

UNITED STATES SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

FORM S-8**REGISTRATION STATEMENT UNDER THE SECURITIES ACT OF 1933****PLAINS GP HOLDINGS, L.P.**

(Exact name of registrant as specified in its charter)

Delaware

(State or other jurisdiction of incorporation or organization)

90-1005472

(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 GP HOLDINGS, L.P. 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 Non-accelerated filer

(Do not check if smaller reporting company)

Accelerated filer Smaller Reporting Company **CALCULATION OF REGISTRATION FEE**

Title of securities to be registered	Amount to be registered (1)	Proposed maximum offering price per unit	Proposed maximum aggregate offering price	Amount of registration fee
Class A shares, representing limited partner interests	10,000,000 Class A shares	\$ 25.875(2)	\$ 258,750,000(2)	\$ 33,327

(1) Pursuant to Rule 416(a) under the Securities Act of 1933, as amended (the "Securities Act"), there are also being registered such additional Class A shares as may become issuable pursuant to the adjustment provisions of the Plains GP Holdings, L.P. 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 10,000,000 Class A shares being registered hereby is based on a price of \$25.875, which is the average of the high and low prices per Class A share of Plains GP Holdings, L.P. as reported by the New York Stock Exchange on December 23, 2013.

PART I
INFORMATION REQUIRED IN THE SECTION 10(a) PROSPECTUS

Plains GP Holdings, L.P. (the “Registrant”) will send or give to all participants in the Plan the document(s) containing information required by Part I of Form S-8, as specified in Rule 428(b)(1) promulgated by the Securities and Exchange Commission (the “Commission”) under the Securities Act of 1933, as amended (the “Securities Act”). The Registrant has not filed such document(s) with the Commission, but such documents (along with the documents incorporated by reference into this Form S-8 Registration Statement (the “Registration Statement”) pursuant to Item 3 of Part II hereof) shall constitute a prospectus that meets the requirements of Section 10(a) of the Securities Act.

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 prospectus filed pursuant to Rule 424(b) under the Securities Act (File No. 333-190227) relating to the Registrant’s Registration Statement on Form S-1, filed with the Commission on October 16, 2013.
- (b) The Registrant’s Current Reports on Form 8-K (File No. 001-36132) filed with the Commission on October 21, 2013 (Items 1.01 and 9.01) and October 25, 2013 (Items 1.01, 2.01, 3.02, 5.02, 5.03 and 9.01).
- (c) The description of the Registrant’s Class A shares, representing limited partner interests, contained in the Registrant’s Registration Statement on Form 8-A (File No. 001-36132) filed with the Commission on October 15, 2013, pursuant to Section 12(b) of the Exchange Act, including any amendment or report filed 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 4. Description of Securities.

Not applicable.

Item 5. Interests of Named Experts and Counsel.

Not applicable.

Item 6. Indemnification of Directors and Officers.

Section 17-108 of the Delaware Revised Uniform Limited Partnership Act empowers a Delaware limited partnership to indemnify and hold harmless any partner or other person from and against all claims and demands whatsoever. The partnership agreement of the Registrant provides that the Registrant will indemnify (1) PAA GP Holdings LLC (the “Company”), as its general partner, (2) any departing general partner of the Registrant (a “Departing GP”), (3) any of the owners of the membership interests of the Company (an “Existing Owner”), (4) any person holding a 10% or greater ownership interest in the issued and outstanding limited partners interests of Plains AAP, L.P. (a “Qualifying Interest Holder”), (5) any person who is or was an affiliate of the Company, a Departing GP, an Existing Owner or a Qualifying Interest Holder (6) any person who is or was a managing member, manager, general partner,

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director, officer, fiduciary, agent or trustee of the Registrant, any of its subsidiaries, the Company, a Departing GP, an Existing Owner or a Qualifying Interest Holder, or any affiliate of any of the foregoing, (7) any person who is or was serving at the request of the Company, a Departing GP, an Existing Owner or a Qualifying Interest Holder, or any affiliate of the Company, a Departing GP, an Existing Owner or a Qualifying Interest Holder as a member, manager, partner, director, officer, fiduciary, agent or trustee of another person (provided, that such a person shall not be an indemnitee by reason of providing, on a fee-for-services basis, trustee, fiduciary or custodial services), and (8) any person the Company designates as an indemnitee (each, an “Indemnitee”) to the fullest extent permitted by law (subject to the limitations expressed in the Partnership Agreement) from and against any and all losses, claims, damages, liabilities (joint and several), expenses (including, without limitation, legal fees and expenses), judgments, fines, penalties, interest, settlements and other amounts arising from any and all claims, demands, actions, suits or proceedings, whether civil, criminal, administrative or investigative, in which any Indemnitee may be involved, or is threatened to be involved, as a party or otherwise, by reason of its status as any of the foregoing, unless there has been a final and non-appealable judgment entered by a court of competent jurisdiction determining that, in respect of the matter for which the Indemnitee is seeking indemnification, the Indemnitee acted in bad faith or engaged in fraud, willful misconduct, or in the case of a criminal matter, acted with knowledge that the Indemnitee’s conduct was unlawful.

