

EXHIBIT NO. 2370

From: Liu, Xuemei

Sent: Sat May 01 14:13:25 2010

To: Zwart, Peter A

Subject: FMs - Macondo

Importance: Normal

Attachments: GoM-SPU-FM-2009-57\_Macondo Exploration Well\_all\_sig.pdf; GOM-SPU-FM-2009-121  
Macondo farm-out with Mitsui.pdf; GOM-SPU-FM-2009-120-Macondo farm-out with APC.pdf;  
GoM-SPU-FM-2009-57-Sup\_ Macondo Exploration Well.pdf

Pete,

There are 4 FMs on Macondo:

- original well FM with BP 100% to AGI due to over 100mn
- FM on agreement with APC
- FM on agreement with Mitsui
- FM supplement this was signed by Mike Daly due to reduced net costs

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AFE and agreements will be sent to you later,  
Xuemei

**Execute Financial Memorandum**  
**BP Exploration & Production Inc. - Gulf of Mexico Exploration**  
**Macondo Exploration Well**

**Authority Requested:** For a total of \$139.5m net of NTE capital to drill the Macondo exploration well.

Million US\$	Gross (\$m)	BP Net Cost \$m (100%)
Sanction Request (NTE)	139.5	139.5
Performance target (PT)	96.1	96.1

**Why This Project?**

- The SPU objective function includes discovering at least 165 mmboe p.a (3 yr rolling average) and replacing 100% of production on a consistent basis.
- Macondo is a top ranked middle Miocene ILX prospect in BP's heart land in Mississippi Canyon. It is located 21 miles north of BP's Isabela discovery, and is expected to have similar quality reservoir. Macondo underlies blocks MC 252, MC 253 and MC 208. (Attachment 1)
- The exploration well objective is to test hydrocarbon presence in the Middle Miocene M56 series in a 4-way dip closure. Charge access is the critical risk. The gross unrisked resource potential is 44-64-86 mmboe (P90-mean-P10) with a chance of success of 67%.
- Macondo is within tieback distance of 3 BP facilities; Pompano, Horn Mountain and Nakika. All three facilities have ullage.

**Readiness to Execute:**

- The Delivery SPA will be Jay Thorseth, DWX Exploration Manager, with a Performance Target of \$96.1m gross.
- BP currently owns 100% of the key block MC 252, which could drain 80% of the recoverable resource. LLOG owns the remaining two blocks. BP will cross assign with LLOG provided terms can be negotiated to protect BP from LLOG's current precarious financial situation. In addition, BP may choose to reduce interest further in Macondo through acreage trades to build material positions in potential giant Paleogene prospects.
- The Macondo well (MC252) will be drilled by the Marianas rig (a 4<sup>th</sup> Generation moored rig) to a MD of ~20,200' and take 77 days to drill, evaluate, and abandon in the expected case. The well will spud in October 2009, post hurricane season.
- Drilling Performance Target is 39.1 days/10k – at the top quartile / 2<sup>nd</sup> quartile boundary. This is a realistic expectation for a 4<sup>th</sup> Generation rig such as the Marianas. Previously, the Marianas delivered 46.8 days/10k while drilling in the Nakika area.
- The final FEL score is 79%.
- The Macondo prospect is described in a Technical Assurance Memorandum within BP's global database.

September 28, 2009



**Expected Impact on External BP Metrics:**

- BP's net exploration capital will be \$96.1m based on performance target assuming 100% costs interest in the exploration well
- Exploration risked write-off of \$31.7m net in 2009

**Economics:**

(100% WI)	Success NPV <sub>1</sub> (\$m)	Success IRR (%)	Success IE	EMV <sub>1</sub> (\$m)	F&D (\$/boe)
\$50 / \$5.0	4	7.2	0.01	26	26.3
\$75 / \$7.5	417	20.4	0.65	250	26.3
\$100 / \$10.0	830	30.7	1.30	527	26.3

- Economics based on the development and production of 80% of the most likely recoverable resource volume, 51 mmboe gross (41 mmboe net), which is accessible by wells drilled on BP owned block MC 252 only.
- Cost estimate based on \$75/bbl oil price.
- Project breaks even in success case at \$50/bbl oil price.
- Gross Green House Gas emissions from the Macondo well are expected not to exceed the policy threshold of 100,000 tCO<sub>2</sub>e/yr., and thus carbon costs are not required to be included in the economics.

