UNITED STATES GOVERNMENT
MEMORANDUM

December 21, 2005

To: Public Information (MS 5030)

From: Plan Coordinator, FO, Plans Section (MS 5231)

Subject: Public Information copy of plan

Control #	-	N-08542
Type	-	Initial Development Operations Coordinations Document
Lease(s)	-	OCS-G08035 Block - 574 Atwater Valley Area OCS-G08036 Block - 575 Atwater Valley Area OCS-G08037 Block - 617 Atwater Valley Area OCS-G08038 Block - 618 Atwater Valley Area OCS-G18403 Block - 613 Green Canyon Area
Operator	-	BHP Billiton Petroleum (GOM) Inc.
Description	-	Platform A, Subsea Wells SC001, SC002, SC003, SD001, SD002, SA001, SD001ST01, SB001ST01
Rig Type	-	Not Found

Attached is a copy of the subject plan.

It has been deemed submitted as of ~~this date~~ 10/11/05 and is under review for approval.

MT
Michael Tolbert
Plan Coordinator

DEC 22 2005

Site Type/Name	Botm Lse/Area/Blk	Surface Location	Surf Lse/Area/Blk
FPSO/A(TLP)		3267 FNL, 5461 FEL	G18403/GC/613
WELL/SA001	G08037/AT/617	3280 FNL, 860 FEL	G08037/AT/617
WELL/SB001ST0	G08035/AT/574	1483 FNL, 5548 FEL	G08038/AT/618
WELL/SC001	G08035/AT/574	2494 FSL, 2331 FEL	G08035/AT/574
WELL/SC002	G08035/AT/574	2576 FSL, 2287 FEL	G08035/AT/574
WELL/SC003	G08035/AT/574	2539 FSL, 2413 FEL	G08035/AT/574
WELL/SD001	G08036/AT/575	4785 FSL, 4092 FWL	G08036/AT/575
WELL/SD001ST0	G08036/AT/575	4785 FSL, 4092 FWL	G08036/AT/575
WELL/SD002	G08036/AT/575	4820 FSL, 4006 FWL	G08036/AT/575

Neptune Project: Execution Phase

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September 12, 2005

Hand-Delivered

Ref. No.: NEP-BHP-00-RG-PLN-0101

Mr. Donald C. Howard
Regional Supervisor, Office of Field Operations
U.S. Department of the Interior
Minerals Management Service
4141 N. Sam Houston Parkway East, Room 104
Houston, TX 77032

Attn: Plans Section

Subject: **MMS Request for Information, EP Control No. N-8542**
Initial Development Operations Coordination Document (DOCD)
Atwater Valley 574 Unit (Neptune Unit), Agreement No. 754395004
Atwater Valley 573, 574, 575, 617 and 618
OCS-G 08034, 08035, 08036, 08037 and 08038
Gulf of Mexico, Offshore, Louisiana

Dear Mr. Howard:

BHP Billiton submitted an Initial Development and Operations Coordination Document (DOCD) for the Neptune Project to MMS on August 16, 2005, in accordance with Notice to Lessees (NTL) No. 2003-G17, *Guidance for Submitting Exploration Plans and Development Operations Coordination Documents*, effective August 27, 2003.

On August 23, 2005, MMS transmitted a Request for Information (RFI) further to the Initial DOCD, EP Control No. N-8542, summarized in table format and enclosed for your convenient reference. These items were reviewed in a meeting on August 24, 2005, with Karen Dunlap, MMS, and Deb Beaubien, BHP Billiton representative.

The Neptune DOCD has been revised to address the requested information. A hard copy and five electronic copies of the revised DOCD (proprietary); and four electronic copies of the Public Information DOCD are being submitted with this letter to facilitate your review in light of the MMS implementation of the Continuity of Operations Plan and opening of the temporary Houston office.

Topsides fabrication preparation under this plan will begin this month. Additional details regarding the sequence and timing of development activities are included in the DOCD.

Thank you in advance for your consideration and review of the Neptune Unit DOCD. Should you have any questions or requests for additional information, please contact me at (713) 499-5414 or our Regulatory Consultant, Deb Beaubien, at 713-702-8524.

Yours sincerely,

Original signed by Debra K. Beaubien on behalf of

Scott A. Bergeron
Neptune HSERQ Team Lead

Enclosures: RFI Summary Table
Revised Neptune Unit DOCD (proprietary & public information copies)

cc: Deb Beaubien, Ocean 1 Consulting, LLC

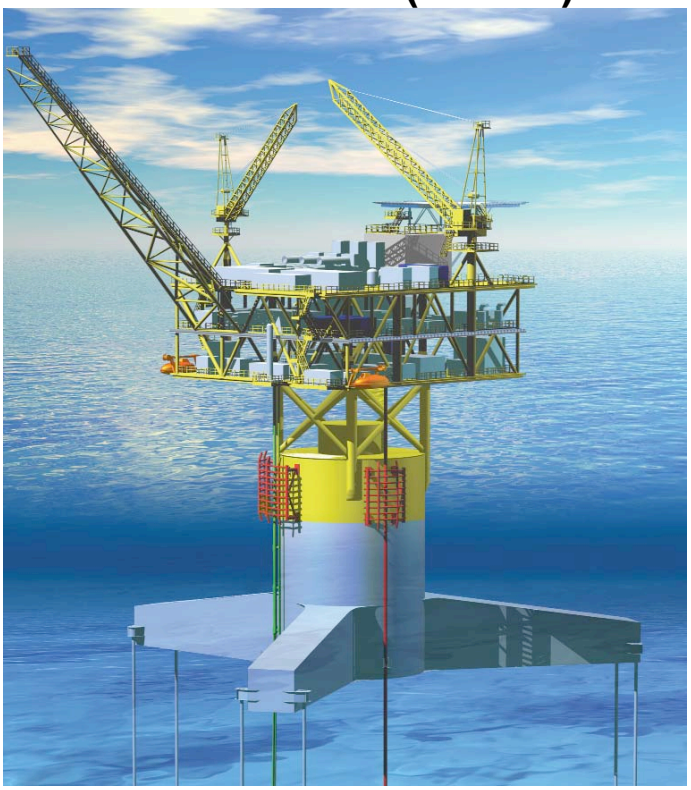
Appendix A - Contents	A location plat showing the S/L, BHL, and call of all the wells.	Plats are included in the revised DOCD as requested.
	The mooring pattern for the Hermond SSCV.	Preliminary anchor plan for the Hermod is included in the revised DOCD as requested.
Appendix B - General	The nearest distance to shore is indicated as 114 miles in the OSRP comparison chart and on the plan info form, but as 120 miles in this section and on the activity map	Activity map has been revised to indicate 114 miles to nearest shoreline as requested.
	On page 39 re the gas and oil export systems and lateral pipelines, please clarify if these are ROW's or lease-term pipelines. What is the shut-in time for the pipelines?	DOCD text has been revised to indicate these are Right-of-Way pipelines, and to indicate the shut-in time as requested.
Appendix C - G&G	Re the figures references under 3.2 on page 46 - they don't correlate. Well SC001 ST03 on Figure 3-5 is listed as SC002. Well SC003 is listed on figure 3-7 as SC-001 ST03. Well SA001 on Figure 3-9 is listed as SC003, etc.	Figure numbers have been corrected in the revised DOCD as requested.
Appendix E - Wastes and Discharges	On the Disposal Table, under NORM, Newpark in Winnie, Texas is listed as the facility. If that is the case, you will need a Texas CZM certification, and you will need to address their enforceable policies.	It is not anticipated that the Neptune Project will generate NORM waste for disposal. The DOCD has been revised to delete this from the waste table.
Appendix F - OSRP	Comparison chart - the distance to shore doesn't agree with where it's mentioned in other parts of the plan.	The activity map and text have been revised to indicate the 114 miles distance to the nearest shoreline as requested..
	The plan states that this activity will supersede your approved OSRP WCD. Therefore, the certification statement in 6.4 is not applicable.	The DOCD has been revised.
Appendix H - EIA	You need to address: Alternatives considered to reduce environmental impacts Self-imposed mitigation Measures List of agencies and persons consulted SEE NTL 2003-G17 - page 28.	The DOCD has been revised as requested.

Appendix I - CZM	For the LCZM, you need to include the statement that "relevant enforceable policies were considered in certifying consistency" – NTL 2003-G17, page 30 - if you include this statement, you don't need to address each enforceable policy for Louisiana. FYI - the letters that were sent to the newspapers don't include GC 613 - you no longer need to do this - LCZM puts notification out on their website.	The DOCD has been revised as requested.
Plan Info Form	Development drilling is checked - the drilling is being done under EP's.	The DOCD has been revised as requested.
	There is no drilling rig for this operation - just the DP Balder constructions vessel and the moored Hermod SSCV for installation of the TLP.	The DOCD has been revised as requested.
	Under Proposed Activity, the plans referenced should include S-6640 and delete S-6649.	The DOCD has been revised as requested.
Well Info Form	On each well info form, it would be helpful if you could please include the corresponding EP Plan number and the former name of the well.	The DOCD has been revised as requested.
Miscellaneous	Location info on page 15 - shows the calls for SD001 as 4092.26 FWL for the S/L - on the well form it's 4092.26 FEL. The BHL on page 15 is 6851 FWL and 6851 FEL on the well info form. Please clarify	The DOCD has been revised as requested.
	The well pre-drilling program chart on page 12, references S-6324 for SC003. However, the calls for the only well with a SL and BHL in the AT 574 are quite a bit different than those on the well form for this plan. Please clarify.	Proposed well SC003 does refer to EP location 'M' in S-6324. The 'M' location will be moved to the drill center C location via the APD process, and the calls will be consistent with what is in the DOCD for this well.

