Edgar Filing: ANADARKO PETROLEUM CORP - Form 10-K

ANADARKO PETROLEUM CORP Form 10-K February 19, 2013 Table of Contents

**Index to Financial Statements** 

# **UNITED STATES**

# SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

# **FORM 10-K**

(Mark One)

ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934 For the fiscal year ended December 31, 2012

or

TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934

For the transition period from to

Commission File No. 1-8968

# ANADARKO PETROLEUM CORPORATION

(Exact name of registrant as specified in its charter)

Delaware 76-0146568

(State or other jurisdiction of incorporation or organization)

(I.R.S. Employer Identification No.)

1201 Lake Robbins Drive, The Woodlands, Texas 77380-1046

(Address of principal executive offices)

Registrant s telephone number, including area code (832) 636-1000

Securities registered pursuant to Section 12(b) of the Act:

Title of each class Common Stock, par value \$0.10 per share Name of each exchange on which registered New York Stock Exchange

Securities registered pursuant to Section 12(g) of the Act: None

Table of Contents

# Edgar Filing: ANADARKO PETROLEUM CORP - Form 10-K

Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act. Yes x No "

Indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or Section 15(d) of the Act. Yes "No x

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. Yes x No "

Indicate by check mark whether the registrant has submitted electronically and posted on its corporate website, if any, every Interactive Data File required to be submitted and posted pursuant to Rule 405 of Regulation S-T (§232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit and post such files). Yes x No "

Indicate by check mark if disclosure of delinquent filers pursuant to Item 405 of Regulation S-K (§229.405 of this chapter) is not contained herein, and will not be contained, to the best of the registrant s knowledge, in definitive proxy or information statements incorporated by reference in Part III of this Form 10-K or any amendment to this Form 10-K. x

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.

Large accelerated filer x Accelerated filer " Non-accelerated filer " Smaller reporting company "

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Act). Yes " No x

The aggregate market value of the Company s common stock held by non-affiliates of the registrant on June 29, 2012, was \$33.0 billion based on the closing price as reported on the New York Stock Exchange.

The number of shares outstanding of the Company s common stock at January 31, 2013, is shown below:

# Title of Class

**Number of Shares Outstanding** 

Common Stock, par value \$0.10 per share

500,565,966

# **Documents Incorporated By Reference**

Portions of the Proxy Statement for the Annual Meeting of Stockholders of Anadarko Petroleum Corporation to be held May 14, 2013 (to be filed with the Securities and Exchange Commission prior to April 4, 2013), are incorporated by reference into Part III of this Form 10-K.

# **Index to Financial Statements**

# TABLE OF CONTENTS

		Page
PART I		_
Items 1 and 2.	Business and Properties	2
	General Control of the control of th	2
	Oil and Gas Properties and Activities	3
	<u>United States</u>	4
	<u>International</u>	10
	Proved Reserves	13
	Sales Volumes, Prices, and Production Costs	18
	<u>Delivery Commitments</u>	19
	Properties and Leases	19
	Drilling Program	19
	Drilling Statistics	20
	Productive Wells	21
	Midstream Properties and Activities	21
	Marketing Activities	23
	Competition	24
	Segment Information	24
	Employees Programme Annual Programme	24
	Regulatory Matters, Environmental, and Additional Factors Affecting Business	24
	Title to Properties	31
T. 4.4	Executive Officers of the Registrant	31
Item 1A.	Risk Factors	33
Item 1B.	Unresolved Staff Comments	49
Item 3.	Legal Proceedings	49
Item 4.	Mine Safety Disclosures	49
PART II		
Item 5.	Market for Registrant s Common Equity, Related Stockholder Matters	
	and Issuer Purchases of Equity Securities	50
Item 6.	Selected Financial Data	53
Item 7.	Management s Discussion and Analysis of Financial Condition	
	and Results of Operations	54
Item 7A.	Quantitative and Qualitative Disclosures About Market Risk	86
Item 8.	Financial Statements and Supplementary Data	88
Item 9.	Changes in and Disagreements with Accountants on Accounting	
	and Financial Disclosure	160
Item 9A.	Controls and Procedures	160
Item 9B.	Other Information	160
PART III		
Item 10.	Directors, Executive Officers, and Corporate Governance	161
Item 11.	Executive Compensation	161
Item 12.	Security Ownership of Certain Beneficial Owners and Management	
	and Related Stockholder Matters	161
Item 13.	Certain Relationships and Related Transactions, and Director Independence	161
Item 14.	Principal Accountant Fees and Services	161
PART IV		
Item 15.	Exhibits, Financial Statement Schedules	162
		102

Table of Contents 3

#### **Index to Financial Statements**

#### PART I

#### Items 1 and 2. Business and Properties

This Annual Report on Form 10-K and the documents incorporated herein by reference contain forward-looking statements based on expectations, estimates, and projections as of the date of this filing. These statements by their nature are subject to risks, uncertainties, and assumptions and are influenced by various factors. As a consequence, actual results may differ materially from those expressed in the forward-looking statements. See *Risk Factors* under Item 1A of this Form 10-K.

#### **GENERAL**

Anadarko Petroleum Corporation is among the world s largest independent exploration and production companies, with approximately 2.6 billion barrels of oil equivalent (BOE) of proved reserves at December 31, 2012. Anadarko s mission is to deliver a competitive and sustainable rate of return to shareholders by developing, acquiring, and exploring for oil and natural-gas resources vital to the world s health and welfare. Anadarko s asset portfolio is aimed at delivering long-term value to stakeholders by combining a large inventory of development opportunities in the U.S. onshore with high-potential worldwide offshore exploration and development activities.

Anadarko s asset portfolio includes U.S. onshore resource plays in the Rocky Mountains area, the southern United States, and the Appalachian basin. The Company is also among the largest independent producers in the deepwater Gulf of Mexico, and has production and exploration activities worldwide, including high-potential basins located in Algeria, Mozambique, Ghana, China, Kenya, Côte d Ivoire, Liberia, Sierra Leone, Brazil, Alaska, New Zealand, and other countries.