**Key Risks and Other Significant Points for Discussion:**

- The subsurface and drilling risks include a narrow pore-pressure and fracture gradient window, stuck pipe, gas kick and shallow depletion from the adjacent Rigel gas field.
- This FM requested amount represents 100% of the NTE well costs. The well may be drilled at a lower cost interest depending on the outcome of various ongoing negotiations. The net Sanctioned amount and the Performance Target will be adjusted accordingly once the negotiations are finalized.

**Authorities:**

Project SPA:

Michael Daly, Head, Exploration &amp; Access

Date:

30/9/09

Supported by:

Andy Inglis, CEO, Exploration &amp; Production

Date:

30/9/09

Approved by:

David Rainey, VP, BP Exploration &amp; Production Inc

Date:

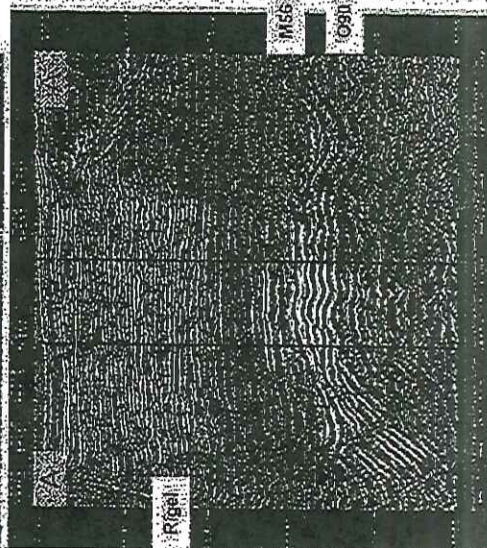
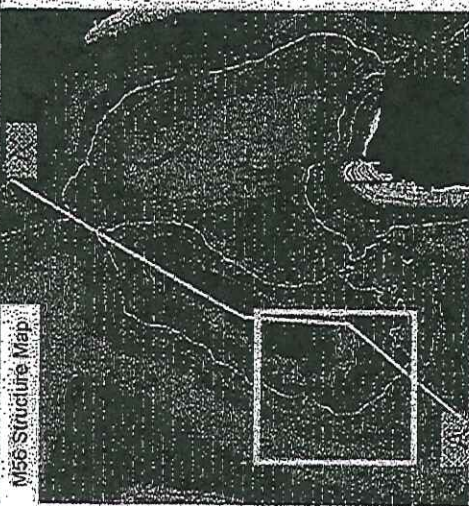
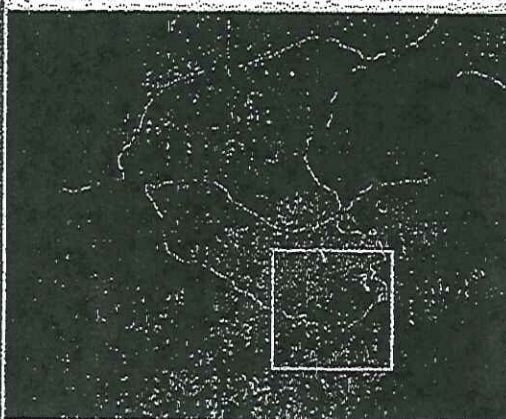
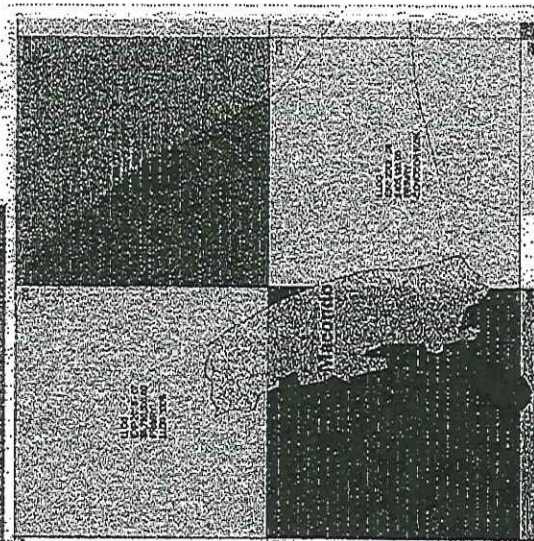
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September 28, 2009

