/prospectus or the enclosed proxy card or voting instruction card, you should contact:

If you are a Pyramid stockholder:

Pyramid Oil Company

P. O. Box 832

Bakersfield, California 93302

(661) 325-1000

Attention: Corporate Secretary

If you are a Yuma stockholder:

Yuma Energy, Inc.

1177 West Loop South, Suite 1825

Houston, Texas 77027

(713) 968-7068

Attention: Corporate Secretary

CAUTIONARY STATEMENT CONCERNING FORWARD-LOOKING STATEMENTS

This proxy statement/prospectus contains certain forward-looking statements with respect to the financial condition, results of operations, plans, objectives, intentions, future performance and business of each of Pyramid and Yuma that are not historical facts and are subject to risks and uncertainties. These statements are based on the beliefs and assumptions of the management of the companies and on the information currently available to such management. Forward-looking statements include information concerning possible or assumed future results of Pyramid, Yuma and the combined company and may be preceded by, followed by, or otherwise include the words "probable," "may," "expect," "estimate," "project," "plan," "believe," "intend," "achievable," "anticipate," "will," "continue," "potential," "should," "could' expressions. These statements occur in, among other places:

"Questions and Answers About the Merger;"

"Summary—Selected Historical Financial Data of Yuma;" "—Selected Historical Financial Data of Pyramid;" "—Selected Unaudited Pro Forma Condensed Consolidated Financial Information;" "—Summary Pro Forma Combined Oil, Natural Gas and Natural Gas Liquids Reserve and Production Data;" "—Comparative Per Share Information;" and "—Comparative Per Share Information;" and "—Comparative Per Share Market Price and Dividend Information;"

"Risk Factors;"

"The Merger—Background of the Merger;" "—Recommendation of Pyramid's Board of Directors and Reasons for the Merger;" and "—Recommendation of Yuma's Board of Directors and Reasons for the Merger;"

"The Merger-Opinion of ROTH Capital Partners to the Pyramid Board of Directors;"

"Unaudited Pro Forma Condensed Combined Financial Information;" and

Statements contained elsewhere in this proxy statement/prospectus concerning Pyramid's and Yuma's plans for the combined company's growth and future operations or financial position.

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These forward-looking statements involve certain risks and uncertainties. Actual results may differ materially from those contemplated in the forward-looking statements due to, among others, the factors discussed under "Risk Factors" beginning on page 24 of this proxy statement/prospectus, as well as the following factors:

• the possibility that the companies may be unable to obtain stockholder approvals required for the merger;

• the possibility that problems may arise in successfully integrating the businesses of the two companies;

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the possibility that the merger may involve unexpected costs;

the possibility that the businesses may suffer as a result of uncertainty surrounding the merger;

the possibility that the industry may be subject to future regulatory or legislative actions (including any additional taxes);

the volatility in commodity prices for oil, gas and natural gas liquids, and in the supply of and demand for oil and natural gas;

the presence or recoverability of estimated oil, gas and natural gas liquids reserves and the actual future production rates and associated costs;

the ability of the combined company to replace oil, gas and natural gas liquids reserves;

environmental risks;

drilling and operating risks;

exploration and development risks;

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competition;

the ability of the combined company's management to execute its plans to meet its goals;

• the ability of the combined company to retain key members of its senior management and key employees;

the combined company's ability to generate sufficient cash flow from operations, borrowings or other sources to fully execute its business plan;

general economic conditions, whether internationally, nationally or in the regional and local market areas in which Pyramid and Yuma conduct their businesses, may be less favorable than expected, including the possibility that economic conditions in the United States will worsen and that capital markets are disrupted, which could adversely affect demand for oil and natural gas and make it difficult to access financial markets;

social unrest, political instability, armed conflict, or acts of terrorism or sabotage in oil and natural gas producing regions, such as northern Africa, the Middle East or our markets; and

other economic, competitive, governmental, legislative, regulatory, geopolitical and technological factors that may negatively impact our business, operations or pricing.

Additional factors that could cause actual results to differ materially from those expressed in the forward-looking statements are discussed in reports filed with the SEC by Pyramid. See "Where You Can Find More Information" beginning on page 152 of this proxy statement/prospectus.

Forward-looking statements speak only as of the date of this proxy statement/prospectus. All subsequent written and oral forward-looking statements concerning the merger or other matters addressed in this proxy statement/prospectus and attributable to Pyramid or Yuma or any person acting on their behalf are expressly qualified in their entirety by the cautionary statements contained or referred to in this section. Except to the extent required by applicable law or regulation, neither Pyramid nor Yuma undertakes any obligation to update forward-looking statements to reflect events or circumstances after the date of this proxy statement/prospectus or to reflect the occurrence of unanticipated events.