Anadarko is committed to producing energy in a manner that protects the environment and public health. Anadarko s focus is to deliver resources to the world while upholding the Company s core values of integrity and trust, servant leadership, people and passion, commercial focus, and open communication in all business activities.

Anadarko s business segments are managed separately due to distinct operational differences and unique technology, distribution, and marketing requirements. The Company s three reporting segments are as follows:

Oil and gas exploration and production This segment explores for and produces natural gas, crude oil, condensate, and natural gas liquids (NGLs).

**Midstream** This segment engages in gathering, processing, treating, and transporting Anadarko and third-party oil, natural-gas, and NGLs production. The Company owns and operates gathering, processing, treating, and transportation systems in the United States for natural gas, crude oil, and NGLs.

Marketing This segment sells much of Anadarko s production, as well as third-party purchased volumes. The Company actively markets oil, natural gas, and NGLs in the United States, and oil from Algeria, China, and Ghana.

Unless the context otherwise requires, the terms Anadarko or Company refer to Anadarko Petroleum Corporation and its consolidated subsidiaries. The Company s corporate headquarters is located at 1201 Lake Robbins Drive, The Woodlands, Texas 77380-1046, and its telephone number is (832) 636-1000.

**Available Information** The Company files or furnishes Annual Reports on Form 10-K, Quarterly Reports on Form 10-Q, Current Reports on Form 8-K, registration statements, and other items with the Securities and Exchange Commission (SEC). Anadarko provides access free of charge to all of these SEC filings, as soon as reasonably practicable after filing or furnishing, on its website located at www.anadarko.com/Investor/Pages/SECFilings.aspx. The Company will also make available to any stockholder, without charge, copies of its Annual Report on Form 10-K as filed with the SEC. For copies of this report, or any other filing, please contact Anadarko Petroleum Corporation, Investor Relations, P.O. Box 1330, Houston, Texas 77251-1330 or call (832) 636-1216 or (800) 262-9361.

# Edgar Filing: ANADARKO PETROLEUM CORP - Form 10-K

## **Table of Contents**

# **Index to Financial Statements**

The public may also read and copy any materials Anadarko files with the SEC at the SEC s Public Reference Room at 100 F Street, N.E., Washington, DC 20549. The public may obtain information on the operation of the Public Reference Room by calling the SEC at 1-800-SEC-0330. The SEC maintains an internet site (www.sec.gov) that contains reports, proxy and information statements, and other information regarding issuers, like Anadarko, that file electronically with the SEC.

## OIL AND GAS PROPERTIES AND ACTIVITIES

The map below illustrates the locations of Anadarko s significant oil and natural-gas exploration and production operations.

#### **Index to Financial Statements**

#### **United States**

*Overview* Anadarko s U.S. operations include oil and natural-gas exploration and production onshore in the Lower 48 states, the deepwater Gulf of Mexico, and onshore Alaska. The Company s U.S. operations accounted for 89% of total sales volumes during 2012 and 90% of total proved reserves at year-end 2012.

Rocky Mountains Region Anadarko s Rocky Mountains Region (Rockies) properties are located in Colorado, Utah, and Wyoming. The assets are a combination of oil and natural-gas plays with significant growth and capital investment in areas that offer higher liquids yields (liquids-rich areas). Anadarko operates approximately 13,100 wells and owns an interest in approximately 10,000 non-operated wells in the Rockies. Anadarko operates fractured carbonate/shale reservoirs, tight-gas assets, coalbed methane (CBM) natural-gas assets, and enhanced oil recovery (EOR) projects within the region. The Company also has fee ownership of mineral rights under approximately 8 million acres that pass through Colorado, Wyoming, and into Utah (known as the Land Grant). Management considers the Land Grant a significant competitive advantage for Anadarko as it offers drilling opportunities for the Company in liquids-rich areas and allows the Company to capture incremental royalty revenue from third-party activity on Land Grant acreage.

The Company believes the competitive advantages provided by mineral ownership in the Land Grant, its liquids-rich reservoirs, strong well performance, low development costs, and a large expandable midstream infrastructure each provide tangible benefits and position the Company to accelerate its Wattenberg horizontal drilling program. Activities in the Rockies focus on expanding existing fields to increase production and adding proved reserves through horizontal drilling, infill drilling, and down-spacing operations.

In 2012, total-year Rockies sales volumes increased 6% over 2011, with an 11% increase in liquids volumes. The Company drilled 794 wells and completed 846 wells during 2012. The Company plans to increase the number of horizontal wells drilled from 181 in 2012 to approximately 325 in 2013, with continued focus on liquids-rich plays.

#### **Index to Financial Statements**

Wattenberg The Wattenberg field is a liquids-rich area where Anadarko operates over 5,500 wells. The field contains the Niobrara and Codell naturally fractured carbonate formations that hold liquids and natural gas. During 2012, the Company drilled 136 vertical/directional wells and 176 horizontal wells. Sales volumes in the Wattenberg field increased 25% compared to 2011, with a year-over-year 30% increase in liquids volumes. Horizontal drilling results in the Wattenberg field have shown strong initial production rates with average liquids yields of approximately 65%. The Company also has identified approximately 4,000 potential drilling locations in the Niobrara and Codell formations that provide substantial opportunity for expanding Anadarko s activity. In 2013, the Company plans to increase its activity in the Wattenberg field by deploying eleven horizontal rigs.

Greater Natural Buttes The Greater Natural Buttes area in eastern Utah is one of the Company s major tight-gas assets where the Company utilizes refrigeration and cryogenic processing facilities to extract NGLs from the gas stream. Anadarko has expanded the cryogenic facilities at its Chipeta plant to increase contracted cryogenic processing capacity, which is capable of recovering an additional 15,000 barrels of NGLs per day.

The Company operates over 2,400 wells in the Greater Natural Buttes area, drilled 341 wells in 2012, and increased year-over-year operated sales volumes from the area by 19%. Anadarko drilled and completed 70 new development wells in the lower Mesaverde Blackhawk formation during 2012 and has identified more than 8,000 potential locations in this formation for future development. Many of these locations are infill drilling opportunities focused on down-spacing from 40-acre well density to 10-acre well density.