PUBLIC INFORMATION COPY
N-8542

Neptune Project: Execution Phase
Gulf Of Mexico

INITIAL NEPTUNE UNIT DEVELOPMENT OPERATIONS COORDINATION DOCUMENT (DOCD)



Document Control Number	Project ID	Discipline	Doc. Type	System Code	Sequence No.	Revision No.
	NEP	BHP	00	RG	PLN	0101

TABLE OF CONTENTS

1 INTRODUCTION

This Initial Development Operations and Coordination Document (DOCD) for the Neptune Unit, operated by BHP Billiton Petroleum (GOM), Inc., has been prepared as required by regulations at 30 CFR 250, Subpart B, and in accordance with the guidance documents provided by Notice to Lessees (NTL) No. 2003-G17, *Guidance for Submitting Exploration Plans and Development Operations Coordination Documents*, effective August 27, 2003, and other NTLs referenced therein. MMS regulations at 30 CFR 250, Subpart B, require information be provided to MMS, affected States and the public of planned exploration, development and production operations. For development and production activities, MMS must receive and approve a Development and Operations Coordination Document (DOCD) that covers those activities.

1.1 Description

1.1.1 Development Concept

The development concept proposed for the Neptune Unit is for seven, pre-drilled, subsea wells connected to a daisy-chained, dual flowline system; tied back to a 50,000 barrels per day, manned, production facility; supported by a Tension Leg Platform (TLP) floating production system, moored above the Sigsbee escarpment.

The pre-drills will be located at four proposed Drill Centers (A, B, C and D), located along the southern flowline. Provisions will be made for three future Drill Centers (two on the northern flowline route [E and F], one on the southern flowline route [G]). **Figure 1-1**, Section 1.5, *Figures for Section 1*, provides a general layout of the overall development facilities.

1.1.2 Neptune Unit and Ownership

The Neptune Unit is comprised of Atwater Valley (AT) Lease Area Blocks 573, 574, 575, 617 and 618, leased at the Central Gulf of Mexico Lease Sale No. 98, held on May 22, 1985. These lease blocks are shown in **Figure 1-1**, Section 1.5, *Figures for Section 1*.

Neptune Unit ownership is summarized below:

Neptune Unit Ownership

Owners	Ownership
BHP Billiton Petroleum (Deepwater), Inc.	35%
Marathon Oil Company	30%
Woodside Energy (USA), Inc.	20%
Maxus (U.S.) Exploration Company	15%

1.1.3 Lease History – Unit and Wells

The five Neptune lease blocks were unitized as the Atwater Valley Block 574 Unit, Agreement No. 754395004, in February 1995. The primary lease term for the Neptune blocks expired July 31, 1995, after which, the leases have been held variously by either drilling operations or Suspension of Production (SOP) approvals issued in accordance with Articles IX, XVI, and XVII of the Unit Agreement and 30 CFR 250.174.

In May 1996, a Suspension of Production (SOP) granted by the MMS retained the leases beyond the primary term, until the SOP was terminated by the MMS in July 2002. At that time, BHP Billiton became the designated operator, and initiated an appraisal drilling program which held the leases from July 2002 through October 15, 2004, by 180-day continuous drilling operations.

The leases were held by an SOP granted by MMS on July 16, 2004, effective from October 16, 2004 through April 30, 2005. On April 25, 2005, MMS approved an SOP for the Unit from May 1, 2005 through July 31, 2005, when the pre-drilling program was expected to begin. Drilling has been delayed, and a new SOP was approved by the MMS on July 26, 2005 for the Unit from August 1, 2005 through October 31, 2005. A copy of the new SOP is included in the Appendices Document, Section 1.

1.1.4 Previously Approved Exploration Plans

Several Exploration Plans (EPs) have been approved previously by the MMS for activities in the Neptune project area. Information regarding these EPs, including the Lease Area, Block and Number, is summarized below.

These EPs contain substantial information on shallow hazards, drilling, shore base, support vessels, Environmental Impact Analysis, and other site information and are incorporated herein by reference.

Previously Approved Exploration Plans

OCS Lease Number		G 08034	G 08035	G 08036	G 08037	G 08038
Lease Area & Block		**AT 573**	**AT 574**	**AT 575**	**AT 617**	**AT 618**
Approved Exploration Plan (EP) Document Control No.	**N 4982**		X	X		X
	N 7528	X	X			
	S 4293				X	
	R 3141				X	
	R 3788				X	
	S 6113		X			
	S 6324		X	X		X
	S 6640			X		
	S 6641				X	X
	S 6670				X	

1.1.5 Lease Information – Host Facility Location

This DOCD covers activities to develop and produce the Neptune Unit leases, and bring the production to a Tension Leg Platform (TLP) located in Green Canyon (GC) 613, Lease OCS-G 18403. A Right-of-Use and Easement (RUE) is required for the Neptune TLP location on this block, which is leased by Chevron USA, Inc. (75%) and Encana GOM, LLC (25%).

The development concept for Neptune is based on the project team's determination that the host facility should be located above the Sigsbee Escarpment to facilitate use of proven TLP floating production system technology in the water depths above the escarpment.

An application for the RUE was submitted to MMS in a letter request dated March 14, 2005. The RUE request is to be considered by MMS in conjunction with review and approval of this DOCD and is incorporated by reference herein. A copy of the RUE request is included as **Figure 1-2**, Section 1.5, *Figures for Section 1*, and in the Appendices Document, Section 1.

1.1.6 Ongoing Coordination with MMS

1.1.6.1 Exploration Plans (EP) pertaining to the Pre-Drill Program

This was described previously in Section 1.1.4.

1.1.6.2 Suspension of Production (SOP)

This was described previously in Section 1.1.3.

1.1.6.3 Right-of-Use (RUE) and Easement for GC 613

This was described previously in Section 1.1.5. The RUE for the TLP location in GC 613 will be considered by MMS in conjunction with this DOCD. The areal coverage of the footprint of the TLP is less than 2 acres, therefore, the minimum rental fee of $675 per year is applicable. Payment of the first year's fee is included with this DOCD.

1.1.6.4 Conceptual DWOP

Neptune submitted a Conceptual Deepwater Operations Plan (CDWOP) to MMS for the Neptune project on June 14, 2005, in accordance with NTL 2000-N06, *Deepwater Operations Plans*, issued October 1, 2000. On June 22, 2005, the Neptune Project Leadership Team met with senior MMS Regional representatives to present an overview of BHP Billiton and the Neptune Project. The Conceptual DWOP was approved by MMS on July 28, 2005.

1.1.6.5 Current Monitoring

A technical meeting was held with MMS on April 28, 2005, to discuss BHP Billiton's plans for compliance with NTL 2005-G05, *Deepwater Ocean Current Monitoring on Floating Facilities*, issued April 21, 2005. Subsequently, on May 19, 2005, an exclusion from the pre-installation requirements was requested and approval was received from MMS on June 29, 2005. A copy of the MMS approval letter is included in the Appendices Document, Section 1.

MMS granted the exclusion because sufficient data had been collected previously from the nearby area, site-specific data were incorporated into the design, the design exceeds anticipated current conditions, and both the DDI and the Neptune TLP incorporate the current monitoring requirements of the NTL when they are operational.

1.1.6.6 New Drill Rig

A technical meeting was held among BHP Billiton, Global Santa Fe, and MMS Regional and New Orleans District representatives on May 24, 2005, to review the new-build rig, the Development Driller I (DDI), which will be used for the Neptune pre-drill program. Subsequent meetings to discuss technical issues in more detail will be convened as appropriate or requested.

1.1.6.7 Conservation Information Document (CID)

The Neptune Conservation Information Document (CID) is being prepared in accordance with NTL 2000-N05, *Conservation Information*, issued October 1, 2000. The CID will be submitted to MMS separately.

1.1.6.8 Pipeline Right-of-Way (ROW)

To route to the TLP, the Neptune production flowlines cross into GC 613, which is not leased by BHP Billiton, making these Department of the Interior (DOI) Right-of-Way (ROW) pipelines. A ROW application will be submitted to MMS separately.

1.1.7 Neptune Wells History

Information regarding the exploration and appraisal wells that have been drilled to date for the Neptune Field is summarized in the table below.

