UNITED STATES SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

FORM S-8

REGISTRATION STATEMENT UNDER THE SECURITIES ACT OF 1933

PLAINS ALL AMERICAN PIPELINE, L.P.

(Exact name of registrant as specified in its charter)

Delaware

(State or other jurisdiction of incorporation or organization)

76-0582150 (I.R.S. Employer Identification No.)

333 Clay Street, Suite 1600 Houston, Texas 77002 (713) 646-4100 (Address of principal executive offices, including zip code)

PLAINS ALL AMERICAN 2013 LONG-TERM INCENTIVE PLAN (Full title of the plan)

> Richard McGee Executive Vice President 333 Clay Street, Suite 1600 Houston, Texas 77002 (713) 646-4100 (Name, address and telephone number of agent for service)

> > copy to:

David P. Oelman D. Alan Beck, Jr. Vinson & Elkins L.L.P. 1001 Fannin Street, Suite 2500 Houston, Texas 77002 (713) 758-2222

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, or a smaller reporting company. See the definitions of "large accelerated filer," "accelerated filer" and "smaller reporting company" in Rule 12b-2 of the Securities Exchange Act of 1934, as amended (the "Exchange Act").

Large accelerated filer x Non-accelerated filer o (Do not check if smaller reporting company)

Accelerated filer o Smaller Reporting Company o

CALCULATION OF REGISTRATION FEE

Title of securities to be registered	Amount to be registered (1)	n	Proposed naximum offering price per unit	1	Proposed naximum aggregate offering price	Amount of registration fee
Common units, representing limited						
partner interests	7,000,000 units	\$	51.17(2)	\$	358,190,000(2) \$	46,134.87
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(1) Pursuant to Rule 416(a) under the Securities Act of 1933, as amended (the "Securities Act"), there are also being registered such additional common units as may become issuable pursuant to the adjustment provisions of the Plains All American 2013 Long-Term Incentive Plan (the "Plan").

(2) Estimated solely for purposes of calculating the registration fee in accordance with Rules 457(c) and 457(h) under the Securities Act. The price for the 7,000,000 common units being registered hereby is based on a price of \$51.17, which is the average of the high and low prices per common unit of Plains All American Pipeline, L.P. as reported by the New York Stock Exchange on December 23, 2013.

EXPLANATORY NOTE

Plains All American Pipeline, L.P. (the "Registrant") previously filed the following registration statements on Form S-8 with the Securities and Exchange Commission (the "Commission"): (i) on February 14, 2005 registering 6,000,000 common units in connection with the Plains All American 2005 Long-Term Incentive Plan (File No. 333-122806); (ii) on November 17, 1999 registering 1,950,000 common units in connection with the Plains All American GP LLC 1998 Long-Term Incentive Plan (File No. 333-91141); (iii) on December 11, 2001 registering 900,000 additional common units in connection with the Plains All American With the Plains All American GP LLC 1998 Long-Term Incentive Plan (File No. 333-74920); and (iv) on March 9, 2007 registering 1,999,618 common units in connection with the Plains All American PPX Successor Long-Term Incentive Plan (File No. 333-141185) (collectively, the "Prior Registrations"). The Plan is an amendment and restatement of each of the three plans noted in the previous sentence, and on November 19, 2013, the Registrant's unitholders approved the amendment and restatement of the Plan, along with the addition of 7,000,000 of the Registrant's common units for issuance in connection with the Plan.

This registration statement is being filed in accordance with General Instruction E to Form S-8 for the purposes of registering the additional 7,000,000 common units of the Registrant under the Plan. The contents of the Prior Registrations are incorporated herein by reference.

PART II

INFORMATION REQUIRED IN THE REGISTRATION STATEMENT

Item 3. Incorporation of Documents by Reference.

Except to the extent that information is deemed furnished and not filed pursuant to securities laws and regulations, the Registrant hereby incorporates by reference into this Registration Statement the following documents:

(a) The Registrant's Annual Report on Form 10-K (File No. 001-14569) for the fiscal year ended December 31, 2012.

(b) The Registrant's Quarterly Reports on Form 10-Q (File No. 001-14569) for the quarterly periods ended March 31, 2013, June 30, 2013 and September 30, 2013.

(c) The Registrant's Current Reports on Form 8-K (File No. 001-14569), filed with the Commission on February 22, 2013, May 29, 2013, August 12, 2013, August 15, 2013, August 20, 2013, August 28, 2013, October 15, 2013, October 24, 2013, October 25, 2013, and November 21, 2013 (in each case excluding any information furnished pursuant to Item 2.02 or Item 7.01 of any such Current Report on Form 8-K).