*Powder River* The Company drilled nine horizontal wells in the Powder River basin during 2012 as part of a multi-objective horizontal exploration program targeting liquids-rich plays. Anadarko controls over 350,000 acres of deep rights within the Powder River basin.

Coalbed Methane Properties Anadarko operates approximately 2,400 low-cost CBM wells and owns an interest in approximately 4,100 non-operated CBM wells in the Rockies, primarily located in the Powder River basin in Wyoming and the Helper and Clawson fields in Utah. Anadarko controls over 650,000 acres of shallow rights within the Powder River basin. CBM is natural gas that is generated and stored within coal seams. To produce CBM, water is extracted from the coal seam, resulting in reduced pressure and the release of natural gas, which flows to the wellhead. In 2012, Anadarko sold its interest in the Atlantic Rim field and reduced development activity in its CBM program as the Company continued to focus capital spending on liquids-rich opportunities. Reduced activity is expected to continue in 2013 as a result of low natural-gas prices.

Salt Creek and Monell During 2012, the Company continued development of its Rockies EOR assets at the Salt Creek and Monell fields in Wyoming. The Company s EOR operations increase the amount of oil that can be produced from mature reservoirs after primary and water-flood recovery methods have been completed. In April 2012, the Company entered into a carried-interest arrangement where a third party agreed to fund \$400 million of development costs in exchange for a 23% interest in the Company s EOR development at the Salt Creek field in Wyoming. At December 31, 2012, \$201 million of the \$400 million obligation had been funded. In 2013, the Company will continue development at the Monell field with a small drilling program planned to enhance carbon-dioxide flooding operations.

#### **Index to Financial Statements**

Southern and Appalachia Region Anadarko s Southern and Appalachia Region properties are primarily located in Texas, Pennsylvania, Louisiana, Kansas, and Ohio. Operations in these areas are focused on finding and developing both natural gas and liquids from shales, tight sands, and fractured-reservoir plays. Anadarko holds an interest in approximately 4.5 million gross acres throughout the Southern and Appalachia Region. This area includes the Eagleford/Pearsall shales in South Texas, the Marcellus shale in north-central Pennsylvania, the Permian basin of West Texas, the Haynesville shale in East Texas and Louisiana, and the Utica shale in eastern Ohio.

By utilizing modernized drilling rigs and experienced crews, the region continued to experience improved drilling efficiencies in every area with respect to cycle times, while also drilling longer lateral lengths. Similar cost reductions and efficiencies were gained on completion operations. Due to lower natural-gas prices, the Company continued its focus on liquids-rich opportunities, executing on its substantial liquids-rich inventory while significantly reducing project costs.

In 2012, total-year sales volumes in the Southern and Appalachia Region increased 36% over 2011, with a 35% increase in liquids volumes. The Company drilled 513 operated horizontal wells and brought 453 wells online in 2012. The Company expects to drill approximately 455 horizontal wells in 2013.

Eagleford The Eagleford shale continues to be one of the Company s most prolific plays, capable of generating returns in excess of 100%. The Eagleford shale also benefits from a carried-interest arrangement entered into in 2011 that conveyed 33.3% of the Company s Eagleford and Pearsall shale assets to a third party in exchange for the funding of \$1.6 billion of Anadarko s then-future development costs. Third-party funding pursuant to the carried-interest arrangement began in the second quarter of 2011 and provided the Company \$500 million of funding for 2011 and \$650 million of funding for 2012. The third-party funding is expected to cover 90% of development costs until the commitment is fulfilled, which is expected to occur by year-end 2013.

#### **Index to Financial Statements**

Anadarko currently holds 413,000 gross acres in this area. During 2012, the Company operated an average of nine rigs, spud 292 horizontal wells, and fracture stimulated 239 wells. The Company increased sales volumes by 93% year over year. During 2012, Anadarko also expanded its infield gathering-system capacity from 225 million cubic feet per day (MMcf/d) to 350 MMcf/d and sanctioned a new high-efficiency Company-operated cryogenic gas plant that is scheduled to come online in 2013. The 200 MMcf/d plant is expected to increase processing capacity and is capable of recovering approximately 30,000 barrels per day (Bbls/d) of NGLs.

*Marcellus* In the Marcellus shale of the Appalachian basin, where the Company holds 760,000 gross acres, 78 operated horizontal wells were spud and 77 wells were brought online utilizing a fleet that averaged five rigs during the year. Anadarko also participated as a non-operating partner in 117 horizontal wells and 154 wells that were brought online in 2012. Anadarko s sales volumes in the Marcellus shale increased 133% over 2011.

In 2010, Anadarko entered into a carried-interest arrangement where a third party earned a 32.5% interest in the Company s Marcellus shale assets in exchange for funding \$1.4 billion of Anadarko s drilling costs. The third party funded 100% of the Company s 2010 development costs and 90% of its 2011 development costs. The funding obligation was completed during July 2012.

*Permian* Anadarko holds an interest in over 575,000 gross acres in the Delaware basin. Anadarko s 2012 drilling activity primarily targeted the liquids-rich Bone Spring formation and Avalon shale. In 2012, Anadarko spud 58 operated wells, participated in 31 non-operated wells, and completed 55 operated and 29 non-operated wells in the area. Significant infrastructure was added in 2012 to allow for increased natural-gas and liquids processing. The Company had three operated rigs drilling in the Bone Spring formation and two operated rigs drilling in the Avalon shale at year-end 2012.

East Texas/Haynesville Anadarko increased its capital program in the East Texas Carthage area in 2012, taking advantage of a liquids-rich area in the Haynesville shale. In 2012, Anadarko operated seven rigs, drilling 67 wells in the Haynesville and Cotton Valley formations and converting 60 wells to production. The Company increased sales volumes from the area by 41% year over year, while also achieving organic reserves growth.

