

BAYTEX ENERGY CORP.

Form 6-K

May 18, 2011

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

FORM 6-K

Report of Foreign Private Issuer
Pursuant to Rule 13a-16 or 15d-16 Under the
Securities Exchange Act of 1934

For the month of May 2011

Commission File Number: 1-32754

BAYTEX ENERGY CORP.
(Exact name of registrant as specified in its charter)

2800, 520 – 3rd AVENUE S.W.
CALGARY, ALBERTA, CANADA
T2P 0R3
(Address of principal executive office)

Indicate by check mark whether the registrant files or will file annual reports under cover Form 20-F or Form 40-F.

Form 20-F Form 40-F

Indicate by check mark if the registrant is submitting the Form 6-K in paper as permitted
by Regulation S-T Rule 101(b)(1):

Indicate by check mark if the registrant is submitting the Form 6-K in paper as permitted
by Regulation S-T Rule 101(b)(7):

Indicate by check mark whether the registrant by furnishing the information contained in this Form is also thereby
furnishing the information to the Commission pursuant to Rule 12g3-2(b) under the Securities Exchange Act of 1934.

Yes No

If “Yes” is marked, indicate below the file number assigned to the registrant in connection with Rule 12g3-2(b):

The following document attached is an exhibit hereto and incorporated by reference herein:

| Exhibit No. | Document |
|-------------|---------------------------|
| 99.1 | First Quarter Report 2011 |

SIGNATURES

Pursuant to the requirements of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

BAYTEX ENERGY CORP.

/s/ W. Derek Aylesworth
Name: W. Derek Aylesworth
Title: Chief Financial Officer

Dated: May 17, 2011