(d) The description of the Registrant's Common Units, representing limited partner interests, contained in the Registrant's Form 8-A/A dated November 3, 1998 and any subsequent amendment thereto for the purpose of updating such description.

Except to the extent that information is deemed furnished and not filed pursuant to securities laws and regulations, all documents filed by the Registrant pursuant to Sections 13(a), 13(c), 14 and 15(d) of the Exchange Act subsequent to the date hereof and prior to the filing of a post-effective amendment that indicates that all securities offered have been sold or that deregisters all securities then remaining unsold shall also be deemed to be incorporated by reference herein and to be a part hereof from the dates of filing of such documents. Any statement contained in a document incorporated or deemed to be incorporated by reference herein shall be deemed to be modified or superseded for purposes of this Registration Statement to the extent that a statement contained herein or in any other subsequently filed document which also is or is deemed to be incorporated by reference herein modifies or supersedes such statement. Any statement so modified or superseded shall not be deemed, except as so modified or superseded, to constitute a part of this Registration Statement.

Item 8. Exhibits.

Unless otherwise indicated below as being incorporated by reference to another filing of the Registrant with the Commission, each of the exhibits listed below in the Exhibit Index is filed herewith.

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SIGNATURES

Pursuant to the requirements of the Securities Act, the Registrant certifies that it has reasonable grounds to believe that it meets all of the requirements for filing on Form S-8 and has duly caused this Registration Statement to be signed on its behalf by the undersigned, thereunto duly authorized, in the City of Houston, State of Texas, on December 31, 2013.

PLAINS ALL AMERICAN PIPELINE, L.P.

By: PAA GP LLC, its general partner

By: Plains AAP, L.P., its sole member

By: Plains All American GP LLC, its general partner

By: /s/ Greg L. Armstrong

Name: Greg L. Armstrong Title: Chairman of the Board and Chief Executive Officer

Each person whose signature appears below hereby constitutes and appoints Greg L. Armstrong, Al Swanson and Richard McGee, and each of them, as his or her true and lawful attorney-in-fact and agent, with full power of substitution and resubstitution, for him or her and in his or her name, place and stead, in any and all capacities, to sign any and all amendments to this registration statement (including post-effective amendments and registration statements filed pursuant to Rule 462 or otherwise) and to file the same, with all exhibits thereto, and the other documents in connection therewith, with the Securities and Exchange Commission, and hereby grants to such attorney-in-fact and agent, full power and authority to do and perform each and every act and thing

requisite and necessary to be done, as fully to all intents and purposes as he or she might or could do in person, hereby ratifying and confirming all that said attorney-in-fact and agent, or his substitute or substitutes, may lawfully do or cause to be done by virtue hereof.

Pursuant to the requirements of the Securities Act, this registration statement has been signed by the following persons in the capacities and on the date indicated.

Signature	Title	Date	
/s/ Greg L. Armstrong			
Greg L. Armstrong	Chairman of the Board and Chief Executive Officer (Principal Executive Officer)	December 31, 2013	
/s/ Al Swanson			
Al Swanson	Executive Vice President and Chief Financial Officer (Principal Financial Officer)	December 31, 201	
/s/ Chris Herbold			
Chris Herbold	Vice President—Accounting and Chief Accounting Officer (Principal Accounting Officer)	December 31, 2013	
/s/ Everardo Goyanes			
Everardo Goyanes	Director	December 31, 2013	
/s/ Gary R. Petersen			
Gary R. Petersen	Director	December 31, 2013	
/s/ John T. Raymond			
John T. Raymond	Director	December 31, 2013	
	II-2		
/s/ Robert V. Sinnott			
/s/ Robert V. Sinnott Robert V. Sinnott	Director	December 31, 2013	
Robert V. Sinnott /s/ Vicky Sutil	Director		
Robert V. Sinnott	Director	December 31, 2013 December 31, 2013	
Robert V. Sinnott /s/ Vicky Sutil Vicky Sutil /s/ J. Taft Symonds			
Robert V. Sinnott /s/ Vicky Sutil Vicky Sutil		December 31, 2013	
Robert V. Sinnott /s/ Vicky Sutil Vicky Sutil /s/ J. Taft Symonds	Director		