Neptune Field Wells History and Information

Neptune Unit Well #	Well Area & Block	EP Control No.	Well Name	API Well No.	Spud Date	Well Status	Water Depth
N-1	AT 575 #1	N-4982	001ST00BP00	608184000500	03/25/95	Perm. Aband.	6251'
N-2	AT 574 #1	N-4982 R-3141	001ST00BP00	608184000801	07/22/97	Perm. Aband.	6133'
N-3	AT 617 #1	S-4293 R-3788	001ST00BP00	608184003000	06/08/02	Temp. Aband..	6140'
N-4	AT 573 #1	N-7528	001ST00BP00	608184003600	12/08/02	Temp. Aband.	5995'
N-5	AT 574 #2	S-6113	002ST00BP00	608184004400	07/02/03	Temp. Aband.	6215'
			002ST01BP00	608184004401			
			002ST02BP00	608184004402			
N-6	AT 618 #1	S-6324	001ST00BP00	608184004600	02/19/04	Perm. Aband.	6260'
N-7	AT 618 #2	N-4982	002ST00BP00	608184004700	03/02/04	Temp. Aband..	6264'

1.1.8 Neptune Development Well Naming

For the Neptune production wells, the naming and numbering system is comprised of the following alphanumeric combination, **S*X*00*y* ST0*z***, whereby:

- **S** designates a **Subsea** well
- ***X*** is the letter designating the **Drill Center** from which the well is drilled
- **00*y*** is the three digit number designating the **sequence** of the well with respect to the Drill Center
- **ST** designates a **Sidetrack**, if appropriate
- **0z** is the two digit number designating the **sequence** of the sidetrack with respect to the well

For example, **SC002** identifies a **S**ubsea production well, at Drill Center **C**, and is the second well (**002**) at Drill Center C.

1.1.9 Description of the Pre-Drilling Activity

It is proposed that seven production wells be pre-drilled and completed for Neptune prior to the installation of the TLP floating offshore production facility. BHP Billiton has entered into a long-term contract with Global Santa Fe for a new-build drilling rig, the Development Driller I (DDI), for drilling and completing the Neptune wells. This drilling program is currently expected to commence in October 2005. It is intended that all seven Neptune production wells will be available by First Oil.

The surface locations for these wells have been approved in previous EPs as summarized in the table below.

Neptune Unit Pre-Drilling Program

Well	Drill Center	Surface Area/Block	Lease OCS-G-	Water Depth	EP No.	Comments
SC002	C	AT 574	08035	6213'	S 6324	Initial 4 batch set
SC001 ST03	C	AT 574	08035	6213'	S 6113	Neptune 5 Re-entry
SD001	*D*	*AT 575*	*08036*	*6251'*	*S 6640*	*Initial 4 batch set; Delineation well; **Not a production well**; See SD001 ST01 entry*
SA001	A	At 617	08037	6168'	S 6670	Initial 4 batch set; Site of future Reservoir Management Well SA001 ST01
SC003	C	AT 574	08035	6213'	S 6324	Initial 4 batch set
SD002	D	AT 575	08036	6251'	S 6640	
SD001 ST01	D	AT 575	08036	6251	S6640	Side-track out of delineation well bore (See SD001 entry)
SB001 ST01	B	AT 618	08038	6261'	N4982	Neptune 7 Re-entry; BHL AT 574 (OCS-G-08035)

The first four wells will be 'batch set', initially drilled to 3,000' below the mudline, with 22" casing set. Then all seven production wells will be drilled to target depth and production casing set, provided the appropriate criteria have been met. Finally, all seven wells will be completed.

The first completion will be a dual-stack pack, which will possibly be flowed back to the rig to clean up, test the formation, and assess the completion methodology. A dual-stack pack is selected as the first completion due to the high information content gained through the completion. Next, less-complicated single completions will be attempted, before graduating back to the more complex dual-stack packs. Most of the critical high rate wells are completed later in the program. The wells are at surface locations previously approved by MMS in Exploration Plans indicated in the previous table. The appropriate information and applications will be submitted pursuant to the respective EP for the proposed flowback of the first completion.

The facility design will incorporate flow back capability to the TLP host as a base design. Hazard identification, operational, and safety reviews must be assessed before a decision can be made regarding completion flow-backs to a dynamically positioned floating drill rig.

The current estimated duration of the seven production well program is 493 days. The drill sequence was designed to maximize knowledge early in the campaign for optimizing remaining wells.

1.1.10 Geological Objectives

Public Information Copy

1.1.11 General Schedule Overview

The general sequencing and timeframe of the main activities for the Neptune Development Project are summarized below:

Proposed Activity	Proposed Start	Proposed End
Drilling & Completion Pre-Drill Program*	Oct. 2005	Feb. 2007
Topsides Fabrication & Transport	Sep. 2005	Apr. 2007
Hull Fabrication & Transport	Dec. 2005	Mar. 2007
Install Flowlines, Risers & Umbilicals	Dec. 2006	May 2007
Install Piles	Late Sep. 2006	Mid Oct. 2006
Install Tendons, Hull, SCR,	Mar. 2007	Apr. 2007

Topsides Hook-Up & Commissioning	Apr. 2007	Jul. 2007
Commission Export Lines	Jun. 2007	Aug. 2007
*Previously approved in EPs (see Section 1, this document)		

Dates shown here and throughout this DOCD are tentative. Some activities may overlap others. The two, right-of-way export pipelines will be installed by a third party.

1.2 Location Information

The Neptune field is centered in Atwater Valley Block 574, 125 miles south of Fourchon, Louisiana. The planned wells lie below the Sigsbee Escarpment at an average water depth of 6200 ft. The planned host facility is above the Escarpment in Green Canyon 613, approximately 6 miles west-northwest of the center of the field. Water depth at the host facility is 4230 ft.

A table compiling information on the proposed wells and TLP location is included below in Section 1.2.1. The plats depicting the well information are included as **Figures 1-3, 1-4, and 1-5**, Section 1.5, *Figures for Section 1*.

In addition, a plat depicting the Neptune TLP location and bathymetry is included as **Figure 1-6**, Section 1.5. A plat depicting the proposed Drill Center C manifold is included as **Figure 1-12**, Section 1.5.

The nearest safety fairway is the "South of Gulf" safety fairway, which terminates approximately 29 miles to the north. The field lies in Environmental Assessment Area Grid 13. Military Warning Area W-92 lies approximately 18 miles west of the planned host facility. There are no ordnance or chemical dumps in the vicinity. The field does not lie near any biologically sensitive areas such as reefs, live bottoms or identified sensitive topographic features. The Neptune Field and host facility do not fall within the revised list of blocks requiring archeological surveys and reports as specified in NTL 2005-G10, issued June 24, 2005.

1.2.1 Location Information, Surface and Bottom Hole Locations, Neptune Wells and TLP

The following table includes detailed information regarding the Neptune wells and TLP locations.

		Surface Location				Bottom Hole Location [Public Information Copy]					
Well	Water Depth	Area Block OCS-G-	Offsets	X Coord Y Coord	Latitude Longitude	Area Block	Offsets	X Coord Y Coord	Latitude Longitude	TVD SS	MD
SC002	6213'	AT 574 08035	2575.77 FSL 2286.66 FEL	726353.3 9934255.8	N 27d 20' 53.078" W 89d 48' 58.035"						
SC001 ST03	6213'	AT 574 08035	2494.11 FSL 2331.17 FEL	726308.8 9934174.1	N 27d 20' 52.260" W 89d 48' 58.508"						
SD001	6251'	AT 575 08036	4785.23 FSL 4092.26 FWL	732732.3 9936465.2	N 27d 21' 16.362" W 89d 47' 47.903"						
SA001	6168'	AT 617 08037	3280 FNL 860 FEL	711940.0 9928400.0	N 27d 19' 51.890" W 89d 51' 36.247"						
SC003	6213'	AT 574 08035	2538.62 FSL 2412.83 FEL	726227.2 9934218.6	N 27d 20' 52.682" W 89d 48' 59.423						
SD002	6251'	AT 575 08036	4820 FSL 4006 FWL	732646.0 9936500.0	N 27d 21' 16.687" W 89d 47' 48.868"						
SD001 ST01	6251	AT 575 08036	4785.23 FSL 4092.26 FWL	732732.26 9936465.23	N 21d 21' 16.362" W 89d 47' 47.903"						
SB001 ST01	6261'	AT 618 08038	1483.01 FNL 5547.53 FEL	723092.5 9930197.0	N 27d 20' 12.187" W 89d 49' 33.147"						
TLP	4229'	GC 613	9231.7 FWL 3267.2 FNL	2638671.7 9944252.8 UTM 15	N 27d 22' 12.284" W 89d 55' 28.490"						

1.3 Drilling Unit

Drilling will be conducted from a Global Santa Fe, new-build, dynamically-positioned (DP), semi-submersible drillship, called the Development Driller I (DDI). Detailed information regarding the DDI will be submitted with the APDs. As indicated previously, BHP Billiton and Global Santa Fe representatives presented detailed information regarding the DDI to MMS Regional and New Orleans District personnel on May 24, 2005.

