
Section 1: SC 13G (SCHEDULE 13G)

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

SCHEDULE 13G

Under the Securities Exchange Act of 1934

(Amendment No. ___)*

ATWOOD OCEANICS, INC.

(Name of Issuer)

Common Stock

(Title of Class of Securities)

050095108

(CUSIP Number)

December 31, 2016

(Date of Event which Requires Filing of this Statement)

Check the appropriate box to designate the rule pursuant to which this Schedule is filed:

Rule 13d-1(b)

Rule 13d-1(c)

Rule 13d-1(d)

*The remainder of this cover page shall be filled out for a reporting person's initial filing on this form with respect to the subject class of securities, and for any subsequent amendment containing information which would alter the disclosures provided in a prior cover page.

The information required in the remainder of this cover page shall not be deemed to be "filed" for the purpose of Section 18 of the Securities Exchange Act of 1934 ("Act") or otherwise subject to the liabilities of that section of the Act but shall be subject to all other provisions of the Act (however, see the *Notes*).

SCHEDULE 13G

CUSIP No. **050095108**

| | | | |
|---|--|--|--|
| 1 | Names of Reporting Persons Arrowstreet Capital, Limited Partnership (04-3472863) | | |
| 2 | Check the appropriate box if a member of a Group (see instructions) (a) <input type="checkbox"/> (b) <input type="checkbox"/> | | |
| 3 | Sec Use Only | | |
| 4 | Citizenship or Place of Organization Massachusetts | | |
| Number of Shares Beneficially Owned by Each Reporting Person With: | 5 | Sole Voting Power 3,698,358 | |
| | 6 | Shared Voting Power | |
| | 7 | Sole Dispositive Power 4,572,165 | |
| | 8 | Shared Dispositive Power | |
| 9 | Aggregate Amount Beneficially Owned by Each Reporting Person 4,572,165 | | |
| 10 | Check box if the aggregate amount in row (9) excludes certain shares (See Instructions) <input type="checkbox"/> | | |
| 11 | Percent of class represented by amount in row (9) 7.1% | | |
| 12 | Type of Reporting Person (See Instructions) IA | | |

| | |
|---|--|
| 1 | Names of Reporting Persons Arrowstreet Capital Holding LLC (46-4498383) |
| 2 | Check the appropriate box if a member of a Group (see instructions) (a) <input type="checkbox"/> (b) <input type="checkbox"/> |
| 3 | Sec Use Only |
| 4 | Citizenship or Place of Organization Delaware |
| Number of Shares Beneficially Owned by Each Reporting Person With: | 5 Sole Voting Power 3,698,358 |
| | 6 Shared Voting Power |
| | 7 Sole Dispositive Power 4,572,165 |
| | 8 Shared Dispositive Power |
| 9 | Aggregate Amount Beneficially Owned by Each Reporting Person 4,572,165 |
| 10 | Check box if the aggregate amount in row (9) excludes certain shares (See Instructions) <input type="checkbox"/> |
| 11 | Percent of class represented by amount in row (9) 7.1% |
| 12 | Type of Reporting Person (See Instructions) HC |

Item 1.

(a) Name of Issuer:

Atwood Oceanics, Inc.

(b) Address of Issuer's Principal Executive Offices:

15011 Katy Freeway

Suite 800

Houston, TX 77094

Item 2.

(a) Name of Person Filing:

Arrowstreet Capital, Limited Partnership ("ASC")

Arrowstreet Capital Holding LLC ("ACH")

(b) Address of Principal Business Office or, if None, Residence:

The address of each reporting person is:

200 Clarendon Street, 30th Floor

Boston, MA 02116

(c) Citizenship:

ASC: Massachusetts limited partnership

ACH: Delaware limited liability company

(d) Title and Class of Securities:

This Schedule 13G report relates to the common stock (the "Common Stock") of Atwood Oceanics, Inc. (the "Issuer").

