BP PLC Form 6-K September 07, 2011 SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

Form 6-K

Report of Foreign Issuer

Pursuant to Rule 13a-16 or 15d-16 of the Securities Exchange Act of 1934

for the period ended September 2011

BP p.l.c. (Translation of registrant's name into English)

1 ST JAMES'S SQUARE, LONDON, SW1Y 4PD, ENGLAND (Address of principal executive offices)

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 |X| Form 40-F

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 |X|

press release

7 September, 2011

# BP ANNOUNCES SIGNIFICANT RESOURCE EXTENSION OF MAD DOG FIELD IN GULF OF MEXICO

BP announced today the drilling of a successful appraisal well in a previously untested northern segment of the Mad Dog field in the US Gulf of Mexico.

The well results confirm a significant resource extension for the Mad Dog Field complex, which includes the existing field, in production since 2005, and appraisal drilling of the Mad Dog South field in 2008 and 2009. Pending confirmation through future appraisal drilling, the total hydrocarbons initially in place in the Mad Dog field complex are now estimated to be up to four billion barrels of oil equivalent.

The well, drilled by BHP Billiton on behalf of the unit operator BP, is located on Gulf of Mexico Green Canyon block 738 approximately 140 miles (225 kilometres) south of Grand Isle, LA., in about 4,500 feet (1,371 metres) of water. The well encountered about 166 net feet (50 metres) of hydrocarbons in the objective Miocene hydrocarbon-bearing sands and discovered an oil column of more than 300 feet (91 metres).

"With these additional hydrocarbon resources north of the main field, Mad Dog has been firmly established as a giant field in BP's Gulf of Mexico portfolio, rivalling Thunder Horse in size of resource," said Bob Dudley, BP group chief executive. "Working with the industry and regulators, we will apply our enhanced standards of safety, reliability and compliance to all of our Gulf activities as we continue to provide important jobs and energy to the nation."

BP maintains a 60.5 per cent working interest in Mad Dog. BHP Billiton has a 23.9 per cent interest, Chevron Corporation, through its subsidiary Union Oil Company of California, has a 15.6 per cent interest.

Due to the materiality of the Mad Dog South finds in 2009, BP has been advancing development options to increase production from Mad Dog by adding another spar production facility with a production capacity of 120,000-140,000 barrels of oil equivalent per day (boed).

"Coupled with the recent exploration success at the discovery at the Moccasin prospect, located in Keathley Canyon, the Mad Dog result re-emphasizes the exploration and development potential of the Gulf of Mexico and the region's ability to continue to deliver material projects for BP," Dudley added.

On Sept. 6, 2011 Chevron Corporation announced the Moccasin discovery in the Lower Tertiary play on Keathley Canyon block 736. BP has a 43.75 per cent working interest in the Moccasin prospect. The prospect is operated by Chevron U.S.A. Inc., also with a 43.75 per cent interest, and the co-owner is Samson Offshore Company with 12.5 per cent interest.

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#### Notes to editors:

• The Mad Dog Field started production in 2005 and utilizes a truss spar platform, equipped with facilities for simultaneous production and drilling operations. The facility is designed to process 80,000 barrels/day of oil and 60,000 standard cubic feet/day of gas.

- Oil and gas is transported to existing shelf and onshore interconnections via the Mardi Gras Transportation System.
- BP is one of the largest producers of oil and gas in the US Gulf of Mexico with net production of over 250,000 boed. BP is progressing eleven Gulf of Mexico projects: Atlantis Phases 2 and 3, Kaskida, Mars B, Galapagos, Na Kika Phases 3 and 4, Freedom, Mad Dog Phase 2, Mad Dog North and Tiber.
- Major BP developments in the deepwater Gulf of Mexico include: Pompano, 1994; Marlin, 2000; Horn Mountain, 2002; Na Kika, 2003; Holstein, 2004; Mad Dog, 2005, Atlantis, 2007, Thunder Horse 2008.

#### Further information:

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#### Cautionary note to US investors:

Certain terms are used in this press release, such as "hydrocarbons initially in place" and references to estimates and projections in relation to such, that the SEC's rules prohibit BP from including in its filings with the SEC. U.S. investors are urged to consider closely the disclosures in BP's Form 20-F, SEC File No. 1-06262. This form is available on BP's website at www.bp.com. You can also obtain this form from the SEC by calling 1-800-SEC-0330 or by logging on to their website at www.sec.gov.

5

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.

BP p.l.c. (Registrant)

Dated: 07 September, 2011

/s/ D. J. PEARL

D. J. PEARL Deputy Company Secretary