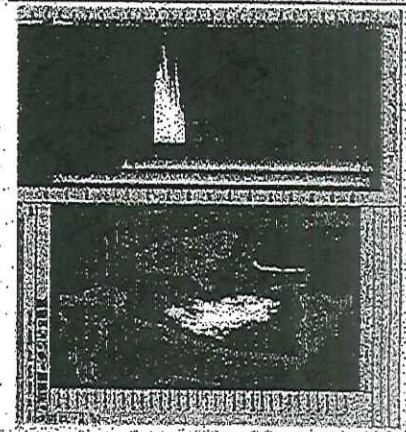


# Attachment 1 - Macondo M56

bp



<b>Prospect Name:</b>	<b>Macondo</b>
<b>Category:</b>	Prospect
<b>Water depth:</b>	4913
<b>Trap:</b>	4-way (DHI support)
<b>Target(s):</b>	M56
<b>GDE:</b>	Channel Levee
<b>Prospect acres:</b>	4500 acres ML
<b>Unrisked Volume:</b>	40-64-94 mmbbl
<b>Critical risks:</b>	Charge Access
<b>Ps:</b>	67
<b>Recommendation:</b>	drill





## Attachment 2:

## Macondo D&amp;C Cost Estimate and Benchmarking

Wells Cost Estimate	Cost
Mooring / Mob / Demob	\$ 32.4 MM
Drilling (Inc. MOB & Prep)	\$ 53.8 MM
Evaluation	\$ 6.2 MM
Abandonment	\$ 3.7 MM
Performance Target (PT)	\$ 96.1 MM
Not To Exceed (NTE)	\$ 139.5 MM

## Scope:

- Design based off Isabela well
  - 6 casing string (Isabel had 7 strings)
  - Moored rig vs dynamically positioned
  - Contingency casing string risked at 50%
  - PT DCUS based on Isabela w/ NPT removed
- Well TD deepened to evaluate M54 sands
- Abandonment costs included in PT costs

## Performance &amp; Learning:

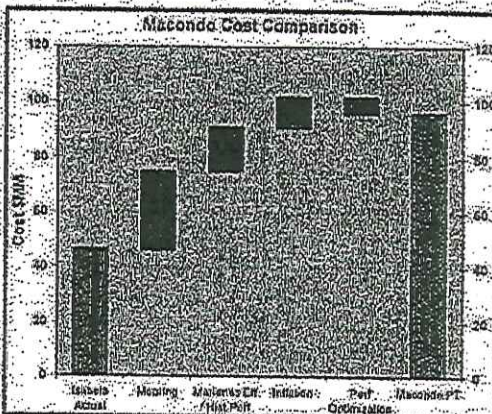
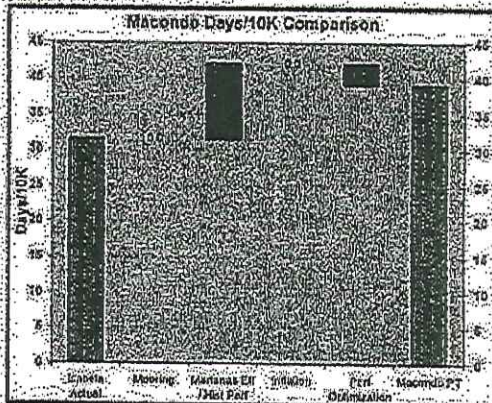
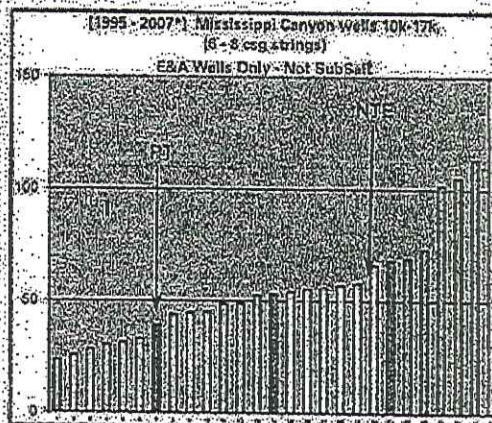
- PT = 39.1 days/10k (77 days)
  - Top of 2nd Quartile
  - Includes 23.6 % NPT
  - No major weather in PT estimate
- Recent Drilling NPT:
  - Isabela 13%
  - Horizon 21% (Puma / Tiger)
  - Marlines 34% (H2 Top drive incident removed)
  - SPU 34.1% excluding weather (2009 YTD)
- Uncontrollable events excluded from PT estimate (re-spud, BOP, major weather, rig failure)
- Continue good mooring performance
- Rig stack allows for equipment to have extended maintenance and reduces failure risks
- Incorporated learnings from Isabela to optimize well performance & reduce likelihood of expandable liner