(e) CUSIP No.:

050095108

Item 3. If this statement is filed pursuant to §§ 240.13d-1(b) or 240.13d-2(b) or (c), check whether the person filing is a:

(a) Broker or dealer registered under Section 15 of the Act;

(b) Bank as defined in Section 3(a)(6) of the Act;

- (c) Insurance company as defined in Section 3(a)(19) of the Act;
- (d) Investment company registered under Section 8 of the Investment Company Act of 1940;
- (e) An investment adviser in accordance with Rule 13d-1(b)(1)(ii)(E);
- (f) An employee benefit plan or endowment fund in accordance with Rule 13d-1(b)(1)(ii)(F);
- (g) A parent holding company or control person in accordance with Rule 13d-1(b)(1)(ii)(G);
- (h) A savings associations as defined in Section 3(b) of the Federal Deposit Insurance Act (12 U.S.C. 1813);
- (i) A church plan that is excluded from the definition of an investment company under section 3(c)(14) of the Investment Company Act of 1940;
- (j) A non-U.S. institution in accordance with Rule 240.13d-1(b)(1)(ii)(J);
- (k) Group, in accordance with Rule 240.13d-1(b)(1)(ii)(K). If filing as a non-U.S. institution in accordance with Rule 240.13d-1(b)(1)(ii)(J), please specify the type of institution: _____

Item 4. Ownership

(a) Amount Beneficially Owned:

4,572,165

(b) Percent of Class:

ASC: 7.1%

ACH: 7.1%

(c) Number of shares as to which such person has:

(i) Sole power to vote or to direct the vote:

3,698,358

(ii) Shared power to vote or to direct the vote:

(iii) Sole power to dispose or to direct the disposition of:

4,572,165

(iv) Shared power to dispose or to direct the disposition of:

Item 5. Ownership of Five Percent or Less of a Class.

If this statement is being filed to report the fact that as of the date hereof the reporting person has ceased to be the beneficial owner of more than five percent of the class of securities, check the following .

Item 6. Ownership of more than Five Percent on Behalf of Another Person.

This Schedule is filed by ASC, in its capacity as investment adviser to a number of its clients, and by ACH, the ultimate parent company of ASC. The securities to which this Schedule relates are held by clients of ASC. Those clients have the right to receive, and/or the power to direct the receipt of, dividends from, or the proceeds from the sale of, such securities. No such client is known by ASC or ACH to have such right or power with respect to more than five percent of this class of securities.

Item 7. Identification and classification of the subsidiary which acquired the security being reported on by the parent holding company or control person.

Not applicable.

Item 8. Identification and classification of members of the group.

Not applicable.

Item 9. Notice of Dissolution of Group.

Not applicable.

Item 10. Certifications.

By signing below I certify that, to the best of my knowledge and belief, the securities referred to above were acquired and are held in the ordinary course of business and were not acquired and are not held for the purpose of or with the effect of changing or influencing the control of the issuer of the securities and were not acquired and are not held in connection with or as a participant in any transaction having that purpose or effect.

SIGNATURE

After reasonable inquiry and to the best of my knowledge and belief, I certify that the information set forth in this statement is true, complete and correct.

Dated: February 13th, 2017

Arrowstreet Capital, Limited Partnership

By: /s/ Eric Burnett

Name: Eric Burnett

Title: Chief Compliance Officer

Arrowstreet Capital Holding LLC

By: /s/ Eric Burnett

Name: Eric Burnett

Title: Member and Authorized Signatory

JOINT FILING AGREEMENT

Pursuant to Rule 13d-1(k)(1) under the Securities Exchange Act of 1934, as amended, the undersigned hereby agree that only one statement containing the information required by Schedule 13G need be filed with respect to the ownership by each of the undersigned of the shares of Common Stock of Atwood Oceanics, Inc. This Agreement may be executed in any number of counterparts, each of which shall be deemed an original.

EXECUTED as of this 13th day of February, 2017.

Arrowstreet Capital, Limited Partnership

By: /s/ Eric Burnett

Name: Eric Burnett

Title: Chief Compliance Officer

Arrowstreet Capital Holding LLC

By: /s/ Eric Burnett

Name: Eric Burnett

Title: Member and Authorized Signatory