1.3.1 Key Features of the Development Driller I (DDI)

A representation of the DDI is included as **Figure 1-7**, Section 1.5, *Figures for Section 1*. Several key features of the rig include, but are not limited to, the following:

- Purpose built for development drilling
- Multiple activity rig
- Acoustic Dynamic Positioning (DP) System
- Accurate positions of seabed locations
- Highly automated tubular handling and riser running
- Tank cleaning system to eliminate personnel entry
- Dedicated clean pontoon storage and transfer system
- ISO 14001 Environmental Management System compliant
- Vertical riser storage
- BOP elevator system
- Rig HSE Case will be prepared

1.3.2 Ocean Current Monitoring Requirements

As indicated previously in Section 1.1.6.5, for the pre-drill program using the DDI, BHP Billiton will comply fully with the requirements of the Notice to Lessees (NTL) No. 2005-G05, *Deepwater Ocean Current Monitoring on Floating Facilities*, issued April 21, 2005. A 38 kHz meter, configured to look downward from the surface, and a 75 kHz meter, configured to look up from the seabed, will be used to collect the requisite data from the drill rig. The ROV will also be equipped with a 300 kHz meter.

Additional information regarding the DDI, and specifically the Neptune pre-drilling program, will be provided in the Application to Drill (APD) process.

1.4 Description of Proposed TLP Structure and Production Facilities

1.4.1 TLP

The host facility will be a new-build, mono-column, production-only, Tension Leg Platform (TLP). Topside facilities include full production/utility equipment and accommodations. The facility will be classed to American Bureau of Shipping (ABS) Guides/Rules as a Floating Offshore Installation (FOI). The host facility will include accommodation for a maximum of 50 personnel with 26-person permanent quarters, plus 24 (two 12-person) temporary quarters. A depiction of the TLP is included as **Figure 1-8**, Section 1.5, *Figures for Section 1*. A depiction of the topsides, looking northeast, is included as **Figure 1-9**, Section 1.5.

The TLP hull will consist of a central surface-piercing support column (i.e., mono-column) supported by 3 radially-extending submerged pontoons. BHP Billiton has previously applied a similar TLP system in the Gulf of Mexico for the Typhoon Development, and considers this to be proven technology.

The TLP hull serves to support the topside production facilities, production Steel Catenary Risers (SCRs), control umbilicals, and export SCRs. The hull will be constructed of steel plate, stiffeners, and girders, using modular shipyard fabrication technology.

The hull will be minimally outfitted with marine systems (for ballast, bilge, ventilation, and hull/tendon monitoring) and designed to be as independent of the topside systems as possible. The hull is not intended to be a normally manned space, however access is provided for maintenance and inspection activities as required.

SCRs will be terminated with flex joints or stress joints and hung on porches at the base of the central column. Fixed riser piping on the outside of the central column will provide the flow path from the end of each SCR to the topside facilities.

1.4.2 TLP Mooring

Six vertical tendons, attached between the seafloor and the outboard ends of the pontoons, will moor the hull. Excess buoyancy in the hull at operational draft induces a high tension in the tendons. This vertical mooring suppresses heave, pitch, and roll motions of the hull, but allows compliant offset in the horizontal (surge and sway) directions. Tendons will be fabricated out of steel pipe and will be kept void to achieve near-neutral buoyancy. Tendon sections will be stalked together offshore using proprietary non-rotating box and pin connectors. The tendons will be anchored to the seafloor using a mechanical connection at the top of a driven tubular pile installed using an underwater hydraulic hammer.

Figure 1-10, Section 1.5, *Figures for Section 1*, is a preliminary drawing of the foundation pile locations. Since this is a vertical tendon mooring system, the moorings will be directly over the pile locations. The areal extent of the TLP mooring footprint is calculated at less than two acres.

Tendons will be provided with fairings or strakes in the upper third of the water column to prevent VIV caused by Loop Current eddies or submerged currents. A TTMS (tendon tension monitoring system) will be integrated with the hull monitoring system to continuously report tensions from load cells at each tendon top connector.

Marine systems will be provided for ballast, bilge, ventilation, and hull/tendon monitoring. Only the minimum necessary equipment will be located within the hull. Where installed inside the hull, equipment such as pumps and remotely operated valves will be located in the ventilated access shaft or HUS (hull utility space) for operator convenience and safety.

All ballast piping will be routed "over the top" of the hull, that is, no sea chests or other hull penetrations will be employed. Water for filling ballast tanks will be provided by effluent from the topside seawater lift/jockey pump system or other external pumps. After hull installation, ballast operations are intended to be very infrequent.

The hull access shaft will have an unobstructed area suitable for lowering equipment and for raising injured personnel. Platforms will be provided at levels where valves or other equipment may require service. Stairways shall be provided in lieu of ladders for access to these platforms.

Ladders and platforms shall be provided on the outside of the hull as necessary to access equipment or appurtenances. Waterline access shall be provided at two locations, but a boat landing will not be provided.

1.4.3 Ocean Current Monitoring

BHP Billiton will comply with the requirements of MMS Notice to Lessees (NTL) 2005-G05, *Deepwater Ocean Current Monitoring on Floating Facilities*, Issued April 21, 2005; Effective April 30, 2005.

For the TLP, a 38 kHz ADCP meter, configured to look downward from the surface and winch retrievable, combined with a 300 kHz horizontal ADCP to measure near-surface currents, and a second 300 kHz*f* ADCP meter, configured to look up from the seabed and boat retrievable using acoustic release, will be used to collect the requisite data from the facility. A third party provider will be contracted to manage the data submittal in accordance with the NTL requirements.

1.4.4 Production Facilities

The Topsides will be a four-legged structure with three decks – Main, Production and Cellar. There will also be a flare boom, and two, 50-person survival crafts. The Production Design Basis is 50 MBOPD, 50 MMSCFD and 15 MBWPD.

The topsides production facilities will consist of three stages of processing with compression required for each stage. The compression train will include a turbine driven centrifugal main gas compressor and a reciprocating flash gas compressor.

Production facilities on the offshore TLP facility will dehydrate the gas, treat the oil to market quality and treat and dispose of produced water by overboard discharge in accordance with applicable EPA regulations.

Sales gas will be dehydrated to meet the export system design requirements. A heat medium system will provide the input of additional heat to the product stream downstream of the 1st stage separator in order to enhance separation and treatment of the viscous crude. The oil export pipeline pumps will be multistage centrifugal pumps.

Hydrocyclones, located on the water outlet of the second stage separator, and final polishing water treatment facilities will be provided to properly process produced water prior to overboard discharge.

The flare system will be designed for the maximum gas rate associated with a 1000 GOR; however, additional design requirements for the blow-down of the flowlines (for flow assurance issues) will be incorporated. Capabilities for flowline pigging, dry oil displacement, and hot oil circulation are included for start-up, shutdown, and operating requirements.

Production support facilities, such as chemical storage, power generation, material handling, and accommodations will be fit for purpose and the overall design will have safety, the environment, constructability, operability, and maintainability as primary considerations.

1.4.5 Installation Information

Heerema Marine Contractors (HMC) will install the piles, tendons, hull, SCRs and topsides. HMC will use the Balder Deepwater Construction Vessel (DCV), a DP vessel, to install the piles, tendons, hull, and SCRs; and the Hermod SSCV, a moored vessel, to install the Topsides. A 15,000 foot 'anchor radius' around the TLP location in GC 613 has been 'cleared' and the results are discussed in Section 3.3, *Shallow Hazards Report*, of this DOCD, which also includes a map of the 15,000 foot 'mooring area' anchor radius that has been 'cleared' for Neptune (**Map 3-3,** Appendices Document, Section 3). Enclosed as **Figure 1-11**, Section 1.5, *Figures for Section 1*, is a general mooring pattern for the HMC Hermod SSCV.

1.4.6 Proposed Pile Installation (4th Qtr of 2006)

The sequencing of activities associated with the proposed pile installation, tentatively scheduled for 4th quarter, 2006, includes the following activities and equipment:

Pile Installation Activity (4th Qtr of 2006)	Site	Barge (400' x 100')	Tug	HMC Balder
Transport Piles from Fabricator to Installation Site	To GC 613	1	1	
Lash Barge to HMC Balder	GC 613	1	1 standby	1
Upend, Lower & Stab Piles to Self Penetration Using Internal Lifting Tool (ILT)	GC 613	1	1 standby	1
Release Pile Barge and Tug	Depart GC 613	1	1	
Lower 500 T Underwater Hammer & Drive Piles to Design Penetration*	GC 613			1
Install Anode Sleeve on Pile	GC 613			1
Perform Pile As-Built Survey	GC 613			1

*Note the schedule summarized in Section 1.1.11 provides for 'soak time' for the piles prior to tendon installation between late September 2006 and March 2007.