## Significant Risks to Delivery:

- Weather - hurricane season & loop currents
- Narrow PPRG window / uncertainty
- BOP stack issues
- Rise/ress section (weather / seas)
- Depleted gas sands in 18" section
- Faulting into high pressure below the M56

## NTE (Not to exceed basis):

- PS0 - 59 days/10k (122 days)
- Max NTE NPT from DCUS = 47.9%
  - H2 actual = 67%
- Contingency liner required
- Single hurricane or loop current event



September 28, 2009



**Execute Financial Memorandum  
BP Exploration & Production Inc. - Gulf of Mexico Exploration  
Macondo Farm-out with Mitsui**

**Authority Requested:**

- To execute an exchange agreement with Mitsui Oil Exploration (MOEX) under the following terms:
  - BP to assign to MOEX 10% WI in Macondo block MC 252
  - MOEX to assign to BP all of its 10% WI in Gouda block GB 997
  - MOEX to pay \$1.92m to BP

**Why This Project?**

- The SPU objective function includes discovering at least 165 mmboe p.a (3 yr rolling average) and replacing 100% of production on a consistent basis.
- Macondo is a top ranked middle Miocene ILX prospect in BP's heart land in Mississippi Canyon. It is located 21 miles north of BP's Isabela discovery, and is expected to have similar quality reservoir. Macondo underlies blocks MC 252, MC 253, and MC 208 (Attachment 1). The gross unrisks resource potential is 64 mmboe with a chance of success (CoS) of 67%.
- BP owns 100% of the key block MC 252, which could drain 80% of the recoverable resource. LLOG in partnership owns MC 208 and MC 253. The Macondo exploration well is currently being drilled by BP at 100% WI.
- Gouda is a key prospect in the Paleogene trend in the GB/KC area. Gouda underlies blocks GB 953, 954, 997, and 998 (Attachment 2). The prospect is estimated at 320 mmboe at 20% CoS. BP currently owns approximately 21% of the estimated resource at Gouda. GB 997 is currently owned by BP/APC/Mitsui on a 67.5/22.5/10 basis respectively.
- Trading BP's interest in Macondo for MOEX's interest in Gouda will allow BP to consolidate and increase ownership in the total Gouda prospect to ~24% and also reduce its capital exposure in the Macondo exploration well on a promoted basis.

**Exchange Terms**

- BP to assign to MOEX 10% of its WI in Macondo block MC 252
- MOEX to assign to BP all of its 10% WI in the Gouda block GB 997; APC has elected to waive their preferential right on GB 997.
- MOEX to pay \$1.92m to BP.

**Readiness to Execute:**

- Kirk Wardlaw, GoM Chief Land Negotiator, is responsible for the delivery of this transaction by mid Nov 2009.