*Utica* In late 2011, the Company began an exploration program in eastern Ohio targeting the liquids-rich Utica shale. In 2012, five exploration wells were drilled throughout the Company s 411,000 gross acres. Seven wells were completed and are currently in the production testing and evaluation phase.

#### **Index to Financial Statements**

*Gulf of Mexico* In the Gulf of Mexico, Anadarko owns an average 64% working interest in 479 blocks. The Company operates seven active floating platforms, holds interests in 34 producing fields, and is in the process of delineating and developing six additional fields in the area. During 2012, the Company continued an active deepwater exploration and appraisal program in the Gulf of Mexico and is continuing to take advantage of existing infrastructure to accelerate development activities at reduced cost.

The following includes the significant production, development, appraisal, and exploration activity during 2012.

*Production* In March 2012, Anadarko began production at the Caesar/Tonga field (33.75% working interest) where it is currently producing from three wells. The Company is drilling a fourth development well at Caesar/Tonga, which is expected to begin producing in the second quarter of 2013.

Development Anadarko continues to advance the Lucius development with construction of the spar underway. During the third quarter of 2012, Anadarko entered into a carried-interest arrangement for the Lucius development, where a third-party partner agreed to fund \$556 million of development costs to earn a 7.2% working interest. The amount of the carry obligation represents 100% of the Company s expected future capital costs through first production. The Company holds a 27.8% working interest in the Lucius development. In December 2012, the Company drilled a successful development well, confirming and extending the Lucius field along its western flank. During 2013, the Company plans to drill four additional development wells and begin completion operations. First production from Lucius is expected in 2014.

#### **Index to Financial Statements**

Appraisal During 2012, Anadarko participated in drilling two appraisal wells in the Gulf of Mexico. The successful Heidelberg-2 appraisal well (44.25% working interest) encountered oil pay in high-quality Miocene sands. The Heidelberg-2 was drilled about 1.3 miles south of and 550 feet up-dip from the Heidelberg discovery. Pre-front-end engineering and design work has been finalized and Anadarko anticipates sanctioning this project in mid-2013. Another successful appraisal well was drilled at the Vito discovery (18.67% working interest) in Mississippi Canyon Block 940 and encountered oil pay in the Miocene-age reservoirs approximately 1.5 miles from the discovery well. A follow-up appraisal well was drilling at year-end 2012.

At year end, the Company-operated Shenandoah appraisal well (30% working interest) was drilling in Walker Ridge Block 51. The appraisal well is delineating the extent of the Lower Tertiary reservoirs found by the 2009 Shenandoah discovery well.

Exploration At year end, two exploration wells were drilling in Walker Ridge within the same mini-basin as the 2009 Shenandoah discovery. The Coronado exploration well (15% working interest) was spud during the second quarter of 2012 and the Yucatan exploration well (15% working interest) was spud during the third quarter of 2012. Both wells will test the Lower Tertiary section.

The Phobos exploration well (30% working interest) was spud in December 2012 and is a multiple-objective test of the Pliocene, Miocene, and Upper and Lower Wilcox sections. The Phobos well is located approximately 12 miles south of the Lucius field. Anadarko expects to be fully carried on the estimated capital cost of the Phobos well as the result of two separate farmout agreements, the latest of which was finalized during the third quarter of 2012.

During 2012, the Company drilled the Spartacus exploration well (63.3% working interest) approximately 15 miles from the Lucius discovery in the Gulf of Mexico. The well was unsuccessful.

Alaska Anadarko s oil and natural-gas production and development activity in Alaska is concentrated primarily on the North Slope. Development activity continued at the Colville River Unit through 2012 with eight additional wells drilled in the Alpine and its satellite fields. In the fourth quarter of 2012, the Company sanctioned the Alpine West development, a 15- to 20-well extension of the Alpine field. In 2013, the Company anticipates participating in approximately 10 additional development wells.

#### **Index to Financial Statements**

#### International

*Overview* Anadarko s significant international oil and natural-gas production and development operations are located in Mozambique, Algeria, Ghana, and China. The Company also has exploration acreage in Ghana, Mozambique, Liberia, Sierra Leone, Kenya, Côte d Ivoire, China, New Zealand, Brazil and other countries. International locations accounted for 11% of Anadarko s total sales volumes and 27% of sales revenues during 2012, as well as 10% of total proved reserves at year-end 2012. Anadarko drilled 51 wells in international areas in 2012, resulting in new natural-gas discoveries in Mozambique and oil discoveries in Ghana and Côte d Ivoire. In 2013, the Company expects to drill approximately 40 development and 20 exploration wells at various international locations.

Mozambique Anadarko operates two blocks (one onshore and one offshore) in Mozambique totaling approximately six million gross acres.

In 2012, the Company drilled two natural-gas discoveries, Golfinho and Atum, in a reservoir complex located entirely within Offshore Area 1 of the Rovuma basin, where Anadarko is the operator and holds a 36.5% working interest. The Golfinho and Atum discovery wells encountered natural-gas pay in two high-quality Oligocene fan systems. These discoveries subsequently were appraised with four successful wells (Golfinho 2, 3, and 4 and Atum 2), which confirmed the southern and down-dip extent of the reservoir. Future appraisal drilling will focus on confirming the northern and up-dip extent of the reservoir, which is age-equivalent to, but geologically distinct from, the Company s 2010 and 2011 discoveries in the Prosperidade field. The Company drilled the Perola Negra and Barracuda exploration wells, both of which were unsuccessful.

#### **Index to Financial Statements**

The Company also completed the appraisal-drilling and well-testing program in the Prosperidade field where Anadarko is the operator and holds a 36.5% working interest. The reservoir straddles Offshore Areas 1 and 4 and contains the Windjammer, Lagosta, Barquentine, and Camarão discoveries. The Prosperidade field appraisal program consisted of the drilling of three successful wells (Lagosta 2 and 3 and Barquentine 4) and a comprehensive testing program. In addition, the Company signed a Heads of Agreement (HOA) with Eni S.p.A. (Eni), establishing foundational principles for the coordinated development of the common natural-gas reservoirs spanning both Offshore Area 1 (operated by Anadarko) and Offshore Area 4 (operated by Eni). The HOA is designed to facilitate a work program whereby the two operators will conduct separate, yet coordinated, offshore development activities, while jointly planning and constructing common onshore liquefaction facilities in the form of a liquefied natural gas (LNG) park in the Cabo Delgado Province of northern Mozambique.