EXHIBIT INDEX

Exhibit Number	Description
4.1	Certificate of Limited Partnership of Plains All American Pipeline, L.P. (incorporated by reference to Exhibit 3.4 to the Registration Statement on Form S-1/A (File No. 333-64107) filed on November 3, 1998).
4.2	Fourth Amended and Restated Agreement of Limited Partnership of Plains All American Pipeline, L.P. (incorporated by reference to Exhibit 3.1 to the Current Report on Form 8-K filed on May 23, 2012).
4.3	Amendment No. 1 dated October 1, 2012 to the Fourth Amended and Restated Agreement of Limited Partnership of Plains All American Pipeline, L.P. (incorporated by reference to Exhibit 3.1 to the Current Report on Form 8-K filed on October 2, 2012).
4.4	Plains All American 2013 Long-Term Incentive Plan (incorporated by reference to Exhibit A to the Registrant's Proxy Statement filed on October 3, 2013).
5.1*	Opinion of Vinson & Elkins L.L.P. as to the legality of the securities being registered.
23.1*	Consent of PricewaterhouseCoopers LLP.
23.2*	Consent of Vinson & Elkins L.L.P. (contained in Exhibit 5.1).
24.1*	Powers of Attorney (included on the signature page of this Registration Statement).

* Filed herewith.

Vinson&Elkins

December 31, 2013

Plains All American Pipeline, L.P. 333 Clay Street, Suite 1600 Houston, Texas 77002

Ladies and Gentlemen:

We have acted as counsel for Plains All American Pipeline, L.P., a Delaware limited partnership (the "Partnership"), in connection with the Partnership's registration under the Securities Act of 1933, as amended (the "Act"), of the offer and sale of an aggregate of up to 7,000,000 additional common units representing limited partner interests in the Partnership (the "Units"), pursuant to the Partnership's registration statement on Form S-8 (the "Registration Statement") filed with the Securities and Exchange Commission (the "Commission") on December 31, 2013, which Units may be issued from time to time in accordance with the terms of the Plains All American 2013 Long-Term Incentive Plan (the "Plan").

In reaching the opinions set forth herein, we have examined and are familiar with originals or copies, certified or otherwise identified to our satisfaction, of such documents and records of the Partnership and such statutes, regulations and other instruments as we deemed necessary or advisable for purposes of this opinion, including (i) the Registration Statement, (ii) the Partnership's Fourth Amended and Restated Agreement of Limited Partnership (as amended, the "Partnership Agreement"), (iii) the Partnership's Certificate of Limited Partnership, (iv) certain resolutions adopted by the board of directors of the Partnership, (v) the Plan, and (vi) such other certificates, instruments, and documents as we have considered necessary for purposes of this opinion letter. As to any facts material to our opinions, we have made no independent investigation or verification of such facts and have relied, to the extent that we deem such reliance proper, upon certificates of public officials and officers or other representatives of the Partnership.

We have assumed (i) the legal capacity of all natural persons, (ii) the genuineness of all signatures, (iii) the authority of all persons signing all documents submitted to us on behalf of the parties to such documents, (iv) the authenticity of all documents submitted to us as originals, (v) the conformity to authentic original documents of all documents submitted to us as copies, and (vi) that all information contained in all documents reviewed by us is true, correct and complete. In addition, we have assumed that Units will be issued in accordance with the terms of the Plan.

Based on the foregoing and subject to the limitations set forth herein, and having due regard for the legal considerations we deem relevant, we are of the opinion that the Units have been duly authorized and, when the Units are issued by the Partnership in accordance with the terms of the Plan and the instruments executed pursuant to the Plan, as applicable, which govern the awards to which any Unit relates, will be validly issued, fully paid and non-assessable.

This opinion is limited in all respects to the Delaware Revised Uniform Limited Partnership Act. We express no opinion as to any matter other than as expressly set forth above, and no opinion on any other matter may be inferred or implied herefrom. The opinions expressed herein are rendered as of the date hereof and we expressly disclaim any obligation to update this letter or advise you of any change in any matter after the date hereof.

Vinson & Elkins LLP Attorneys at Law

Abu Dhabi Austin Beijing Dallas Dubai Hong Kong Houston London Moscow New York Palo Alto Riyadh Shanghai Tokyo Washington 1001 Fannin Street, Suite 2500 Houston, TX 77002-6760 Tel +1.713.758.2222 Fax +1.713.758.2346 www.velaw.com

This opinion letter may be filed as an exhibit to the Registration Statement. In giving this consent, we do not thereby admit that we come within the category of persons whose consent is required under Section 7 of the Act.

Very truly yours,

/s/ Vinson & Elkins L.L.P. Vinson & Elkins L.L.P. Exhibit 5.1

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CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

We hereby consent to the incorporation by reference in this Registration Statement on Form S-8 of our report dated February 27, 2013 relating to the financial statements and the effectiveness of internal control over financial reporting, which appears in Plains All American Pipeline, L.P.'s Annual Report on Form 10-K for the year ended December 31, 2012.

/s/ PricewaterhouseCoopers LLP Houston, Texas December 30, 2013