November 08, 2009

**Expected Impact on External BP Metrics:**

- The gross AFE amount on Macondo is \$96.1m. The \$1.92m from MOECO to BP will be an upfront payment against the Macondo exploration well. Thus, the farm-out will reduce BP's
  - exploration capital exposure by \$11.5m net (performance target)
  - risked write-off by \$3.8m (performance target)


**Economics:**

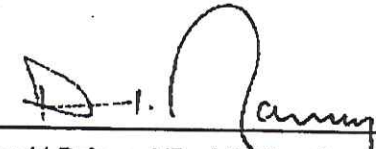
- Macondo estimated mean resources on MC 252 is 51 mmboe gross. MOEX net risked share at 10% is 2.8 mmboe.
- Risked NRI accessed by BP in Gouda is ~ 1.6 mmboe
- MOEX and APC have agreed to elect-out of the tax partnership in Gouda. Thus, the proposed deal will be treated as a partial Like-Kind Exchange for income tax purposes. The \$1.92m cash consideration will remain subject to income tax (i.e.  $\$1.92m \times 35\% = \$0.67m$  cash tax liability)
- No change to BP's annual lease amortization, and a minimal impact to BP's lease rental.

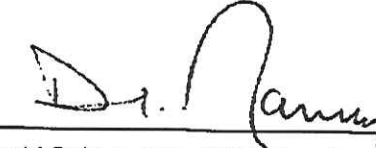
**Key Risks and Other Significant Points for Discussion:**

- Failure to complete this deal will cause BP to miss the opportunity to maximize WI in a quality Paleogene prospect.

**Authorities:**

Project SPA:  Date: Nov 9, 2009  
Jay Thorseth, Exploration Manager, DWX

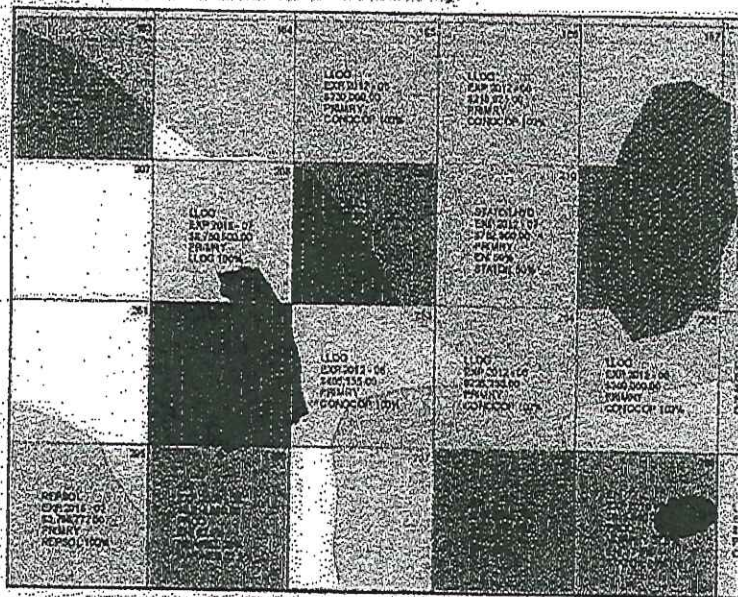
Supported by:  Date: 11.9.09  
David Rainey, VP of Exploration, GoM SPU

