

**PROXY
BASIC EARTH SCIENCE SYSTEMS, INC.
ANNUAL MEETING OF STOCKHOLDERS**

THIS PROXY CARD IS VALID ONLY WHEN SIGNED AND DATED.

The undersigned hereby appoints Ray Singleton, Richard K. Rodgers and Monroe W. Robertson as proxies with full power of substitution to vote as designated below all of the shares of Common Stock of Basic Earth Science Systems, Inc. that the undersigned has the power to vote at the Annual Meeting of Stockholders to be held at 1550 Seventeenth Street, Suite 500, Denver, Colorado, 80202, on Tuesday, December 15, 2009, at 9:30 a.m. MST, and any adjournment thereof. **This Proxy is solicited on behalf of the Board of Directors.**

THE BOARD OF DIRECTORS RECOMMENDS A VOTE "FOR" ALL PROPOSALS.

TO VOTE FOR ALL PROPOSALS - To vote for ALL Proposals as recommended by the Board of Directors, please mark this box, sign and date this proxy on the reverse side and return this proxy in the accompanying addressed envelope.

PROPOSAL NO. 1 - Amendment and restatement of Certificate of Incorporation to update, consolidate and clarify it <i>(Page 5)</i>	FOR	AGAINST	ABSTAIN
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

PROPOSAL NO. 2 - Amendment of Certificate of Incorporation to change the name of the company to Earthstone Energy, Inc. <i>(Page 7)</i>	FOR	AGAINST	ABSTAIN
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

PROPOSAL NO. 3 - Amendments to Certificate of Incorporation to create a classified board of directors and permit only the Board of Directors to fill vacancies <i>(Page 9)</i>	FOR	AGAINST	ABSTAIN
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

PROPOSAL NO. 4 - Amendments to Certificate of Incorporation to prohibit stockholder action by written consent and to allow only the Board of Directors to call special meetings of the stockholders <i>(Page 11)</i>	FOR	AGAINST	ABSTAIN
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

PROPOSAL NO. 5 - Amendments to Certificate of Incorporation to increase the stockholder vote required to amend certain features of the Certificate of Incorporation from a majority to 66-2/3% <i>(Page 12)</i>	FOR	AGAINST	ABSTAIN
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

PROPOSAL NO. 6 - Amendments to Certificate of Incorporation in order to effect a reverse stock split of the Common Stock within a range of one for four and one for 12 <i>(Page 14)</i>	FOR	AGAINST	ABSTAIN
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

PROPOSAL NO. 7 - Election of three directors named in this proxy statement* <i>(Page 20)</i>	FOR ALL	WITHHOLD VOTE FOR ALL	FOR ALL EXCEPT
(01) Ray Singleton	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(02) Richard K. Rodgers			<input type="checkbox"/>
(03) Monroe W. Robertson			<input type="checkbox"/>

PROPOSAL NO. 8 - Ratification of the appointment of Ehrhardt Keefe Steiner & Hottman PC as our independent registered public accounting firm <i>(Page 22)</i>	FOR	AGAINST	ABSTAIN
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

*** NOTE: If Proposal No. 3 for a classified board is approved, Ray Singleton would stand for election as a Class I Director for a term of one year, Richard K. Rodgers would stand for election as a Class II Director for a term of two years, and Monroe W. Robertson would stand for election as a Class III Director for a term of three years. If Proposal No. 3 is not approved, Messrs. Singleton, Rodgers, and Robertson would stand for election to one-year terms ending at the Annual Meeting of Stockholders in 2010.**

This proxy, when properly executed, will be voted in the manner directed herein by the undersigned stockholder(s). **If this proxy card contains no specific voting instructions, the shares will be voted FOR each proposal.**

Please sign exactly as your name appears below. When shares are held by joint tenants, both should sign. When signing as attorney, as executor, administrator, trustee, or guardian, please give full title as such. If a corporation, please sign in full corporate name by President or other authorized officer. If a partnership, please sign in partnership name by authorized person. Please note any changes in your address in the space provided below.

Dated: _____

SIGNATURE

PRINT NAME

Change of Address (if applicable): _____

PLEASE SIGN AND RETURN THIS PROXY IN THE ACCOMPANYING ADDRESSED ENVELOPE AS SOON AS POSSIBLE.

PLEASE CHECK THIS BOX IF YOU INTEND TO BE PRESENT AT THE ANNUAL MEETING OF STOCKHOLDERS.