Any indemnification under these provisions will be only out of the assets of the Registrant, and the Company shall not be personally liable for, or have any obligation to contribute or loan funds or assets to the Registrant to enable it to effectuate, such indemnification. The Registrant is authorized to purchase (or to reimburse the general partner or its affiliates for the cost of) insurance against liabilities asserted against and expenses incurred by such persons in connection with the Registrant’s activities, regardless of whether the Registrant would have the power to indemnify such person against such liabilities under the provisions described above.

Section 18-108 of the Delaware Limited Liability Company Act provides that, subject to such standards and restrictions, if any, as are set forth in its limited liability company agreement, a Delaware limited liability company may, and has the power to, indemnify and hold harmless any member or manager or other person from and against any and all claims and demands whatsoever. The limited liability company agreement of the Company provides for the indemnification of (i) any Existing Owner or Qualifying Interest Holder (ii) any person who is or was an affiliate of the Company, any Existing Owner or any Qualifying Interest Holder, (iii) any person who is or was a managing member, manager, general partner, shareholder, director, officer, fiduciary, agent or trustee of the Company, any Existing Owner or any Qualifying Interest Holder or any affiliate of the Company, any Existing Owner or any Qualifying Interest Holder, (iv) any person who is or was serving at the request of the Company, any Existing Owner or any Qualifying Interest Holder or any affiliate of the Company, any Existing Owner or any Qualifying Interest Holder as a member, manager, partner, director, officer, fiduciary, agent or trustee of another person in furtherance of the business or affairs of the Company and its subsidiaries; *provided*, that a person shall not be an indemnitee by reason of providing, on a fee-for-services basis, trustee, fiduciary or custodial services, and (v) any person the Board designates an indemnitee (each, a “Company Indemnitee”) from and against any and all losses, claims, demands, costs, damages, liabilities, expenses of any nature (including reasonable attorneys’ fees and disbursements), judgments, fines, settlements and other amounts arising from any and all claims, demands, actions, suits or proceedings, civil, criminal, administrative or investigative, in which Company Indemnitee may be involved, or threatened to be involved, as a party or otherwise, by reason of his, her or its status as a Company Indemnitee; *provided* such Company Indemnitee acted in good faith and in a manner he or she subjectively believed to be in, or not opposed to, the interests of the Company and with respect to any criminal proceeding, had no reason to believe his, her or its conduct was unlawful. Expenses incurred by a Company Indemnitee in defending any such claim, demand, action, suit or proceeding will, from time to time, be advanced by the Company prior to the final disposition of such claim, demand, action, suit or proceeding upon receipt by the Company of an undertaking by or on behalf of the Company Indemnitee to repay such amounts if it is ultimately determined that the Company Indemnitee is not entitled to be indemnified. The Company is authorized to purchase and maintain insurance, on behalf of the members of its Board of Directors, its officers and such other persons as the Board of Directors may determine, against any liability that may be asserted against or expense that may be incurred by such person in connection with the activities of the Company.

Item 7. Exemption from Registration Claimed.

Not applicable.

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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.

Item 9. Undertakings.

(a) The undersigned Registrant hereby undertakes:

(1) To file, during any period in which offers or sales are being made, a post-effective amendment to this Registration Statement:

(i) to include any prospectus required by Section 10(a)(3) of the Securities Act;

(ii) to reflect in the prospectus any facts or events arising after the effective date of the Registration Statement (or the most recent post-effective amendment thereof) which, individually or in the aggregate, represent a fundamental change in the information set forth in the Registration Statement. Notwithstanding the foregoing, any increase or decrease in volume of securities offered (if the total dollar value of securities offered would not exceed that which was registered) and any deviation from the low or high end of the estimated maximum offering range may be reflected in the form of prospectus filed with the Commission pursuant to Rule 424(b) if, in the aggregate, the changes in volume and price represent no more than a 20 percent change in the maximum aggregate offering price set forth in the “Calculation of Registration Fee” table in the effective registration statement; and

(iii) to include any material information with respect to the plan of distribution not previously disclosed in the Registration Statement or any material change to such information in the Registration Statement;

provided, however, that paragraphs (a)(1)(i) and (a)(1)(ii) do not apply if the information required to be included in a post-effective amendment by those paragraphs is contained in periodic reports filed with or furnished to the Commission by the Registrant pursuant to Section 13 or Section 15(d) of the Exchange Act that are incorporated by reference in this Registration Statement.

(2) That, for the purpose of determining any liability under the Securities Act, each such post-effective amendment shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial *bona fide* offering thereof.