Approved by:  Date: 11.9.09  
David Rainey, VP, BP Exploration & Production Inc

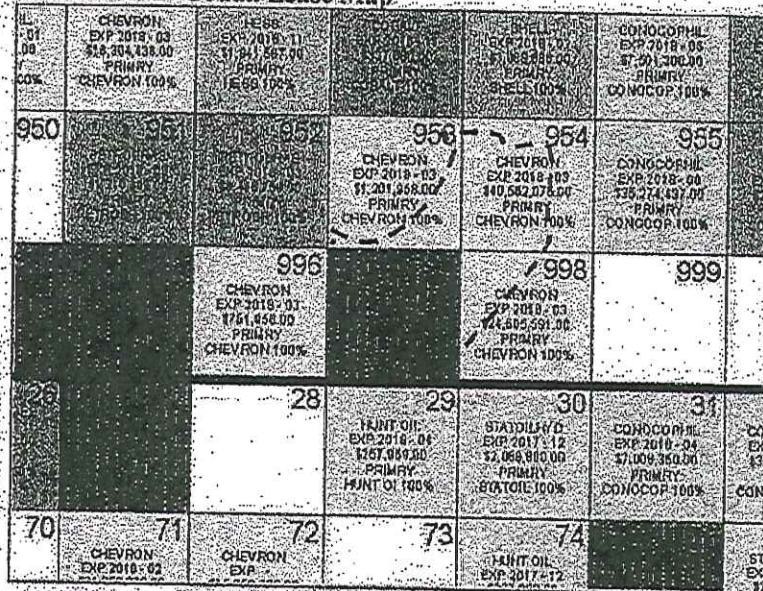
November 08, 2009



Attachment 1: Macondo Lease Map



Attachment 2: Gouda Lease Map



November 09, 2009



**Execute Financial Memorandum**  
**BP Exploration & Production Inc. - Gulf of Mexico Exploration**  
**Macondo Farm-out with Anadarko**

**Authority Requested:**

- To execute agreements with Anadarko (APC) under the following terms:
  - BP to assign to APC a 25% WI in Macondo block MC 252; APC to assign to BP all of its 50% WI in Gila block KC 140 and all of its 25% WI in Koelsch blocks GB 994, 995 and KC 27.
  - APC to participate in Macondo by paying 33.33% of the exploration well cost. In addition, BP and APC will enter into an AML on a 75/25 basis on MC 208, 209 and 253, which will expire on Dec 31, 2011

**Why This Project?**

- The SPU objective function includes discovering at least 165 mmboe p.a (3 yr rolling average) and replacing 100% of production on a consistent basis.
- Macondo is a top ranked middle Miocene ILX prospect in BP's heart land in Mississippi Canyon. It is located 21 miles north of BP's Isabela discovery, and is expected to have similar quality reservoir. Macondo underlies blocks MC 252, MC 253, and MC 208 (Attachment 1). The gross unrisks resource potential is 64 mmboe with a chance of success (CoS) of 67%.
- BP owns 90% of the key block MC 252, which could drain 80% of the recoverable resource. LLOG in partnership owns MC 208 and MC 253. The Macondo exploration well is currently being drilled by BP and MOEX, with 90% and 10%, respectively.
- Gila is the top-ranked Paleogene prospect in BP GoM's exploration portfolio. It is located 25 miles west of the Tiber discovery (Attachment 2). The prospect is estimated at 850 mmboe with 33% CoS. BP, Devon, and Petrobras own the key blocks across the structure. This trade will allow BP to increase its ownership of the estimated resource by approximately 1%.
- Koelsch is another top-ranked Paleogene prospect located 38 miles northeast from the Tiber discovery (Attachment 3). The prospect is estimated at 350 mmboe with 20% CoS currently. This trade will allow BP to increase its ownership of the estimated resource from approximately 33% to 48%.
- Trading BP's interest in Macondo for APC's interest in Koelsch and Gila will allow BP to increase working interest in potential Paleogene prospects and also reduce capital exposure in the Macondo exploration well on a promoted basis.

**Exchange Terms**

There are two agreements to be executed simultaneously, a lease exchange agreement and a well participation agreement. The terms are listed below:

- BP will assign to APC 25% of its WI in the Macondo block MC 252. APC will assign to BP all of its 50% WI in the Gila block KC 140 and all of its 25% WI in Koelsch blocks GB 994, 995 and KC 27.

December 2, 2009



- APC will participate in Macondo by paying 33.33% of the exploration well costs. APC's promote will be capped at reaching Objective Depth or 110% of the gross AFE at \$96.1m, whichever occurs first. BP and APC will enter into an AMI covering MC 208, 209 and 253 (Macondo area) on a 75/25 basis which will expire on Dec 31, 2011.
- The Development Plan for Macondo will involve a tieback to Pompano provided it is safely, economically and technically feasible to do so.

**Readiness to Execute:**

- Kemper Howe, GoM Land Manager, is responsible for the delivery of this transaction by mid Nov 2009.