1.4.7 Proposed Tendon Installation (1st Qtr of 2007)

The sequencing of activities associated with the proposed tendon installation, tentatively scheduled for 1st quarter, 2007, includes the following:

Tendon Installation Activity (1st Qtr of 2007)	Site	Barge (400' x 100')	Tug	HMC Balder
Transport Tendons from Fabricator to Installation Site	To GC 613	2	2	
Lash Barge to HMC Balder	GC 613	1	1 standby	1
Upend Tendon Sections and Engage into Tendon Assembly Frame (TAF)	GC 613	1	1 standby	1
Connect Tendon Sections Using Merlin Connectors	GC 613	1	1	1
Lift and Set Tendon Buoyancy Module (TBM) into TBM Tower Mounted on the Balder	GC 613	1 & TBM barge	2 standby	1
Engage completed Tendon into TBM	GC 613	1	1 standby	1
Lower Tendon/TBM Assembly and Stab Into Pile Receptacle	GC 613	1	1 standby	1
Deballast TBM Completely & Derig	GC 613	1	1 standby	1
Repeat for All Six (6) Tendons	GC 613	1 & TBM barge	2 standby	1

1.4.8 Proposed Hull Installation (2nd Qtr of 2007)

Hull installation is tentatively scheduled for 2nd Quarter, 2007. The sequencing of activities associated with this installation include the following:

Hull Installation Activity (2nd Qtr of 2007)	Site	Barge (400' x 100')	Tug(s)	HMC Balder
Wet Tow Hull from Staging Yard to Installation Site	To GC 613		2	
Connect Control and Seakeeping Lines to Hull	GC 613		3	1
Rig Balder Crane to Pre-Installed Hull Lowering Rigging	GC 613		3	1
Hook-up Ballast Hoses from Balder to Hull	GC 613		3	1
Ballast Hull to Lock-off Draft, While Maintaining Constant Hook Load	GC 613		3	1
Stab All Six Tendons Into Corresponding Pontoon Porches	GC 613		3	1
Engage Tendon Connectors on Porches	GC 613		3	1
Deballast Hull to Design Draft and Storm Safe Tendon Tensions	GC 613		3	1
Derig Balder Crane from Hull and All Seafastening Lines	GC 613		3	1
Recover TBMs and Return Them to Shore	GC 613	1 TBM Barge	1	1
Verify Proper Hull Flotation and Make Applicable Cutoffs on Legs of Deck Support Structure	GC 613			1
Remove Temporary Installation Equipment from Top of Hull	GC 613			1

1.4.9 Proposed SCR Installation (2nd Qtr of 2007)

The sequencing of activities associated with SCR installation, tentatively scheduled for 2nd quarter, 2007, includes the following:

SCR Installation Activity (2nd Qtr of 2007)	Site	Barge (400' x 100')	Tug(s)	HMC Balder
Recover Pre-Layed SCR from Seabed to the Surface	GC 613			1
Connect Pull-in Rigging to SCR Pullhead	GC 613			1
Lower SCR into Water and Begin Pulling in Towards SCR Porth on the Hull	GC 613			1
Engage SCR Flexjoint into Porch Basket	GC 613			1
Remove Pullhead	GC 613			1
Install Spool Piece Between Flexjoint Flange and Hull Mounted Riser Tube	GC 613			1
Repeat for Flowlines and Export Risers	GC 613			1

1.4.10 Proposed Topsides Installation (2nd Qtr of 2007)

The sequencing of activities associated with the topsides installation, tentatively schedule for 2nd quarter, 2007, includes the following:

Topsides Installation Activity (2nd Qtr of 2007)	Site	Anchor Handling Vessel (AHV)	Barge (400' x 100')	Tug(s)	HMC Hermod
Mobilize HMC Hermod to Installation Site and Set Anchors	GC 613	1			1
Transport Topsides to Installation Site	GC 613		1	1	
Lash Barge to Stern of Hermod	GC 613	1	1	1 standby	1
Rig to Pre-Installed Lift Rigging	GC 613	1	1	1 standby	1
Cut Tiedowns/Seafastenings	GC 613	1	1	1 standby	1
Lift Topsides and Remove Barge	GC 613	1	1	2	1
Engage Hermod Anchor Winches and Move Into Position Over Hull	GC 613	1		2	1
Stab Topsides Into Legs of Deck Support Structure on Hull	GC 613	1		2	1
Derig Lift Rigging	GC 613	1		2	1
Weldout Deck Legs	GC 613	1		2	1
Lift, Set and Weldout Small Platform Crane	GC 613	1		2	1
Lift, Stab and Weldout Flareboom	GC 613	1		2	1
Perform All Hook-Up & Commissioning Work to Achieve Proper Certifications	GC 613	1		2	1

1.4.11 Description of Proposed Subsea System and Flowlines

Production from the subsea wells will be gathered and routed to the host via two flowlines that traverse the Sigsbee Escarpment. One line is routed to the four southern Drill Centers (A, B, C and D) that are part of this proposal. Two of these Drill Centers, C and B, reuse the Neptune-5, and Neptune-7 wells, respectively. A future Drill Center (G) is also planned for the along the Southern Flowline.

Neptune Development Project Proposed Drill Centers

Neptune Drill Center	Lease Area & Block	OCS Lease No.	Surface System Location Distance from Nearest Block Lines		Wells in Plan
A	AT 617	G 08037	3289 FNL	860 FEL	**1**
B	AT 618	G 08038	1483 FNL	5547 FEL	**1**
C	AT 574	G 08035	2494 FSL	2331 FEL	**3**
D	AT 575	G 08036	4820 FSL	4006 FEL	**2**
E (Future)	*AT 574*	*G 08035*	*6456 FSL*	*7281 FEL*	
F (Future)	*AT 574*	*G 08035*	*6137 FSL*	*2598 FWL*	
G (Future)	*AT 573*	*G 08034*	*2820 FSL*	*2500 FEL*	

Information on the proposed new wells is summarized in the table in previous Section 1.2.1, *Location Information*.

The second flowline is designed and routed to accommodate two potential future drill centers, E and F, for drilling the 'North Flank'. Both flowlines will merge at Drill Center D with a pigging return loop. Initial production will flow up both lines, which can be split at Drill Center C. Late life production will flow up only one flowline to improve flow assurance.

Drill Center architecture will consist of in-line sleds and pipeline end termination (PLET) units at the flowline terminations at Drill Center D. Drill Center C will have a manifold with two jumper tie-in points. The manifold has a flowline isolation valve in the flowline sled and will be capable of switching any of the three wells to either the north or south branch of the flowline loop. The manifold will allow for distribution of these wells in an optimal way between the two flow lines. A location plat for the Drill Center C manifold is included as **Figure 1-12**, Section 1.5, *Figures for Section 1*.

The subsea system will consist of subsea production wells, various subsea hardware items, well control equipment and control umbilicals for seven subsea production wells and a 'daisy chain' loop flowline architecture. The 'daisy chain' concept was determined to be the optimal gathering flowline architecture for Neptune to connect the drilling centers, and transport the oil and gas to production facilities on the TLP. Steel catenary risers (SCRs) will connect the gathering system flowlines to the TLP.

Riser based gas lift is planned as a staged investment. Required pre-investment will be made to ensure that future implementation of riser lift is possible without major modification of the facilities. Gas lift will be reconsidered after significant performance data is available, and development wells are drilled, in order to optimize the production.

Deepwater, 5" x 2", 10 ksi rated Guidelineless (GLL), horizontal subsea production trees will be used for each subsea well, located at various intervals along the subsea pipeline at the Drill Centers.

Subsea chokes on each tree will be used to regulate the pressure, flow and production from each subsea well. Both the north and south subsea flowlines will be terminated in a subsea PLET (pipeline end termination) at DC D that has isolation valves and a removable pigging loop. These may also have future subsea well tie-in capability for wells located adjacent to or nearby the PLET. Drill Centers, flowline configurations and bathymetry contours are depicted in the following figures in Section 1.5, *Figures for Section 1*: **Figure 1-1,** *General Field Layout*; **Attachment A to Figure 1-2**, *Letter Request for Right-of-Use and Easement*; **Maps 3-1 and 3-2**, *AUV Bathymetry Rendering* and *AUV Bathymetry*

Contours, respectively. A large format copy of each of the maps is included in the Appendices Document, Section 3.

1.4.12 Description of the Subsea Wells

The proposed wells will be relatively conventional deepwater wells. Wellbores will utilize normal production tubing and well completion fluids.

The Neptune wells will be produced through single or dual frac pack completions placed in the main producing horizons. The Neptune production casing program was designed to minimize the effects of annular pressure buildup (APB) by eliminating low volume trapped annuli and using high strength tubulars.

- A 9-5/8" production liner below 13-5/8" production casing eliminated the trapped annulus of a tieback and improved cementing efficiency.
- Life cycle modeling of well production at maximum rates, temperatures, and anticipated fluids was performed by three separate consulting firms, all of which validated the well design.
- FEA modeling and testing confirmed the production casing connection integrity in cyclical loading conditions typical of APB.
- The 16" and 13-5/8" casing cement tops are well below the previous casing shoes. The mud left behind pipe is a low solids SBM, reducing the quantity of solids dropout over time. Both of these mitigations will prevent a trapped annulus, minimizing APB.
- APB in the primary (production casing) annulus above the packer may be monitored and bled off via the subsea tree.

Chemical injection capability will be installed at the subsea tree and downhole in each well completion. A permanent downhole flowmeter (DHFM) will be installed in each well. The DHFM incorporates pressure and temperature sensors.

One or more of the Neptune wells may be cleaned up or flowed back to the rig to test the completion. The remainder Neptune wells will be cleaned up and flowed back to the host production facility, along with future workovers and recompletions.