SUMMARY

The following summary highlights some of the information contained in this proxy statement/prospectus. This summary may not contain all of the information that is important to you. For a more complete description of the merger agreement, the merger and the other transactions contemplated thereby, Pyramid and Yuma encourage you to read carefully this entire proxy statement/prospectus, including the attached Annexes. We have defined certain oil and gas industry terms used in this proxy statement/prospectus in the "Glossary of Oil and Gas Terms" beginning on page 153.

The Companies

(Pages 38 and 39)

Pyramid Oil Company

P. O. Box 832

Bakersfield, California 93302

(661) 325-1000

Pyramid is engaged in the business of the exploration, development and production of crude oil and natural gas. Pyramid acquires interests in land and producing properties through acquisitions and leases and then drills and/or operates crude oil or natural gas wells in efforts to discover and produce oil and gas. Crude oil and natural gas produced from these properties are sold to various refineries and pipeline companies. The majority of the oil and gas properties that Pyramid owns and operates are for its account. Pyramid also participates in joint ventures with other companies in the development of oil and gas properties. Although Pyramid owns some minor oil and gas interests in New York, Wyoming and Texas, all of its major revenue-producing properties are in California. Immediately prior to the completion of the merger, Pyramid intends to transfer most of its oil and gas working interests to a wholly-owned subsidiary.

Pyramid Merger Subsidiary, Inc.

P. O. Box 832

Bakersfield, California 93302

(661) 325-1000

Pyramid Merger Subsidiary, Inc., which we refer to as Merger Subsidiary, is a Delaware corporation and a direct wholly owned subsidiary of Pyramid and was formed solely for the purpose of consummating the merger. Pyramid Merger Subsidiary, Inc. has not carried on any activities to date, except for activities incidental to formation and activities undertaken in connection with the merger.

Yuma Energy, Inc.

1177 West Loop South, Suite 1825

Houston, Texas 77027

(713) 968-7000

Yuma Energy, Inc. is a U.S.-based oil and gas company focused on the exploration for, and development of, conventional and unconventional oil and gas prospects. Yuma's predecessor was established in 1983. Yuma has employed a 3-D seismic-based strategy to build a multi-year inventory of development and exploration prospects. Yuma's current operations are focused on onshore central Louisiana, where Yuma is targeting the Austin Chalk, Tuscaloosa, Wilcox, Frio, Marg Tex and Hackberry formations. In addition, Yuma has a non-operated position in the Bakken Shale in North Dakota. Yuma's core competencies in generating oil and gas prospects include: unconventional oil plays; onshore liquids-rich projects; and high impact deep onshore prospects located beneath known producing trends, identified through the use of 3-D seismic surveys.

The Merger

(Page 46)

The Structure of the Merger

Pyramid has agreed to acquire Yuma under the terms and conditions set forth in the merger agreement, which we describe in this proxy statement/prospectus. Pursuant to the merger agreement, a newly formed subsidiary of Pyramid, which we refer to as "Merger Subsidiary," will merge with and into Yuma, with Yuma continuing as the surviving corporation and a wholly owned subsidiary of Pyramid. We refer to this as the merger. This process is often called a "reverse merger" because a larger private company (Yuma) is merged with a subsidiary of a smaller public company (Pyramid). We have attached the merger agreement as Annex A to this proxy statement/prospectus. We encourage you to carefully read the merger agreement in its entirety. We currently expect that the merger will be completed in the third quarter of 2014. However, we cannot predict the actual timing of the completion of these transactions or if they will ultimately occur.

Merger Consideration

The merger agreement provides that at the effective time of the merger each share of Yuma common stock and preferred stock issued and outstanding immediately prior to the effective time will be converted into the right to receive shares of Pyramid common stock. In the merger, Pyramid agreed to issue 66,336,701 shares of its common stock to former Yuma stockholders at the effective time of the merger. No assurance can be given that the current fair market value of Pyramid common stock will be equivalent to the fair market value of Pyramid common stock on the date that the merger consideration is received by a Yuma stockholder or at any other time. The actual fair market value of the Pyramid common stock received by Yuma stockholders depends upon the fair market value of Pyramid common stock on the date the merger was announced, on the date that this proxy statement/prospectus is mailed to Yuma's stockholders, or on the date of the special meeting of Yuma stockholders.