During 2012, the government of Mozambique awarded the site for the LNG processing facilities. Also, Anadarko and its partners awarded Front-End Engineering and Design contracts related to the development of four 5-million tonnes per annum LNG trains, including 10 million metric tons per annum (mmtpa) for Area 1 and 10 mmtpa for Area 4. The first LNG train is expected to be completed with first delivery in 2018.

Algeria Anadarko is engaged in production and development operations in Algeria s Sahara Desert in Blocks 404 and 208 that are governed by a Production Sharing Agreement (PSA) between Anadarko, two other parties, and Sonatrach, the national oil and gas company of Algeria. The Company is responsible for 24.5% of the development and production costs on these blocks. At December 31, 2012, all production was from fields located in Block 404, which produce through the Hassi Berkine South and Ourhoud central processing facilities. Initial production from the El Merk project in Block 208 is expected in the first quarter of 2013, with peak volumes expected to be achieved at the El Merk central processing facility during 2013. The Company drilled 20 development wells in 2012. During 2013, the Company expects to drill 18 to 20 wells.

Exceptional Profits Tax Resolution In 2006, the Algerian parliament approved legislation establishing an exceptional profits tax on foreign companies Algerian oil production and issued regulations implementing this legislation. The Company disagreed with Sonatrach s collection of the exceptional profits tax and initiated arbitration against Sonatrach in 2009. In March 2012, the Company and Sonatrach resolved this dispute. The resolution provides for delivery of crude oil to the Company over a 12-month period that began in June 2012. The Company recognized a \$1.8 billion credit in the Costs and Expenses section of the Consolidated Statement of Income in the first quarter of 2012 to reflect the effect of this agreement on previously recorded expenses. Additionally, the parties amended the existing PSA to increase the Company s sales volumes and to lower the effective exceptional profits tax rate. The amendment confirmed the length of each exploitation license to be 25 years from the date the license was granted under the PSA with expiration dates ranging from December 2022 to December 2036.

Ghana Anadarko s exploration and development activities in Ghana are located offshore in the West Cape Three Points Block and the Deepwater Tano Block.

During 2012, the Company and its partners drilled four of eight Phase 1A wells in the Jubilee field (24% non-operated unit interest), which is included in the West Cape Three Points and the Deepwater Tano Blocks. In addition, seven existing producing wells were successfully acidized to enhance production levels and the Company exited the year with record gross production volumes for the field of more than 110,000 Bbls/d. In 2013, the Company and its partners plan to drill the remaining four Phase 1A wells in the Jubilee field.

West Cape Three Points Jubilee tie-back development options are being evaluated in the West Cape Three Points Block (31% non-operated working interest) to maximize the value from the Teak and Akasa discoveries. During 2012, the Teak 4 appraisal well was drilled and was unsuccessful.

#### **Index to Financial Statements**

Deepwater Tano During 2012, the Company participated in four exploration and appraisal wells in the Deepwater Tano Block where Anadarko holds an 18% non-operated working interest.

Successful operations in the Tweneboa/Enyenra/Ntomme (TEN) complex were completed through the drilling of two appraisal wells (Enyenra 4A and Ntomme 2A) and a testing program. During the fourth quarter of 2012, the Company and its partners submitted the Plan of Development (POD) for the TEN fields to the Government of Ghana. In 2013, the Company and its partners plan to sanction and begin development of the TEN fields upon approval of the POD. The TEN development will utilize a standalone floating production, storage, and offloading vessel for production from subsea wells.

The Okure-1 exploration well targeted a slightly deeper section than the pay sections encountered in the TEN complex. The well encountered a low net-to-gross oil bearing sandstone interval in a secondary Turonian objective. The well was deemed non-commercial and was plugged and abandoned.

The Company also made an additional discovery in the Deepwater Tano Block at the Wawa exploration well, which encountered oil pay and gas-condensate pay in Turonian-aged reservoirs. Pressure data indicate that this discovery is an accumulation separate and distinct from the adjacent TEN complex and extends the presence of hydrocarbon-bearing formations more than six miles north. In 2013, the Company and its partners plan to conduct an appraisal program for the Wawa discovery.

*China* Anadarko s production and development activities in China are located offshore in Bohai Bay. Drilling resumed in the fourth quarter of 2012, with four new sidetrack wells drilled and brought online. Drilling will continue through 2013. Preparation of a development plan for the next major field expansion and project sanction are expected to be completed in the third quarter of 2013. Consistent with the terms of the petroleum contract, the Company transferred operatorship of the Bohai Bay development to CNOOC China Limited at the end of 2012. The Company maintained its average working interest of approximately 35%.

Drilling is also expected to resume on the Company s exploration acreage in the South China Sea in the second quarter of 2013. The Liwan 21-1-1 exploration well (50% working interest) in the South China Sea spud in August 2012 and was suspended after setting surface casing due to rig commitments and weather considerations. The Company is fully carried on the well.

*Liberia* The Company operates two blocks, Block 10 (80% working interest) and Block 15 (48% working interest), offshore Liberia totaling approximately 1.3 million exploration acres in the Liberian basin. Multiple Cretaceous stratigraphic prospects, similar to the Jubilee Mahogany fan, have been identified on these blocks. Block 10 exploration drilling is planned for 2013.

Sierra Leone Anadarko operates a 55% participating interest in Block SL-07B-11 offshore Sierra Leone, which encompasses approximately 1.3 million gross acres. Multiple Upper Cretaceous fan-type prospects have been identified in the lightly explored Liberian basin. The Jupiter #1 discovery well, spud in the fourth quarter of 2011, reached total depth in 2012 and encountered hydrocarbon pay. The wellbore has been preserved for possible re-entry, as the area requires additional evaluation. The Mercury #2 appraisal well, drilled 7.5 miles northwest and approximately 1,300 feet lower than the Mercury discovery well, was unsuccessful. Data from the wells is being evaluated to determine future drilling plans.