**Expected Impact on External BP Metrics:**

- Since the historical lease bonus that BP paid on MC 252 was \$34m, and 25% of the \$34m is greater than \$5m (the major lease swap threshold), the lease exchange will be recognized financially as acquisition and divestment. \$8.5m will be reportedly externally as capex in relation to asset swap.
- The gross AFE amount for the Macondo exploration well is \$96.1m. The farm-out in Macondo will reduce BP's:
  - exploration capital exposure by \$32m net (performance target)
  - risked write-off by \$10.6m net (performance target)

**Economics:**

- Macondo's estimated gross resources on MC 252 is 51 mmboe. APC net risked share at 25% is ~7 mmboe.
- Risked NRI accessed by BP is ~7.3 mmboe in Koelsch and 1.1 mmboe in Gila.
- The proposed deal is considered value neutral to BP. No change to BP's annual lease amortization, and a minimal impact to BP's lease rental.

**Key Risks and Other Significant Points for Discussion:**

- Failure to complete this deal will cause BP to miss the opportunity to maximize WI in top quality Paleogene prospects.

**Authorities:**

Project SPA:

  
Jay Thorseth, Exploration Manager, DWX

Date: 3 Dec 2009

Supported by:

  
David Rainey, VP of Exploration, GoM SPU

Date: 12-3-09.

Approved by:

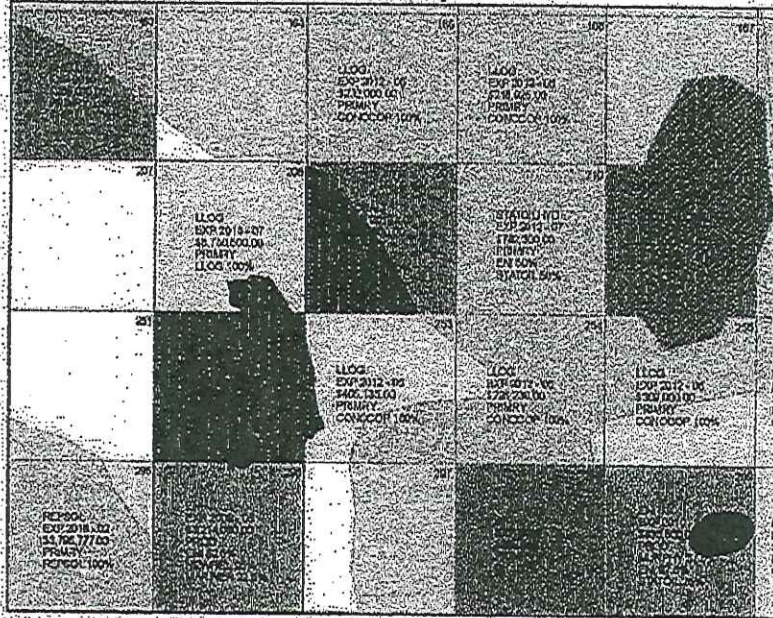
  
David Rainey, VP, BP Exploration & Production Inc

Date: 12-3-09.