Treatment of Yuma Restricted Stock Awards and Restricted Stock Units

Each restricted stock unit issued by Yuma under any stock option, purchase or award plan, program or arrangement and outstanding at the time of the merger shall be assumed by Pyramid, multiplied by the number of shares of Pyramid common stock to be received for each share of Yuma common stock in the merger and converted into the number of Pyramid restricted stock units described under "The Merger—Treatment of Yuma Restricted Stock Awards and Restricted Stock Units." Each outstanding Yuma restricted share granted under any Yuma stock plan and which will not vest upon consummation of the merger, will be assumed by Pyramid, multiplied by the number of shares of Pyramid restricted shares. Any Yuma restricted share of Yuma common stock in the merger and converted into Pyramid restricted shares. Any Yuma restricted shares that have vested or vest upon the closing of the merger shall be deemed outstanding and shall be entitled to their pro rata share of the merger consideration discussed below under "Security Ownership of Certain Beneficial Owners of Pyramid Upon Consummation of the Merger" beginning on page 127.

Treatment of Pyramid Options and Pyramid Restricted Stock Awards

Options granted by Pyramid under the Pyramid stock option plan will remain outstanding and continue to represent rights to acquire shares of Pyramid common stock on the terms and conditions presently governing the stock options. Restricted stock granted by Pyramid under the Pyramid stock option plan will vest upon the closing of the merger.

Ownership of Pyramid After the Merger

Pyramid will issue 66,336,701 shares of Pyramid common stock to former Yuma stockholders pursuant to the merger. Immediately following the completion of the merger, Pyramid expects to have approximately 71,224,786 shares of its common stock outstanding. Yuma stockholders are therefore expected to hold approximately 93% of Pyramid's common stock outstanding immediately after the merger. Consequently, Pyramid stockholders, as a general matter, will have less influence over the management and policies of Pyramid than they currently exercise.

Directors and Executive Officers of Pyramid After the Merger

The directors and executive officers of Pyramid prior to the merger will resign as directors and executive officers of Pyramid as part of the closing of the merger. Information concerning the six board nominees and the officers expected to be appointed to serve Pyramid upon closing of the merger is set forth in detail under "Management of Pyramid Following the Merger" beginning on page 116.

Effective Time and Completion of the Merger

Pyramid and Yuma hope to complete the merger as soon as reasonably practicable and expect the closing of the merger to occur in the third quarter of 2014. However, the merger is subject to the satisfaction or waiver of other conditions, and it is possible that factors outside the control of Pyramid and Yuma could result in the merger being completed at an earlier time, a later time or not at all. If the merger has not been completed on or before December 31, 2014, either Pyramid or Yuma may terminate the merger agreement unless the failure to complete the merger by that date is due to the failure of the party seeking to terminate the merger agreement to fulfill any material obligations under the merger agreement or a material breach of the merger agreement by such party.

Completion of the Merger is Subject to Certain Conditions

A number of conditions must be satisfied or waived, where legally permissible, before the merger can be consummated. These include, among others:

·the approval by the Pyramid stockholders of the restated articles of incorporation of Pyramid proposals;

•the approval and adoption by Pyramid stockholders of the merger agreement;

·the approval and adoption of the merger agreement by Yuma stockholders;

the effectiveness of the Form S-4 registration statement, of which this proxy statement/prospectus is a part, and the \cdot absence of a stop order suspending the effectiveness of the Form S-4 registration statement or proceedings for such purpose pending before or threatened by the SEC;

the issuance of shares of Pyramid common stock shall be exempt from registration, or shall have been registered or qualified, under state securities laws;

the approval for listing on the NYSE MKT of the shares of Pyramid common stock to be issued pursuant to the merger agreement, subject to official notice of issuance;

the board of directors of Yuma shall have a good faith belief that the merger will qualify as a reorganization within • the meaning of the Code (which is a condition to the merger and such belief will be based on the tax opinion of TroyGould PC discussed under "Material Federal U.S. Tax Consequences" beginning on page 72);

no governmental entity having jurisdiction over any party shall have enacted, issued, promulgated, enforced or •entered any order, whether temporary, preliminary or permanent, that makes illegal, enjoins or otherwise prohibits consummation of the merger or the other transactions contemplated by the merger agreement;

the board of directors of Pyramid shall have received an opinion from ROTH to the effect that, as of the date of the • original merger agreement and based upon and subject to the qualifications and assumptions set forth therein, the exchange ratio of the merger is fair, from a financial point of view, to Pyramid and its stockholders;

the accuracy of the representations and warranties of Pyramid and Yuma in the merger agreement, subject to certain materiality thresholds;

the performance in all material respects by each of Pyramid and Yuma of its respective covenants required to be performed by it under the merger agreement at or prior to the closing date;

receipt of certificates by executive officers of each of Pyramid and Yuma to the effect that the conditions described in the preceding two bullet points have been satisfied;