1.4.13 Description of Subsea Wells Control System

The Control System for the subsea wells will consist of multiplexed electrohydraulic (MUX E/H) Control Pods on each Tree, and electrical and hydraulic "Flying Leads" (EFL and HFL) to control ancillary valves or equipment such as the sled and pipeline end termination (PLET) isolation valves. Control signals will be provided by topsides equipment through a subsea control umbilical that contains sufficient hydraulic and electrical conduits to convey signal, data and shutdown commands to the subsea equipment. The topsides

control system will include a Master Control Station (MCS), a hydraulic power unit (HPU), a data recorder, an uninterruptible power supply (UPS), and subsea well control software.

A 10,000 psi rated surface controlled subsurface safety valve (SCSSV) will be installed at a suitable depth below the mud line to mitigate hydrate formation risk. The SCSSV will be tubing retrievable. The downhole SCSSV hydraulic lines will be redundant, and hydraulic operating pressure is expected to be between 5,500 to 7,500 psi.

For each production well, reservoir surveillance will be via continual downhole pressure and rate measurement through the application of permanent downhole flow meters (which include pressure gauges) in each producer. This will provide real-time production data on each well and information required to improve estimates of reservoir volume, pressure support, future performance, and well integrity.

In the event of failure of the permanent downhole flow-meters, methods such as substitution, nodal analysis, or other types of technical analysis will be used for reservoir management and well production allocation. Field production will be managed by hydraulic pressure limits imposed on the wells by production through the subsea flowline network. As necessary, the surface flow rate will be choked back at the topsides to maintain total oil, water, liquid, and gas rates below the safe operating limits of the facility.

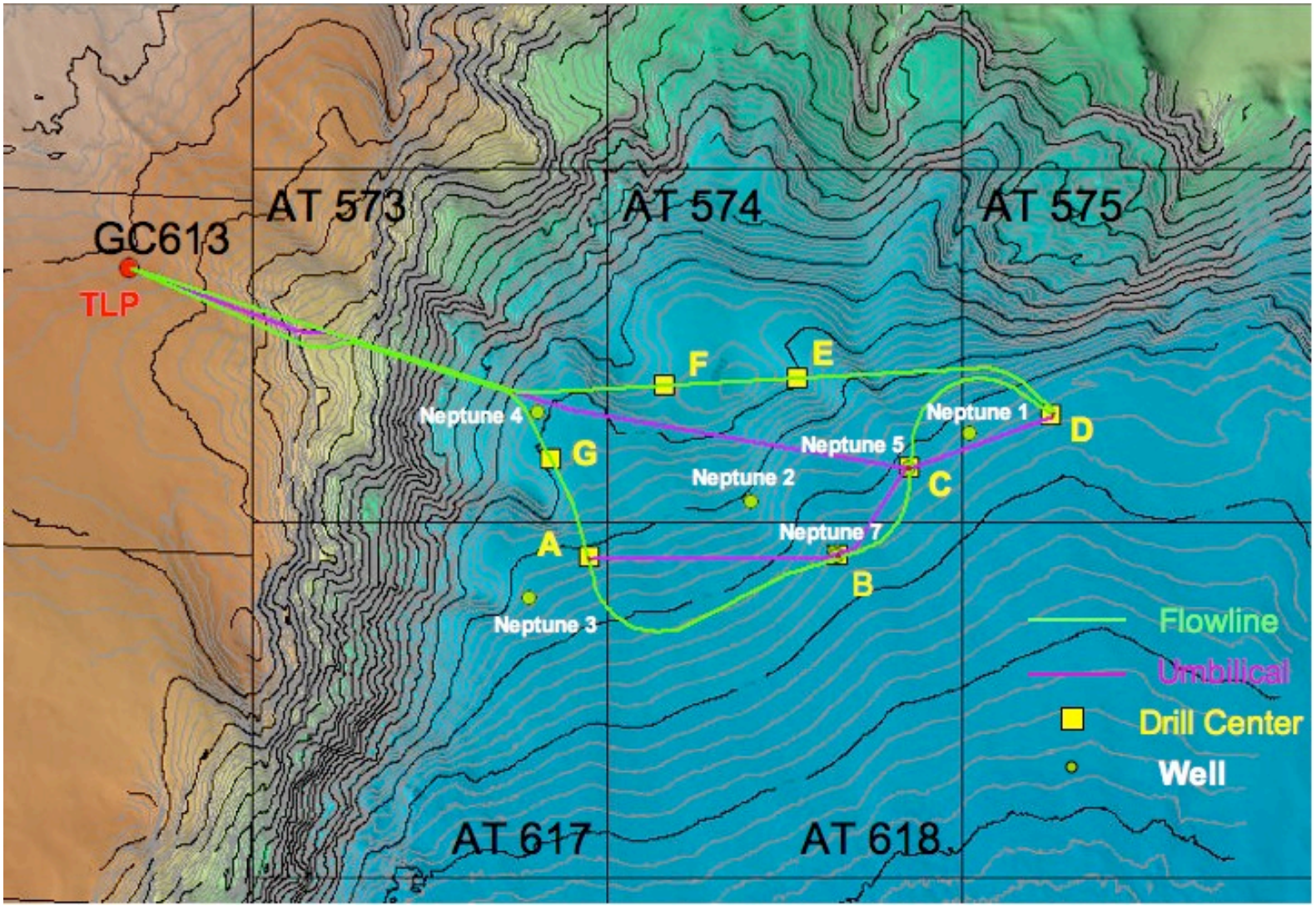
Beyond the system hydraulics and the facility rate limits, the wells are also limited by a maximum acceptable completion drawdown. This near wellbore pressure drop is a typical type of operational limit imposed on frac pack completions to maintain integrity and provide continued sand exclusion.

1.4.14 Project Summary Information

An overview of the project information is summarized in **Figure 1-13**, Section 1.5, *Figures for Section 1*.

1.5 Figures for Section 1

1.5.1 Figure 1-1: Neptune General Field Layout and Bathymetry Contours



1.5.2 Figure 1-2: Right-of-Use and Easement Request for TLP Location

bhpbilliton

BHP Billiton Petroleum (GOM) Inc.
1360 Post Oak Boulevard, Suite 150
Houston, Texas 77056-3020 USA
Telephone 713.961.8500
Facsimile 713.961.8400

Via Facsimile and Overnight Delivery

March 14, 2005

Minerals Management Service
Gulf of Mexico OCS Region
1201 Elmwood Park Blvd.
New Orleans, LA 70123-2394
Attention: Mr. Nick Wetzel

Re: Request for Right-of-Use and Easement
OCS-G 18403 Green Canyon Block 613
Neptune Project Host Location
Atwater Valley Block 574 Unit (Unit Agreement No. 754395004)
OCS-Gulf of Mexico

Gentlemen:

The Atwater Valley Block 574 Unit (Unit Agreement No. 754395004) (the "Neptune Unit") is presently under a Suspension of Production (SOP) through April 30, 2005. BHP Billiton Petroleum (GOM) Inc. ("BHP Billiton"), Operator of the Neptune Unit, is on schedule in moving the Neptune Project forward to first oil in December 2007. BHP Billiton's Neptune project team has diligently studied the optimal location in the Neptune area to locate the Neptune host tension-leg platform ("Neptune Host").

As the Minerals Management Service ("MMS") is aware, the slope of the Sigsbee escarpment in this area is very steep, posing a significant problem when trying to select a host location. The majority of the Neptune Unit lies directly on top of the Sigsbee escarpment which does not allow for a host facility to be located within the Neptune Unit area. Through BHP Billiton's study, we have identified OCS-G 18403 Green Canyon Block 613 as the preferred location for the Neptune Host. This area is described by a circle of 2,000-foot radius centered around the coordinates (in UTM Zone 15) X = 2,638,672 feet; Y = 9,944,253 feet. The location lies in the Northeast quarter of Green Canyon Block 613, and the center of the area is 3,267 feet South of the Green Canyon Block 613 North Block line, and 9,232 feet East of the Green Canyon Block 613 West Block line (see Attachment "A" Plat). This location has been selected to take advantage of a preferred corridor across the Sigsbee escarpment, allowing for adequate separation between the top of the escarpment and the host location to assure minimal opportunity for escarpment failure. The preferred host requires that a 500-foot diameter around this location be maintained for anchoring. No offset piles or anchors are anticipated.

Under letter dated September 22, 2004 (copy enclosed), BHP Billiton received approval from Chevron U.S.A. Inc. ("Chevron"), a lessee and operator of OCS G 18403 Green Canyon Block 613, to conducted soil boring operations on that block to confirm BHPB's supposition that Green Canyon Block 613 is the optimal location for the Neptune Host. At the time Chevron approved the soil boring operation, Chevron advised BHP Billiton that they had no exploration plans for the block, and BHP Billiton's proposed soil boring operations would not cause any interference. As BHP Billiton made clear in the

September 22 letter, if the soil boring analysis verified depositional stability for the host anchors, BHP Billiton would seek approval to locate the Neptune Host on Green Canyon Block 613.

