

**UNITED STATES
SECURITIES AND EXCHANGE COMMISSION**
Washington, D.C. 20549

Form S-1
REGISTRATION STATEMENT
UNDER
THE SECURITIES ACT OF 1933

USA COMPRESSION PARTNERS, LP

(Exact Name of Registrant as Specified in Its Charter)

Delaware	4922	75-2771546
(State or Other Jurisdiction of Incorporation or Organization)	(Primary Standard Industrial Classification Code Number)	(I.R.S. Employer Identification Number)

**100 Congress Avenue, Suite 450
Austin, Texas 78701
(512) 473-2662**
(Address, Including Zip Code, and Telephone Number, Including Area Code, of Registrant's Principal Executive Offices)

J. Gregory Holloway
Vice President, General Counsel and Secretary
**100 Congress Avenue, Suite 450
Austin, Texas 78701
(512) 473-2662**
(Name, Address, Including Zip Code, and Telephone Number, Including Area Code, of Agent for Service)

Copies to:

Sean T. Wheeler Keith Benson Latham & Watkins LLP 811 Main Street, Suite 3700 Houston, Texas 77002 (713) 546-5400	Mike Rosenwasser E. Ramey Layne Vinson & Elkins L.L.P. 666 Fifth Avenue New York, New York 10103 (212) 237-0000
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Approximate date of commencement of proposed sale to the public: As soon as practicable after this Registration Statement becomes effective.

If any of the securities being registered on this form are to be offered on a delayed or continuous basis pursuant to Rule 415 under the Securities Act of 1933, check the following box.

If this form is filed to register additional securities for an offering pursuant to Rule 462(b) under the Securities Act, check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering. File No. 333-174803

If this form is a post-effective amendment filed pursuant to Rule 462(c) under the Securities Act, check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering.

If this form is a post-effective amendment filed pursuant to Rule 462(d) under the Securities Act, check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering.

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 Exchange Act. (Check one):

Large accelerated filer Accelerated filer Non-accelerated filer Smaller reporting company
(Do not check if a smaller reporting company)

CALCULATION OF REGISTRATION FEE

Title of Each Class of Securities to be Registered	Amount to be Registered(1)	Proposed maximum offering price per unit(2)	Proposed maximum aggregate offering price(2)	Amount of registration fee(3)
Common units representing limited partner interests	12,650,000	\$ 18.00	\$ 227,700,000	\$ 35,764.48

- Includes common units issuable upon exercise of the underwriters' option to purchase additional common units.
- Estimated solely for the purposes of calculating the registration fee in accordance with Rule 457(o) under the Securities Act.
- The registrant has previously paid \$23,220.00 in registration fees in connection with the registration of \$200,000,000 of proposed maximum aggregate offering price in the filing of the Registration Statement on Form S-1 (File No. 333-174803) on June 9, 2011 and \$9,721.00 in registration fees in connection with the registration of 11,500,000 common units in the filing of Amendment No. 10 to the Registration Statement on January 7, 2013. The registrant submits with this filing \$2,823.48 in registration fees with respect to the additional 1,150,000 common units registered hereby.

The Registration Statement shall become effective upon filing with the Securities and Exchange Commission in accordance with Rule 462(b) under the Securities Act of 1933, as amended.

Explanatory Note

This registration statement is being filed with respect to the registration of additional common units representing limited partner interests of USA Compression Partners, LP, a Delaware limited partnership, pursuant to Rule 462(b) under the Securities Act of 1933, as amended. The contents of the registration statement on Form S-1 (Registration No. 333-174803), initially filed by USA Compression Partners, LP with the Securities and Exchange Commission on June 9, 2011, as amended by Amendment No. 1 thereto filed on August 8, 2011, Amendment No. 2 thereto filed on November 18, 2011, Amendment No. 3 thereto filed on December 21, 2011, Amendment No. 4 thereto filed on February 13, 2012, Amendment No. 5 thereto filed on May 10, 2012, Amendment No. 6 thereto filed on June 8, 2012, Amendment No. 7 thereto filed on August 9, 2012, Amendment No. 8 thereto filed on November 6, 2012, Amendment No. 9 thereto filed on December 4, 2012, Amendment No. 10 thereto filed on January 7, 2013 and Amendment No. 11 thereto filed on January 11, 2013, and which was declared effective on January 14, 2013, including the exhibits thereto, are incorporated herein by reference.

The required consent is listed on an Exhibit Index attached hereto and filed herewith.

PART II

INFORMATION NOT REQUIRED IN THE PROSPECTUS

Item 16. Exhibits and Financial Statement Schedules.

(a) All exhibits previously filed or incorporated by reference in the registrant's Registration Statement on Form S-1, as amended (Registration No. 333-174803), are incorporated by reference into, and shall be deemed to be a part of this filing, except for the following, which are filed herewith:

<u>Exhibit Number</u>	<u>Description</u>
23.1	Consent of KPMG LLP
24.1	Powers of Attorney (included on the signature page to the Registration Statement on Form S-1 (File No. 333-174803) initially filed with the Securities and Exchange Commission on June 9, 2011, to Amendment No. 9 thereto filed on December 3, 2012 and to Amendment No. 10 thereto filed on January 7, 2013 and incorporated by reference herein)

(b) Financial Statement Schedules.

Financial statement schedules are omitted because they are not required or the required information is shown in our financial statements or notes thereto.

INDEX TO EXHIBITS

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24.1	Powers of Attorney (included on the signature page to the Registration Statement on Form S-1 (File No. 333-174803) initially filed with the Securities and Exchange Commission on June 9, 2011, to Amendment No. 9 thereto filed on December 3, 2012 and to Amendment No. 10 thereto filed on January 7, 2013 and incorporated by reference herein)

QuickLinks

[Explanatory Note](#)

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[Item 16. Exhibits and Financial Statement Schedules.](#)

[SIGNATURES](#)

Consent of Independent Registered Public Accounting Firm

The Partners
USA Compression Partners, LP:

We consent to the use of our report incorporated by reference herein and to the reference to our firm under the heading "Experts" in the prospectus related to the Partnership's Registration Statement on Form S-1 (File No. 333-174803) that is incorporated by reference to this Registration Statement. Our report refers to the Partnership's change in controlling ownership on December 23, 2010, which resulted in a new cost basis for the Partnership.

/s/ KPMG LLP

Dallas, Texas
January 14, 2013

QuickLinks

[Exhibit 23.1](#)

[Consent of Independent Registered Public Accounting Firm](#)