Pyramid and Yuma shall each have obtained any consents, approvals and waivers to the merger required of any third party;

there not having occurred a material adverse effect on Pyramid or Yuma since the date of the merger agreement, the effects of which are continuing; and

dissenting shares, if any, shall constitute less than 1% of the issued and outstanding common stock of Yuma and less than 5% of the issued and outstanding shares of its Series A and its Series B preferred stock.

Neither Pyramid nor Yuma can give any assurance as to when or if all of the conditions to the consummation of the merger will be satisfied or waived or that the merger will occur.

It is a condition to Yuma's obligations to complete the merger that the Yuma board of directors has a good faith belief that the merger will qualify as a "reorganization" within the meaning of Section 368(a) of the Code. This condition may be waived by Yuma, and in such event Yuma will undertake to recirculate and re-solicit its stockholders if the condition is waived and the change in tax consequences is material.

Termination of the Merger Agreement; Fees Payable

In general, the merger agreement may be terminated at any time prior to the effective time of the merger in the following ways, subject to certain exceptions discussed in "The Merger Agreement – Termination of the Merger Agreement":

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·by mutual written agreement of Pyramid and Yuma;

•by either Pyramid or Yuma:

if the merger is not completed on or before December 31, 2014, unless the failure of the closing to occur by
such date is due to the failure of the party seeking to terminate the merger agreement to fulfill any material obligation under the merger agreement or a material breach of the merger agreement by such party;

if any court or other governmental entity shall have issued a statute, rule, order, decree or regulation or taken any • other action permanently restraining, enjoining or otherwise prohibiting the consummation of the merger or making the merger illegal;

·if the Yuma stockholders fail to approve and adopt the merger agreement by the requisite vote;

if there has been a material breach of any of the representations, warranties or covenants set forth in the merger agreement on the part of any of the other parties, which breach has not been cured prior to the earlier of 10 days (with regard to representations and warranties) or 20 days (with regard to covenants) following receipt by the breaching party of written notice of such breach from the terminating party or December 31, 2014 (provided that the terminating party is not then in material breach of any representation, warranty, covenant or other agreement contained in the merger agreement); or

·if the Pyramid stockholders fail to approve and adopt the merger agreement.

by Yuma if, notwithstanding the existence of the voting agreement with the members of the board of directors of Yuma, prior to receipt of the Yuma stockholders' approval, Yuma receives a superior offer (as defined below), resolves to accept such superior offer, complies with the termination fee payment obligations and gives Pyramid at least four business days' prior written notice of its intention to terminate;

by Yuma, if the board of directors of Pyramid shall have failed to recommend, or shall have withdrawn, modified or amended in a manner adverse to Yuma in any material respect its previous board recommendation, or shall have resolved to do any of the foregoing, or shall have recommended another acquisition proposal defined below or if the board of directors of Pyramid shall have resolved to accept a superior offer;

by Pyramid, if, notwithstanding the existence of the voting agreement with Michael D. Herman, Chairman, and Interim President and Chief Executive Officer of Pyramid, prior to receipt of the Pyramid stockholders' approval, Pyramid receives a superior offer, resolves to accept such superior offer, complies with the termination fee payment obligations and gives Yuma at least four business days' prior written notice of its intention to terminate;

by Pyramid, if the board of directors of Yuma shall have failed to recommend, or shall have withdrawn, modified or amended in a manner adverse to Pyramid in any material respect its previous Yuma board recommendation, or shall have resolved to do any of the foregoing, or shall have recommended another acquisition proposal or if the board of directors of Yuma shall have resolved to accept a superior offer;

·by Pyramid, if the stockholders of Yuma fail to approve the merger; or

by Yuma, if the stockholders of Pyramid fail to approve and adopt the merger agreement and the proposals related to • the restated articles of incorporation of Pyramid at the Pyramid stockholders' meeting (including any adjournment or postponement thereof).