**Kenya** Anadarko owns and operates a 45% participating interest in five deepwater blocks offshore Kenya, encompassing approximately six million gross acres. The Company completed 2D and 3D seismic programs and two exploration wells are planned for 2013. Evaluation of the Company s exploration position will commence with the Kiboko and Kubwa prospects, which will test both stratigraphic and structural play types. The Company will be largely carried on these two wells.

#### **Index to Financial Statements**

Côte d Ivoire Anadarko owns working interests in three blocks offshore Côte d Ivoire (Blocks CI-515 and CI-516 with a 45% operated working interest and Block CI-103 with a 40% non-operated working interest). Two exploration wells were drilled in 2012 on Blocks CI-105 and CI-103. The Kosrou well on Block CI-105 was unsuccessful. Anadarko and its partners elected not to enter the next phase of exploration outlined in the production sharing contract license for Block CI-105 and no longer hold a working interest in the block. The Company announced a discovery at the Paon exploration well on Block CI-103, which encountered light oil pay in a single Cretaceous fan interval. The discovery confirms that the Upper Cretaceous fan play present in Ghana extends westward into Côte d Ivoire. Several additional prospects have been identified and an extensive exploration and appraisal program is being planned for the area.

**New Zealand** Anadarko operates approximately 10 million gross exploration acres in New Zealand, with a 50% working interest in the Taranaki and Canterbury basins and a 100% working interest in the recently acquired Pegasus basin. A 3D seismic survey of approximately 1,100 square miles was completed on the Taranaki Block in 2011, and a 2D seismic survey of approximately 2,400 miles was acquired over the Canterbury Blocks. An exploration well is planned for the end of 2013 subject to rig availability.

*Brazil* Anadarko holds exploration interests in approximately 750,000 gross acres in six blocks located offshore Brazil in the Campos and Espírito Santo basins. The Wahoo-4 appraisal well on Block BM-C-30 (30% working interest) encountered oil pay on the western side of the structure in which the Wahoo-1 discovery well is located. Additional appraisal on the northeastern side of the structure is planned for 2013. The Ituana appraisal well on Block BM-C-29 was plugged and abandoned and the Company is evaluating the results of the well to determine the future plans for the block. Also during 2012, the Company drilled the Requeijao and Provolone exploration wells, both of which were unsuccessful. The Company is marketing its Brazilian properties.

*Indonesia* In 2012, Anadarko owned participating interests in approximately 3.4 million gross exploration acres in Indonesia through three production sharing contracts, one operated and two non-operated. In December 2012, the Company agreed to sell the Indonesian properties to a third party. The sale closed in early 2013.

Other Anadarko also has exploration projects in other overseas, new-venture areas including Colombia, Guyana, Morocco, Tunisia, and South Africa.

#### **Proved Reserves**

Estimates of proved reserves volumes owned at year end, net of third-party royalty interests, are presented in billion cubic feet (Bcf), at a pressure base of 14.73 pounds per square inch for natural gas and in millions of barrels (MMBbls) for oil, condensate, and NGLs. Total volumes are presented in millions of barrels of oil equivalent (MMBOE). For this computation, one barrel is the equivalent of 6,000 cubic feet of natural gas. Shrinkage associated with NGLs has been deducted from the natural-gas reserves volumes.

Disclosures by geographic area include the United States and International. The International geographic area consists of proved reserves located in Algeria, Ghana, and China, which by country and in total represents less than 15% of the Company s total proved reserves.

#### **Index to Financial Statements**

## Summary of Proved Reserves

D. 1. 21 2012	Natural Gas Co	Oil and ndensate IMBbls) (M	NGLs IMBbls) (I	Total MMBOE)
December 31, 2012				
Proved				
Developed	<del>.</del>	210	***	4
United States	6,445	318	283	1,675
International		208		208
Undeveloped				
United States	1,884	193	110	617
International		48	12	60
Total proved	8,329	767	405	2,560
December 31, 2011 Proved				
Developed				
United States	6,113	352	267	1,638
International	0,113	173	207	173
Undeveloped		173		173
United States	2,252	184	94	653
International	2,232	62	13	75
Total proved	8,365	771	374	2,539
December 31, 2010				
Proved				
Developed				
United States	5,982	303	222	1,523
International		150		150
Undeveloped				
United States	2,135	195	85	635
International		101	13	114
Total proved	8,117	749	320	2,422

The Company s year-end 2012 product mix for proved reserves was 54% natural gas, 30% oil and condensate, and 16% NGLs; compared to a year-end 2011 product mix of 55% natural gas, 30% oil and condensate, and 15% NGLs; and a year-end 2010 product mix of 56% natural gas, 31% oil and condensate, and 13% NGLs.

The Company s estimates of proved developed reserves, proved undeveloped reserves (PUDs), and total proved reserves at December 31, 2012, 2011, and 2010, and changes in proved reserves during the last three years are presented in the *Supplemental Information on Oil and Gas Exploration and Production Activities (Supplemental Information)* under Item 8 of this Form 10-K.

The Company has not filed information with a federal authority or agency with respect to its estimated total proved reserves at December 31, 2012. Annually, Anadarko reports gross proved reserves for U.S.-operated properties to the U.S. Department of Energy. These reported reserves are derived from the same database used to estimate and report proved reserves in this Form 10-K.

MMDOE

#### **Index to Financial Statements**

Also presented in the *Supplemental Information* are the Company s estimates of future net cash flows and discounted future net cash flows from proved reserves. See *Operating Results* and *Critical Accounting Estimates* under Item 7 of this Form 10-K for additional information on the Company s proved reserves.