(3) To remove from registration by means of a post-effective amendment any of the securities being registered which remain unsold at the termination of the offering.

(b) The undersigned Registrant hereby undertakes that, for purposes of determining any liability under the Securities Act, each filing of the Registrant’s annual report pursuant to Section 13(a) or Section 15(d) of the Exchange Act (and, where applicable, each filing of an employee benefit plan’s annual report pursuant to Section 15(d) of the Exchange Act) that is incorporated by reference in the Registration Statement shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial *bona fide* offering thereof.

(c) Insofar as indemnification for liabilities arising under the Securities Act may be permitted to directors, officers and controlling persons of the Registrant pursuant to the foregoing provisions, or otherwise, the Registrant has been advised that in the opinion of the Commission such indemnification is against public policy as expressed in the Securities Act and is, therefore, unenforceable. In the event that a claim for indemnification against such liabilities (other than the payment by the Registrant of expenses incurred or paid by a director, officer or controlling person of the Registrant in the successful defense of any action, suit or proceeding) is asserted by such director, officer or controlling person in connection with the securities being registered, the Registrant will, unless in the opinion of its counsel the matter has been settled by controlling precedent, submit to a court of appropriate

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 GP HOLDINGS, L.P.

By: PAA GP HOLDINGS LLC, its general partner

By: /s/ Greg L. Armstrong

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

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.

<u>Signature</u>	<u>Title</u>	<u>Date</u>
<u>/s/ Greg L. Armstrong</u> Greg L. Armstrong	Chief Executive Officer and Chairman of the Board (Principal Executive Officer)	December 31, 2013
<u>/s/ Al Swanson</u> Al Swanson	Executive Vice President and Chief Financial Officer (Principal Financial Officer)	December 31, 2013
<u>/s/ Chris Herbold</u> Chris Herbold	Vice President—Accounting and Chief Accounting Officer (Principal Accounting Officer)	December 31, 2013
<u>/s/ Everardo Goyanes</u> Everardo Goyanes	Director	December 31, 2013
<u>/s/ John T. Raymond</u> John T. Raymond	Director	December 31, 2013
<u>/s/ Robert V. Sinnott</u> Robert V. Sinnott	Director	December 31, 2013
<u>/s/ Vicky Sutil</u> Vicky Sutil	Director	December 31, 2013

EXHIBIT INDEX

<u>Exhibit Number</u>	<u>Description</u>
4.1	Certificate of Limited Partnership of Plains GP Holdings, L.P. (incorporated by reference to Exhibit 3.1 to the Registration Statement on Form S-1 (File No. 333-190227) filed on July 29, 2013).
4.2	Amended and Restated Agreement of Limited Partnership of Plains GP Holdings, L.P. (incorporated by reference to Exhibit 3.1 to the Current Report on Form 8-K filed on October 25, 2013).
4.3	Plains GP Holdings, L.P. Long Term Incentive Plan (incorporated by reference to Exhibit 10.3 to the Current Report on Form 8-K filed on October 25, 2013).
5.1*	Opinion of Vinson & Elkins L.L.P.

- 23.1* Consent of PricewaterhouseCoopers LLP.
- 23.2* Consent of Ernst & Young LLP.
- 23.3* Consent of Vinson & Elkins L.L.P. (contained in Exhibit 5.1).
- 24.1* Power of Attorney (included on the signature page of this registration statement).

* Filed herewith.

Vinson & Elkins

December 31, 2013

Plains GP Holdings, L.P.
333 Clay Street, Suite 1600
Houston, Texas 77002

Ladies and Gentlemen:

We have acted as counsel for Plains GP Holdings, 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 10,000,000 Class A shares representing limited partner interests in the Partnership (the "Shares"), 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 Shares may be issued from time to time in accordance with the terms of the Plains GP Holdings, L.P. 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 Amended and Restated Agreement of Limited Partnership (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 Shares 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 Shares have been duly authorized and, when the Shares 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 Share 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
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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.

CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

We hereby consent to the incorporation by reference in this Registration Statement on Form S-8 of Plains GP Holdings, L.P. of our report dated July 22, 2013 relating to the financial statements of Plains All American GP LLC and our report dated July 22, 2013 relating to the balance sheet of Plains GP Holdings, L.P., which appear in Amendment No. 4 to the Registration Statement on Form S-1 and related Prospectus (No. 333-190227) of Plains GP Holdings, L.P. filed on October 16, 2013.

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

CONSENT OF INDEPENDENT AUDITORS

We consent to the incorporation by reference in the Registration Statement on Form S-8 of our report dated March 22, 2012, with respect to the financial statements of Project Argyle, a business owned by BP p.l.c. and affiliates.

/s/ ERNST & YOUNG LLP
Calgary, Canada
December 30, 2013

Chartered Accountants