For purposes of these termination provisions, the term "acquisition proposal" means any offer or proposal, whether written or oral, from any person or group (as defined in Section 13(d)(3) of the Exchange Act) other than Pyramid or Yuma or any affiliates thereof (each, a "third party") to acquire beneficial ownership of (a) 15% or more of any class of the equity securities of such party or (b) 15% or more of the fair market value of the assets of such party. The term "superior offer" means an unsolicited bona fide written offer by a third party to enter into (a) a merger, consolidation, business combination or other similar transaction as a result of which either (A) the stockholders of a party to the merger agreement prior to such transaction in the aggregate cease to own at least 50% of the voting securities of the entity surviving or resulting from such transaction (B) in which a person or group acquires beneficial ownership of securities representing 50% or more of the voting power of the party's capital stock or (b) a sale, lease or other disposition of at least 50% of the assets of the party, taken as a whole, that: (A) was not obtained or made as a direct or indirect result of a breach of (or in violation of) the merger agreement; and (B) is on terms and conditions that the board of directors of Pyramid or Yuma, as applicable, determines, in its reasonable, good faith judgment, after obtaining and taking into account such matters that its board of directors deems relevant following consultation with its outside legal counsel and financial advisor is reasonably likely to be more favorable, from a financial point of view, to Pyramid's stockholders or Yuma's stockholders, as applicable, than the merger and the other transactions and is reasonably capable of consummation.

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For more information regarding the rights of Pyramid and Yuma to terminate the merger agreement, see "The Merger Agreement—Termination of the Merger Agreement" beginning on page 68.

Except for the termination fee set forth in the merger agreement and as described below, all costs and expenses incurred in connection with the merger agreement and the transactions contemplated therein shall be paid by the party incurring such costs or expenses.

Under the merger agreement, Yuma may be required to pay to Pyramid or Pyramid may be required to pay Yuma a termination fee of \$1.0 million if the merger agreement is terminated under certain circumstances. For more information regarding termination fees, see "The Merger Agreement—Termination of the Merger Agreement" beginning on page 68.

Payment of Termination Fee by Yuma. Yuma shall pay Pyramid a cash termination fee of \$1.0 million (the "Yuma Termination Fee") in the event that (i) Yuma terminates the merger agreement because it accepts a superior offer; (ii) Pyramid terminates the merger agreement as a result of a breach of a covenant by Yuma or because Yuma changes or fails to make its recommendation of the merger; or (iii) Pyramid terminates the merger agreement because Yuma stockholders fail to approve the merger; provided that in this instance (A) after the date of the merger agreement and prior to the date Yuma solicits the approval of Yuma's stockholders, an acquisition proposal has been publicly announced and not withdrawn or abandoned at the time of termination, and (B) within one year after such termination, Yuma enters into a definitive agreement with respect to or consummates such acquisition proposal.

Payment of Termination Fee by Pyramid. Pyramid shall pay Yuma a cash termination fee of \$1.0 million (the "Pyramid Termination Fee") in the event that (i) Pyramid terminates the merger agreement because it accepts a superior offer; (ii) Yuma terminates the merger agreement as a result of a breach of a covenant by Pyramid; or (iii) Yuma terminates the merger agreement because Pyramid's stockholders fail to approve the issuance of stock necessary to effect the merger; provided that in this instance (A) after the date of the merger agreement and prior to the Pyramid special meeting, an acquisition proposal has been publicly announced and not withdrawn or abandoned at the time of termination, and (B) within one year after such termination, Pyramid enters into a definitive agreement with respect to or consummates such acquisition proposal.

We May Amend the Terms of the Merger and Waive Rights Under the Merger Agreement

Subject to compliance with applicable law, Pyramid and Yuma may amend the merger agreement at any time before or after approval and adoption of the merger agreement by Pyramid and Yuma stockholders. However, after such approval and adoption there may not be, without further approval of Pyramid and Yuma stockholders, any amendment of the merger agreement that alters or changes, in a way that adversely affects the holders of any shares of Pyramid or

Yuma capital stock or alters or changes the merger consideration to be received by the Yuma stockholders in the merger.

At any time prior to the effective time of the merger, Pyramid and Yuma may, to the extent legally allowed:

extend the time for the performance of any of the obligations or other acts of the other parties under the merger agreement;

waive any inaccuracies in the other parties' representations and warranties; and

• waive the other parties' compliance with any of its agreements or conditions contained in the merger agreement.

Any such waiver or extension is subject to certain conditions. See "The Merger Agreement—Amendment of the Merger Agreement."

Regulatory Filings and Approvals Required to Complete the Merger

We are not aware of any material governmental or regulatory approvals required for the completion of the merger and compliance with the applicable corporate law of the States of California and Delaware.

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The Special Meetings and Voting

(Pages 40 and 43)

Pyramid Special Meeting of Stockholders

The special meeting of the stockholders of Pyramid will be for the following purposes:

1. To consider and vote upon a proposal to approve and adopt the merger agreement, as it may be amended from time to time.