Changes in PUDs Revisions of prior estimates include updates to prior PUDs, the addition of new PUDs associated with current development plans, the transfer of PUDs to unproved categories due to development plan changes, and the impact of changes in economic conditions, including lower commodity prices. These PUD changes reflect Anadarko s ongoing evaluation of its asset portfolio and current-year changes to development plans. The Company s year-end development plans and associated PUDs are consistent with SEC guidelines for PUD development within five years unless specific circumstances warrant a longer development time horizon. Significant changes to PUDs occurring during 2012 are summarized in the table below:

728
102
37
(171)
3
(22)
677

**PUD Conversion** In 2012, the Company converted 171 MMBOE, or 23% of total year-end 2011 PUDs to developed status. Approximately 79% of PUD conversions occurred in onshore U.S. assets, 15% in international assets, and the remaining 6% in Gulf of Mexico assets.

The majority of the onshore U.S. PUD conversions, approximately 133 MMBOE, occurred as a result of development activities in the Rockies and the Southern and Appalachia Regions. The remaining onshore U.S. PUD conversions were a result of development activity in Alaska. International PUD conversions, approximately 25 MMBOE, were primarily associated with ongoing development of the El Merk project located in Block 208 of the Berkine basin in Algeria where initial production is expected to occur in the first quarter of 2013. The Gulf of Mexico PUD conversions, approximately 11 MMBOE, were associated with development of the Nansen field.

Anadarko spent \$1.0 billion to develop PUDs in 2012, of which approximately 69% related to domestic development programs in the Rockies and the Southern and Appalachia Regions, 28% to development of international projects, and the remaining 3% to Alaska and Gulf of Mexico development projects.

In 2011, the Company converted 171 MMBOE, or 23% of the total year-end 2010 PUDs to developed status. Approximately 58% of PUD conversions occurred in onshore U.S. assets, 26% in international assets, and the remaining 16% in Gulf of Mexico assets. Anadarko spent \$900 million on PUD development in 2011. Approximately 68% of total 2011 PUD-development capital related to domestic development programs in the Rockies and the Southern and Appalachia Regions. Approximately 12% related to the development of the Caesar/Tonga and Lucius projects in the Gulf of Mexico, and 10% related to development of the El Merk project in Algeria. The remaining 10% of 2011 PUD-development spending was associated with Alaska and other international development projects.

Table of Contents 18

#### **Index to Financial Statements**

**Development Plans** The Company annually reviews all PUDs to ensure an appropriate plan for development exists. Typically, onshore U.S. PUDs are converted to developed reserves within five years of the initial proved reserves booking, but projects such as EOR, arctic development, deepwater development, and international programs may take longer. All of the Company s onshore U.S. PUDs at December 31, 2012, were scheduled to be developed within five years, with the exception of the Salt Creek EOR project, the annual development of which is limited by CO2 supply contract terms and the amount of work that can be physically completed.

At December 31, 2012, the Company had 91 MMBOE of pre-2008 PUDs that remain undeveloped five years or more after initial disclosure as PUDs. Approximately 40% of these PUDs are associated with the El Merk development project and are being developed according to an Algerian government-approved plan. Site preparation was initiated in 2008 and construction of the El Merk central processing facility is progressing, with commissioning of the first train in its final stages. At year-end 2012, 89 wells of the Reservoir Development Plan s estimated 119 total wells have been drilled. First oil production from the El Merk fields is expected to occur in the first quarter of 2013.

Another 33% of the Company s pre-2008 PUDs are associated with the Salt Creek EOR single-development project located in the Rockies. Since 2003, Anadarko has invested an average of \$74 million per year to develop various phases of the Salt Creek EOR project and will continue significant spending levels in the future to complete the development. In 2012, the Company demonstrated its continued interest in developing the project by entering into a carried-interest arrangement with a third party to fund \$400 million of the costs associated with ongoing development activities.

All remaining pre-2008 PUDs are associated with Gulf of Mexico opportunities where longer development times are primarily a result of moratorium-related delays. The Company expects to develop its pre-2008 Gulf of Mexico PUDs over the next three years.

Technologies Used in Proved Reserves Estimation The Company s 2012 proved reserves additions were based on estimates generated through the integration of relevant geological, engineering, and production data, utilizing technologies that have been demonstrated in the field to yield repeatable and consistent results as defined in the SEC regulations. Data used in these integrated assessments included information obtained directly from the subsurface through wellbores, such as well logs, reservoir core samples, fluid samples, static and dynamic pressure information, production test data, and surveillance and performance information. The data utilized also included subsurface information obtained through indirect measurements such as seismic data. The tools used to interpret the data included proprietary and commercially available seismic processing software and commercially available reservoir modeling and simulation software. Reservoir parameters from analogous reservoirs were used to increase the quality of and confidence in the reserves estimates when available. The method or combination of methods used to estimate the reservoir was based on the unique circumstances of each reservoir and the dataset available at the time of the estimate.

Internal Controls over Reserves Estimation Anadarko s estimates of proved reserves and associated future net cash flows were made solely by the Company s engineers and are the responsibility of management. The Company requires that reserves estimates be made by qualified reserves estimators (QREs), as defined by the Society of Petroleum Engineers standards. The QREs are assigned to specific assets within the Company s regions. The QREs interact with engineering, land, and geoscience personnel to obtain the necessary data for projecting future production, net cash flows, and ultimate recoverable reserves. Management within each region approves the QREs reserves estimates. All QREs receive ongoing education on the fundamentals of SEC definitions and reserves reporting through the Company s reserves manual and internal training programs administered by the Corporate Reserves Group (CRG).

#### **Index to Financial Statements**

The CRG ensures confidence in the Company s reserves estimates by maintaining internal policies for estimating and recording reserves in compliance with applicable SEC definitions and guidance. Compliance with the SEC reserves guidelines is the primary responsibility of Anadarko s CRG.

The CRG is managed through the Company s finance department, which is separate from its operating regions, and is responsible for overseeing internal reserves reviews and approving the Company s reserves estimates. The Director Reserves Administration and the Corporate Reserves Manager manage the CRG and report to the Director Corporate Planning. The Director Corporate Planning reports to the Company s Senior Vice President, Finance and Chief Financial Officer, who in turn reports to the President and Chief Executive Officer. The Audit Committee of the Company s Board of Directors meets with management, members of the CRG, and the Company s independent petroleum consultants, Miller and Lents, Ltd. (M&L), to discuss the results of procedures and methods reviews as discussed below, as well as other matters and policies related to reserves.