The soil-boring program did confirm BHP Billiton's supposition that Green Canyon Block 613 is the optimal location for the Neptune Host. Accordingly, by letter dated December 17, 2004 (copy enclosed), BHP Billiton advised Chevron of the results of the soil boring analysis and as required requested Chevron's consent to locate the Neptune Host on Green Canyon Block 613. After several unacceptable verbal proposals by Chevron to grant consent in return for consideration, Chevron has formally responded to BHP Billiton with its letter dated February 16, 2005 (copy enclosed), stating that "after a thorough review of your proposal, it has been determined that the location of the Neptune host facility on Green Canyon Block 613 would interfere with Chevron U.S.A. Inc.'s future plans for the exploration and potential development of the subject lease." There are no current operations on Green Canyon Block 613 with which the Neptune Host would interfere. Further, to our knowledge, Chevron, and its partner EnCana Gulf of Mexico LLC ("EnCana"), have no future exploration or potential development plans for the block. Therefore, in light of the foregoing, BHP Billiton can only conclude that Chevron's response has been directed at BHP Billiton's unwillingness to grant consideration in return for Chevron's consent.

As Chevron has declined to approve BHP Billiton's Neptune Host location request, BHP Billiton hereby applies to the MMS, pursuant to 30 CFR 250.160, for a Right-of-Use and Easement on OCS-G 18403 Green Canyon Block 613 in order to locate the Neptune Host facility on said block (see Attachment "A" Plat). Additionally, and in accordance with 30 CFR 250.160, BHP Billiton, under separate letter dated March 14, 2005 (copy enclosed), has requested that Chevron and EnCana provide their comments to the MMS in regard to this application for a Right-of-Use and Easement.

BHP Billiton appreciates the MMS's consideration of BHP Billiton's request for a Right-of-Use and Easement on Green Canyon Block 613. Our aggressive schedule to move the challenged Neptune development project to targeted first production is obviously impacted by this matter. Therefore, BHP Billiton would be happy to meet with the MMS, and happy to include Chevron and EnCana if the MMS deems it appropriate, in order to get this matter resolved quickly.

If you have any questions or need any additional information, please contact the undersigned at (713) 499-5822.