2. To consider and vote upon the proposals related to the restated articles of incorporation of Pyramid.

3. To approve and adopt the Pyramid Oil Company 2014 Long-Term Incentive Plan.

To consider and vote on any proposal to authorize Pyramid's board of directors, in its discretion, to adjourn the 4. special meeting to a later date or dates, if necessary or appropriate, to solicit additional proxies in favor of the proposals listed above.

Pyramid does not expect to transact any other business at the special meeting. Pyramid's board of directors has fixed the close of business on August 11, 2014 as the record date for determining those Pyramid stockholders entitled to vote at the special meeting and any adjournment or postponement thereof. Accordingly, only stockholders of record at the close of business on that date are entitled to notice of, and to vote at, the special meeting. A complete list of the Pyramid stockholders will be available for examination at the offices of Pyramid in Bakersfield, California during ordinary business hours for a period of 10 days prior to the special meeting.

The approval and adoption of the merger agreement and the approval of the proposals related to the Pyramid restated articles of incorporation each require the affirmative vote of the holders of at least a majority of the shares of Pyramid common stock issued and outstanding and entitled to vote at the Pyramid special meeting. The affirmative vote of the holders of at least a majority of the shares of Pyramid common stock represented in person or by proxy at the special meeting and voting on each such proposal, provided that such shares voting affirmatively must also constitute a majority of the required quorum for the meeting, is required to approve the proposal to approve and adopt the Pyramid 2014 Long-Term Incentive Plan and the proposal to adjourn the Pyramid special meeting, if necessary or appropriate, to solicit additional proxies in favor of the proposals listed above.

The board of directors of Pyramid recommends that Pyramid stockholders vote "FOR" each of the proposals to be voted on at the special meeting.

Yuma Special Meeting of Stockholders

The special meeting of the stockholders of Yuma will be for the following purposes:

1. To consider and vote on the proposal to approve and adopt the merger agreement, as it may be amended from time to time, and the transactions contemplated by the merger agreement; and

2. To consider and vote on the proposal to adjourn the Yuma special meeting, if necessary or appropriate, to solicit additional proxies if there are not sufficient votes to approve the foregoing proposal regarding the merger.

Yuma's board of directors has fixed the close of business on August 11, 2014 as the record date for determining the holders of shares of Yuma common stock and preferred stock entitled to receive notice of and to vote at the Yuma special meeting and any adjournments or postponements thereof. Each holder of shares of Yuma common stock and preferred stock outstanding on the record date will be entitled to one vote for each share held of record upon each matter properly submitted at the Yuma special meeting and at any adjournment or postponement thereof. In order for Yuma to satisfy its quorum requirements, the holders of at least a majority of the total number of outstanding shares of Yuma common stock and preferred stock entitled to vote at the meeting must be present.

The approval of the merger agreement requires the affirmative vote of the holders of at least a majority of the shares of Yuma common stock issued and outstanding and entitled to vote at the Yuma special meeting. Approval of the merger agreement also requires the affirmative vote of the holders of two-thirds or 66 % of Yuma's Series A and Series B preferred stock issued and outstanding and voting together separately as a class. The affirmative vote of a majority of the votes cast by holders of Yuma common stock at the Yuma special meeting is required to approve the proposal to adjourn the Yuma special meeting, if necessary or appropriate, to solicit additional proxies if there are insufficient votes at the time of the Yuma special meeting to approve and adopt the merger agreement.

Voting Agreements

Yuma has entered into an amended and restated voting agreement with Michael D. Herman, Chairman, Interim President and Chief Executive Officer of Pyramid, who owns approximately 40.8% of the outstanding shares of Pyramid common stock as of the record date of the Pyramid special meeting of stockholders. The voting agreement provides, among other things, that Michael D. Herman will vote in favor of the proposal to approve and adopt the merger agreement and the proposals related to the Pyramid restated articles of incorporation. Mr. Herman also agreed not to sell, transfer or otherwise dispose of his shares of Pyramid common stock, subject to certain exceptions provided in the voting agreement.

Certain of Yuma's officers and directors (and certain of their affiliates) who own in the aggregate approximately 95.2% of the outstanding shares of Yuma common stock, approximately 2.8% of the outstanding shares of Yuma Series A preferred stock, and approximately 9.4% of the outstanding shares of Yuma Series B preferred stock as of the record date of the Yuma special meeting of stockholders entered into an amended and restated voting agreement with Pyramid, in which each stockholder agreed to vote in favor of the merger. Each stockholder also agreed not to sell, transfer or otherwise dispose of that stockholder's shares of Yuma common stock and preferred stock, subject to certain exceptions provided in the voting agreement.