The Company s principal engineer, who is primarily responsible for overseeing the preparation of proved reserves estimates, has over 26 years of experience in the oil and gas industry, including over 12 years as either a reserves estimator or manager. Further professional qualifications include a degree in petroleum engineering, extensive internal and external reserves training, and asset evaluation and management. The principal engineer is a member of the Society of Petroleum Evaluation Engineers and the Society of Petroleum Engineers, where he has been a member for over 26 years. In addition, the principal engineer is an active participant in industry reserves seminars and professional industry groups.

Third-Party Procedures and Methods Reviews M&L reviewed the procedures and methods used by Anadarko s staff in preparing its internal estimates of proved reserves and future net cash flows at December 31, 2012. The purpose of the review was to determine that the procedures and methods used by Anadarko to estimate its proved reserves are effective and in accordance with the definitions contained in SEC regulations. The procedures and methods review by M&L was a limited review of Anadarko s procedures and methods and does not constitute a complete review, audit, independent estimate, or confirmation of the reasonableness of Anadarko s estimates of proved reserves and future net cash flows.

The review consisted of 17 fields which included major assets in the United States and Africa, and encompassed approximately 87% of the Company's estimates of proved reserves and associated future net cash flows at December 31, 2012. In each review, Anadarko's technical staff presented M&L with an overview of the data, methods, and assumptions used in estimating its reserves. The data presented included pertinent seismic information, geologic maps, well logs, production tests, material balance calculations, reservoir simulation models, well performance data, operating procedures, and relevant economic criteria.

Management s intent in retaining M&L to review its procedures and methods is to provide objective third-party input on the Company s procedures and methods and to gather industry information applicable to reserves estimation and reporting processes.

# **Index to Financial Statements**

## Sales Volumes, Prices, and Production Costs

The Company s sales volumes were 268 MMBOE for 2012, 248 MMBOE for 2011, and 235 MMBOE for 2010. Production costs are costs to operate and maintain the Company s wells and related equipment and include the cost of labor, well service and repair, location maintenance, power and fuel, transportation, other taxes, and production-related general and administrative costs. Additional information on volumes, prices, and production costs is contained in *Financial Results* under Item 7 of this Form 10-K. Additional detail regarding production costs is contained in the *Supplemental Information* under Item 8 of this Form 10-K. Information on major customers is contained in *Note 21 Segment Information* in the *Notes to Consolidated Financial Statements* under Item 8 of this Form 10-K. The following table provides the Company s annual sales volumes, average sales prices, and average production costs per BOE for each of the last three years:

		Sales Volumes			Av			
	Natural Gas (Bcf)	Oil and Condensate (MMBbls)	NGLs (MMBbls)	Barrels of Oil Equivalent (MMBOE)	Natural Gas (Per Mcf)	Oil and Condensate (Per Bbl)	NGLs (Per Bbl)	Average Production Costs <sup>(2)</sup> (Per BOE)
2012								
United States								
Greater Natural Buttes	163	1	5	33	\$ 2.20	6 \$ 81.34	\$ 40.43	\$ 8.75
Wattenberg	95	12	5	33	3.00			8.05
Other United States	655	42	20	171	2.73	3 99.36	40.37	8.76
Total United States	913	55	30	237	2.68	8 97.46	6 40.44	8.66
International		31		31		111.11	l	10.89
Total	913	86	30	268	2.68	3 102.35	5 40.44	8.92
2011								
United States								
Greater Natural Buttes	135	1	4	27		8 \$ 84.13		
Wattenberg	79	9	5	27	4.17			7.58
Other United States	638	38	18	163	3.90	99.28	54.55	9.80
Total United States	852	48	27	217	3.87	7 97.70	53.95	9.50
International		31		31		109.20	)	9.98
Total	852	79	27	248	3.87	7 102.24	53.95	9.55
2010								
United States								
Greater Natural Buttes	107	1	4	23		2 \$ 66.61	\$ 40.31	\$ 9.56
Wattenberg	74	7	3	22	4.28			6.79
Other United States	648	40	16	164	4.14	4 74.91	43.69	8.82
Total United States	829	48	23	209	4.12	2 74.96	5 43.07	8.68
International		26		26		78.52	2	7.56
Total	829	74	23	235	4.12	2 76.22	2 43.07	8.56

# Edgar Filing: ANADARKO PETROLEUM CORP - Form 10-K

18

Bcf	billion cubic feet		
Mci	nd cubic feet		
Bbl	barrel		
(1)	Excludes the impact of commodity derivatives.		
(2)	Excludes ad valorem and severance taxes.		

#### **Index to Financial Statements**

## **Delivery Commitments**

The Company sells crude oil and natural gas under a variety of contractual agreements, some of which specify the delivery of fixed and determinable quantities. At December 31, 2012, Anadarko was contractually committed to deliver approximately 1,150 Bcf of natural gas to various customers in the United States through 2031. These contracts have various expiration dates with approximately 45% of the Company s current commitment to be delivered in 2013, and 70% by 2017. At December 31, 2012, Anadarko also was contractually committed to deliver approximately 10 MMBbls of crude oil to ports in Algeria and Ghana through 2013. The Company expects to fulfill these delivery commitments with existing proved developed and proved undeveloped reserves.

# **Properties and Leases**

The following schedule shows the developed lease, undeveloped lease, and fee mineral acres in which Anadarko held interests at December 31, 2012:

	Developed Lease		Undeveloped Lease					
					Fee Mineral		Total	
thousands of acres	Gross	Net	Gross	Net	Gross	Net	Gross	Net
United States								
Onshore	5,081	3,098	5,556	2,592	10,285	8,438	20,922	14,128
Offshore	300	151	2,410	1,620			2,710	1,771
Total United States	5,381	3,249	7,966	4,212	10,285	8,438	23,632	15,899

Table of Contents 23