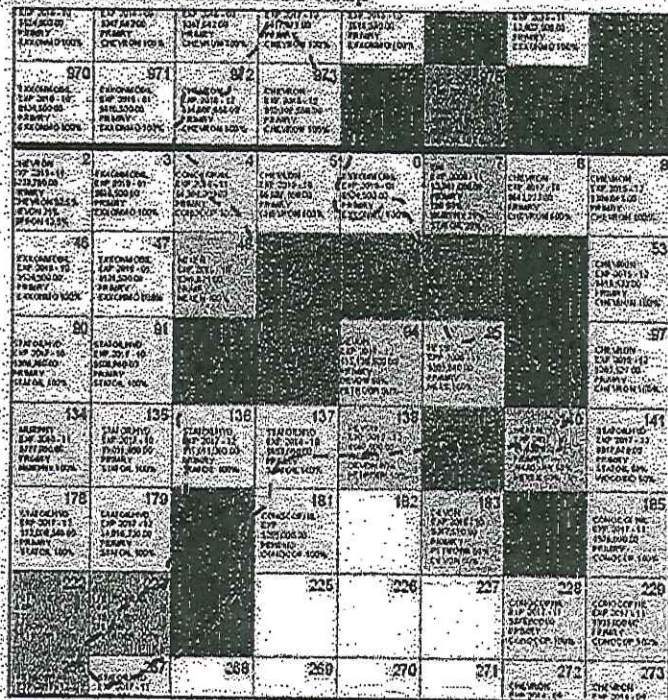
December 2, 2009



### Attachment 1: Macondo Lease Map



### Attachment 2: Gila Lease Map



December 2, 2009



## Attachment 3: Koelsch Lease Map

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				996 CHEVRON EXP 2018-01 312,500.00 PRIMARY CHEVRON 100%	
	25			28	29 HUNT OIL EXP 2018-01 317,500.00 PRIMARY HUNT OIL 100%
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112 CHEVRON EXP 2018-01 312,500.00 PRIMARY CHEVRON 100%				116 CHEVRON EXP 2018-01 312,500.00 PRIMARY CHEVRON 100%	117 HUNT OIL EXP 2018-01 317,500.00 PRIMARY HUNT OIL 100%
166	167	168 DEVON EXP 2018-01 312,500.00 PRIMARY DEVON 100%	169	160 STAFORNO EXP 2018-01 312,500.00 PRIMARY STAFORNO 100%	161 HUNT OIL EXP 2018-01 317,500.00 PRIMARY HUNT OIL 100%

December 2, 2009



**Supplemental Financial Memorandum**  
**BP Exploration & Production Inc. - Gulf of Mexico Exploration**  
**Macondo Exploration Well**

**Authority Requested:** To commit \$17m net of additional NTE capital to complete the Macondo exploration well.

Million US\$	Gross \$m	BP Net Cost \$m (~60%)
Original FM Sanction (100% BP)	140	140
Sanction adjusted for farm-out	140	82
Supplemental Sanction Request (NTE)	166	99
Supplemental Performance Target (PT)	151	89

**Why This Project?**

- The SPU objective function includes delivering discovered resources sufficient to sustain production above 450 mboed and testing the potential to grow production to 700 mboed by 2025.
- The Macondo exploration well objective is to test hydrocarbon presence in the Middle Miocene M56 series in a 4-way dip closure. The well was spud by the Marianas rig on October 1, 2009 and drilled to 8,969' MD. Hurricane Ida hit the Marianas on November 8, 2009. The rig was moved to the shipyard for repairs on November 21, 2009 and stayed in the shipyard until the rig release on December 29, 2009. Hurricane Ida damage to the Marianas rig resulted in ~\$31m gross NPT.
- The Deepwater Horizon rig was mobilized on Jan 31, 2010 to complete the well. Currently the Macondo well is drilling at ~15,114' MD in the 12¼ x 14½" open hole and preparing to run 11 7/8" liner. The actual spend to date is about \$118m gross including the hurricane impact. Lost circulation and well control events have resulted in earlier than planned setting of the 18", 16", and 13 5/8" casing strings. The well now requires 11 7/8" and 9 7/8" contingency liners to reach the planned TD.
- The forward plan is to drill to the objective depth of approximately 19,650' MD, execute the evaluation program and, if successful, run 7" production liner. The NTE request is for \$166m total gross, 87 days/10K excluding the hurricane impact, which benchmarks as the lower 3<sup>rd</sup> quartile.

**Readiness to Execute:**

- The Delivery SPA will be Jay Thorseth, DWX Exploration Manager, with a Performance Target of \$151m gross.
- Approximately 4,537' remains to be drilled and two liners to be set prior to reaching the objective depth. The well is expected to finish by the end of April 2010.

March 24, 2010

**Expected Impact on External BP Metrics:**

- BP's net exploration capital for the well will be \$89m total based on the performance target.
- 2010 net capital will be \$49m and 2010 net risked write-off amount will be \$30m based on the performance target.

**Authorities:**

Project SPA:

  
Jay Thorseth, Exploration Manager, DWX

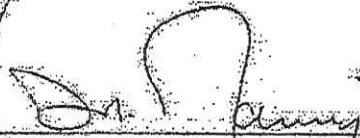
Date: 30 Mar 2010

Supported by:

  
Michael Daly, Head of Exploration

Date: 26 Feb 2010

Approved by:

  
David Rainey, VP, BP Exploration & Production Inc

Date: 30 Mar 2010

March 24, 2010