For more information regarding these voting agreements, see "Voting Agreements" on page 71.

Matters to be Considered in Deciding How to Vote

(Pages 40 and 43)

Recommendation of the Pyramid Board of Directors and Its Reasons for the Merger

After careful consideration, the Pyramid board of directors approved the merger agreement on February 4, 2014. The **Pyramid board of directors recommends that Pyramid stockholders vote "FOR" the proposal to approve and adopt the merger agreement; "FOR the proposals related to the restated articles of incorporation of Pyramid; "FOR" the proposal to approve and adopt the Pyramid 2014 Long-Term Incentive Plan; and "FOR" any proposal to authorize Pyramid's board of directors to adjourn the special meeting.** Because of their mutual dependence, if the proposal to approve and adopt the merger agreement or the proposals related to the restated articles of incorporation of Pyramid are not all approved, then none will be deemed to have been approved.

For the factors considered by Pyramid's board of directors in reaching its decision to approve these matters as well as the Pyramid board of directors' reasons for, and certain risks related to, the merger, see "The Merger—Recommendation of Pyramid's Board of Directors and Reasons for the Merger" beginning on page 51.

Recommendation of the Yuma Board of Directors and Its Reasons for the Merger

After careful consideration, on February 4, 2014, the Yuma board of directors unanimously (i) determined that the merger is fair to and in the best interests of Yuma and its stockholders, (ii) declared the merger agreement and the transactions contemplated thereby advisable, and (iii) approved the merger, the merger agreement and the transactions contemplated thereby. The Yuma board of directors unanimously recommends that Yuma stockholders vote "FOR" the proposal to approve and adopt the merger agreement and the transactions contemplated by the merger agreement and "FOR" any adjournment proposal.

For the factors considered by the Yuma board of directors in reaching its decision to approve the merger agreement and approve the consummation of the transactions contemplated by the merger agreement, including the merger, as well as the Yuma board of directors' reasons for, and certain risks related to, the merger, see "The Merger—Recommendation of Yuma's Board of Directors and Reasons for the Merger" beginning on page 53.

Fairness Opinion of ROTH Capital Partners to the Pyramid Board of Directors

ROTH rendered its opinion to Pyramid's board of directors that, as of the date of the opinion, based upon and subject to the qualifications, limitations and assumptions stated in its opinion, the exchange ratio (meaning the number of shares of Pyramid common stock to be issued for each share of Yuma common stock and preferred stock in the merger) is fair to Pyramid and its stockholders, from a financial point of view.

The full text of the written opinion of ROTH, dated February 5, 2014, which sets forth assumptions made, procedures followed, matters considered and limitations on the review undertaken in connection with the opinion, is attached as Annex D to this proxy statement/prospectus. ROTH provided its opinion for the information and assistance of Pyramid's board of directors in connection with its consideration of the merger. ROTH's opinion is not a recommendation as to how any holder of Pyramid's common stock should vote with respect to the issuance of Pyramid common stock in the merger or any other matter.

Pursuant to a letter agreement dated December 20, 2013, Pyramid engaged ROTH to act as its financial advisor in connection with the contemplated merger transaction. As compensation for its services in connection with the merger, Pyramid paid ROTH \$150,000 upon the delivery of its fairness opinion. Additional compensation equal to 1.5% of the merger consideration, in no event less than \$300,000 nor more than \$450,000, will be payable on completion of the merger. In addition, Pyramid has agreed to reimburse ROTH for its expenses, including attorneys' fees and disbursements, and to indemnify ROTH and related persons against various liabilities.

Material U.S. Federal Income Tax Consequences of the Merger

Subject to the qualifications, limitations and assumptions described in "Material U.S. Federal Income Tax Consequences" beginning on page 72, the following five paragraphs are the opinion of TroyGould PC regarding the material U.S. federal income tax consequences of the merger:

the merger, that is, the merger of Merger Subsidiary with and into Yuma, will qualify as a reorganization within the meaning of Section 368(a) of the Code;

no gain or loss will be recognized by a U.S. holder of Yuma common stock and/or preferred stock on receipt of Pyramid common stock pursuant to the merger;

the aggregate tax basis of the Pyramid common stock received by each U.S. holder of Yuma common stock and/or •preferred stock will equal the aggregate tax basis of the Yuma stock surrendered by such holder in exchange for Pyramid common stock;

the holding period of the Pyramid common stock received by each U.S. holder will include the period during which • such holder held the Yuma common stock and/or preferred stock surrendered in exchange for Pyramid common stock; and

no gain or loss will be recognized by Pyramid, Yuma or the U.S. holders of Pyramid common stock by reason of the merger.

Interests of Pyramid and Yuma Directors and Executive Officers in the Merger

In considering the recommendation of the boards of directors of Pyramid and Yuma with respect to the merger, stockholders should be aware that the executive officers and directors of Pyramid and Yuma have certain interests in the merger that may be different from, or in addition to, the interests of Pyramid and Yuma stockholders. Pyramid's

and Yuma's boards of directors were aware of these interests and considered them, among other matters, when adopting resolutions to approve and adopt the merger agreement and recommending that their respective stockholders vote to approve and adopt the merger agreement. For a discussion of the possibly conflicting interests, see "The Merger—Interests of Yuma's Directors and Executive Officers in the Merger" beginning on page 59 and "The Merger—Interests of Pyramid's Directors and Executive Officers in the Merger" beginning on page 59.

Per Share Market Price and Dividend Information

The following table sets forth the closing prices per share of Pyramid common stock, as well as the implied value of the proposed merger consideration for each share of Yuma common stock (after conversion of Yuma preferred stock to Yuma common stock), on February 5, 2014, the last full trading day prior to the public announcement of the merger, and August 8, 2014 the last full trading day that this information could practicably be calculated prior to the date of this proxy statement/prospectus, which was calculated by assuming that (A) 57,493 shares of Yuma common stock are issued and outstanding, (B) all issued and outstanding shares of Yuma Series A preferred stock convert into 19,954 shares of Yuma common stock, and (D) no shares of Yuma common stock or preferred stock dissent, (E) Yuma does not issue any restricted stock awards to its employees between the date of this proxy statement/prospectus and the effective time of the merger, and (F) Pyramid issues 66,336,701 shares of its common stock in the merger.

	Pyramid		Implied Value Per Share of		
	Common Stock		Yuma Common Stock		
February 5, 2014	\$	5.44	\$	4,114.47	
August 8, 2014	\$	5.08	\$	3,842.19	

Because the aggregate merger consideration is fixed and will not be adjusted as a result of changes in the market price of Pyramid common stock, the merger consideration equivalent will fluctuate with the market price of Pyramid common stock. The merger agreement does not include a price-based termination right or provisions that would limit the impact of increases or decreases in the market price of Pyramid common stock. You should obtain current market quotations for the Pyramid shares from a newspaper, the Internet or your broker prior to voting on the merger agreement.

Neither Pyramid nor Yuma paid dividends on its common stock during the past three years and neither company has any current intention of doing so in the foreseeable future.

Appraisal Rights

Holders of Yuma common stock and preferred stock have the right to dissent from the proposed merger and, subject to certain conditions provided for in Section 262 of the DGCL, are entitled to receive payment of the fair value of their Yuma common stock or preferred stock. Yuma stockholders will be bound by the terms of the merger unless they dissent by complying with all of the requirements of the Delaware dissenters' rights statute. See "Dissenters' Rights of Appraisal" beginning on page 75 for a summary of dissenters' rights available to Yuma stockholders, which summary is not intended to be a complete statement of applicable Delaware law and is qualified in its entirety by reference to Section 262 of the DGCL which is set forth in its entirety as Annex E to this proxy statement/prospectus.

Pyramid stockholders do not have dissenter's or appraisal rights in connection with the merger.

Comparison of the Rights of Stockholders of Yuma Energy, Inc. and Pyramid Oil Company

Holders of Yuma common stock and preferred stock hold stock in a Delaware corporation and will have different rights as stockholders of Pyramid, a California corporation, due to the different laws governing these companies. The differences are described in more detail under "Significant Differences Between the Corporation Laws of California and Delaware" beginning on page 147.

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Selected Consolidated Historical Financial Data of Pyramid

Set forth below are selected data derived from Pyramid's audited financial statements as of and for the years ended December 31, 2009 through 2013 and Pyramid's unaudited financial statements as of and for the three months ended March 31, 2014 and 2013. This information should be read together with Pyramid's financial statements and related notes and management's discussion and analysis of operations and financial condition of Pyramid contained in this proxy statement/prospectus under the captions "Historical Financial Statements of Pyramid" and "Management's Discussion and Analysis of Operations and Financial Condition of Pyramid," respectively.

Three Months Ended March 31	Year Ended December 31,			
2014	2013	2013	2012	2011