Sincerely,

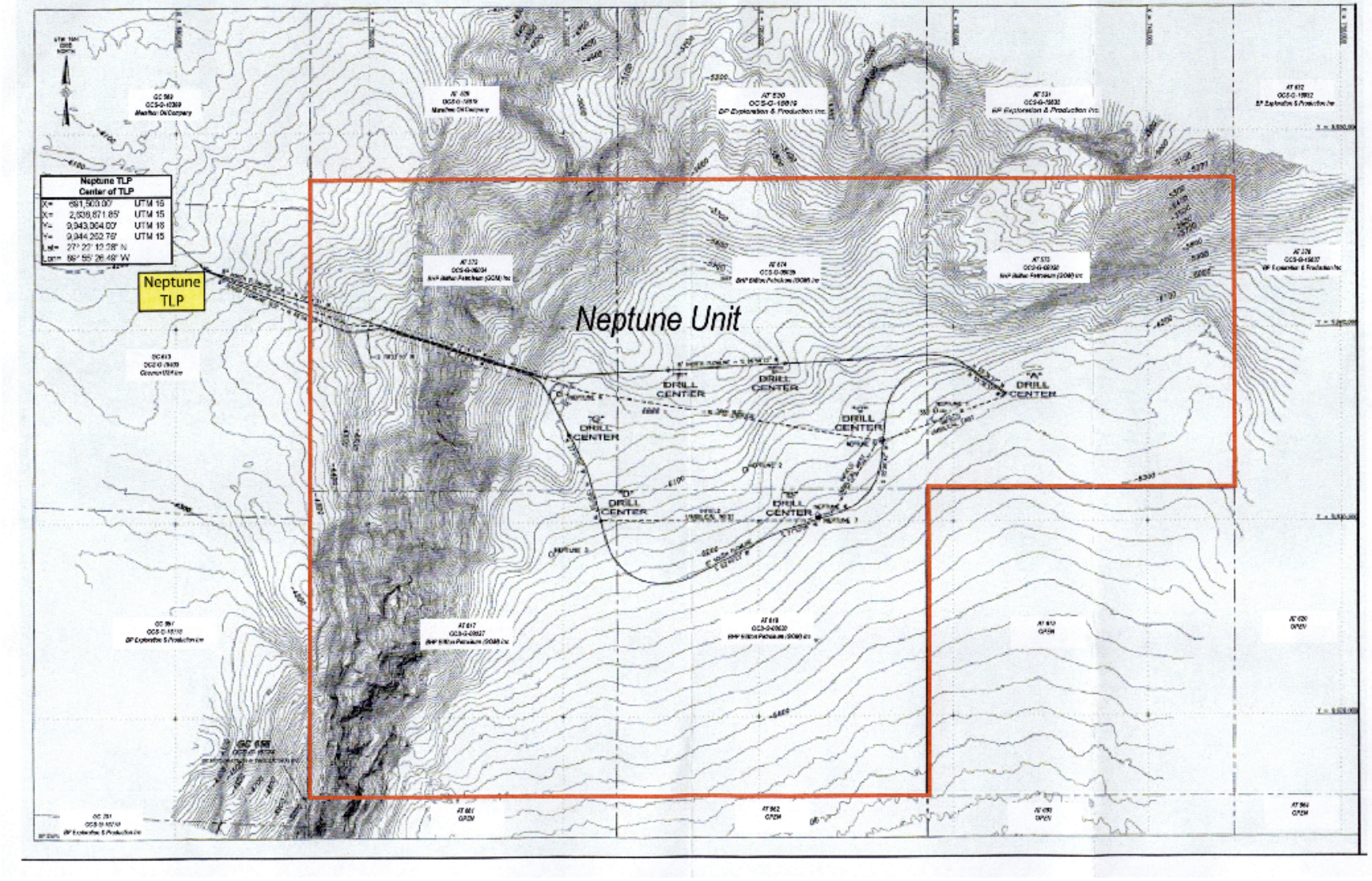
Mark S. Miller
Sr. Staff Negotiator

Attachment/Enclosures

cc: J. Michael Melancon – Minerals Management Service

Attachment "A" To Right-of-Use and Easement (RUE) Request

Proposed Neptune Host Location - Green Canyon Block 613
Neptune Unit



1.5.3 Figure 1-3: Atwater Vally 574 Well Location

Public Information Copy

1.5.4 Figure 1-4: Atwater Valley 575 Well Location Plat

Public Information Copy

1.5.5 Figure 1-5: Atwater Valley 617 Well Location Plat

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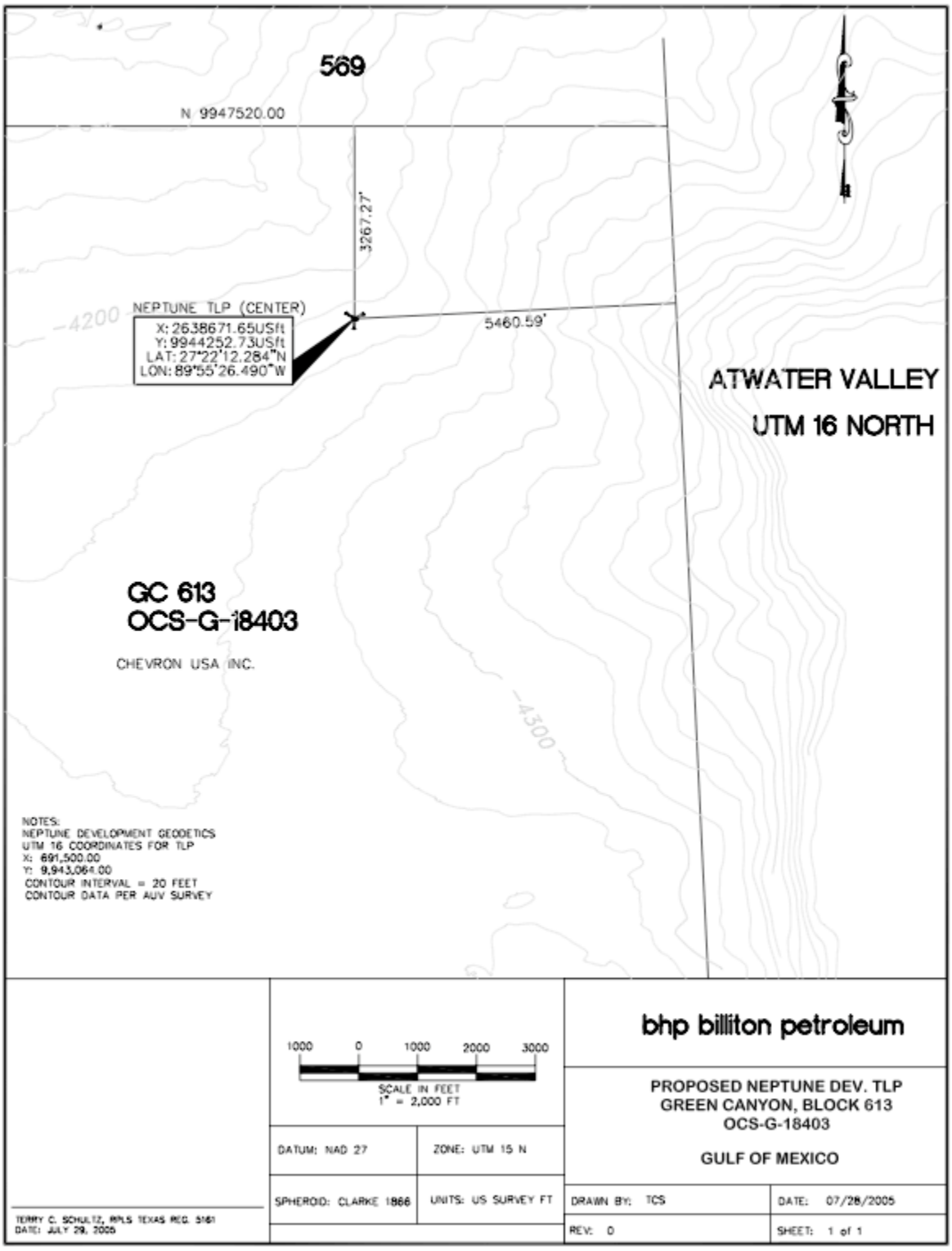
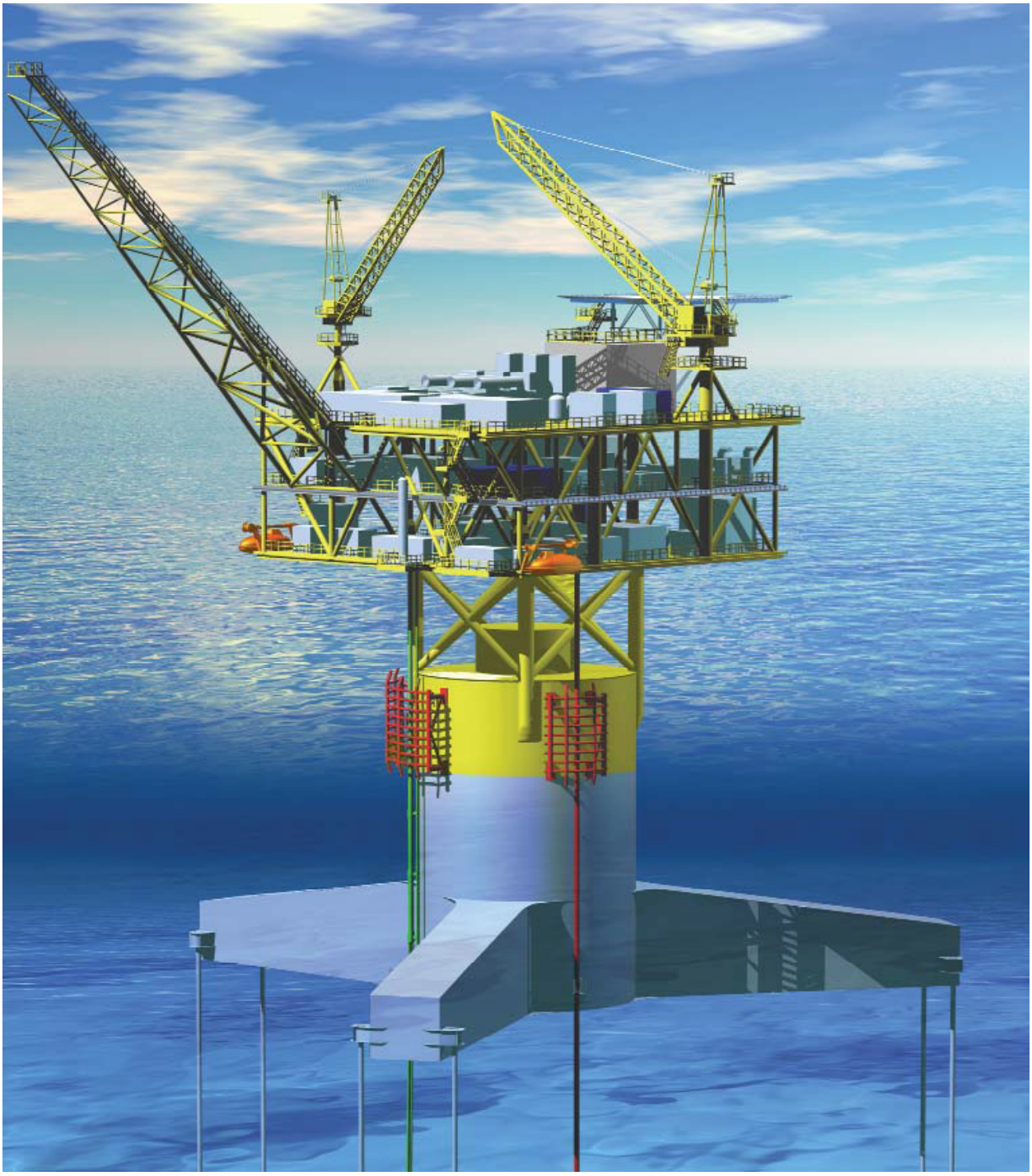
1.5.6 Figure 1-6: Green Canyon 613 TLP Location Plat (UTM 15 coordinates)



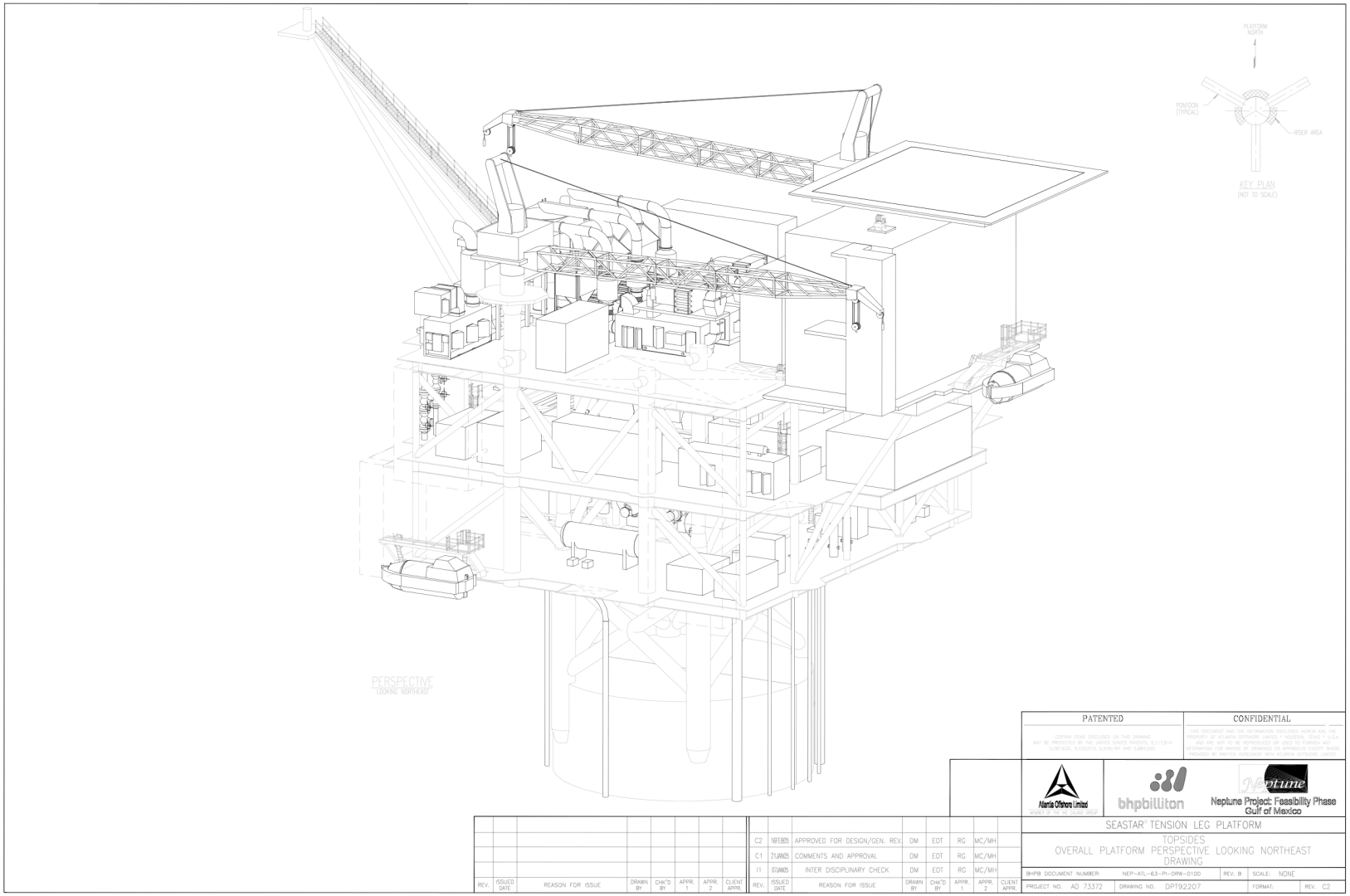
1.5.7 Figure 1-7: Depiction of the Development Driller I (DDI) Drill Rig

1.5.8 Figure 1-8: Depiction of the Neptune TLP Facility

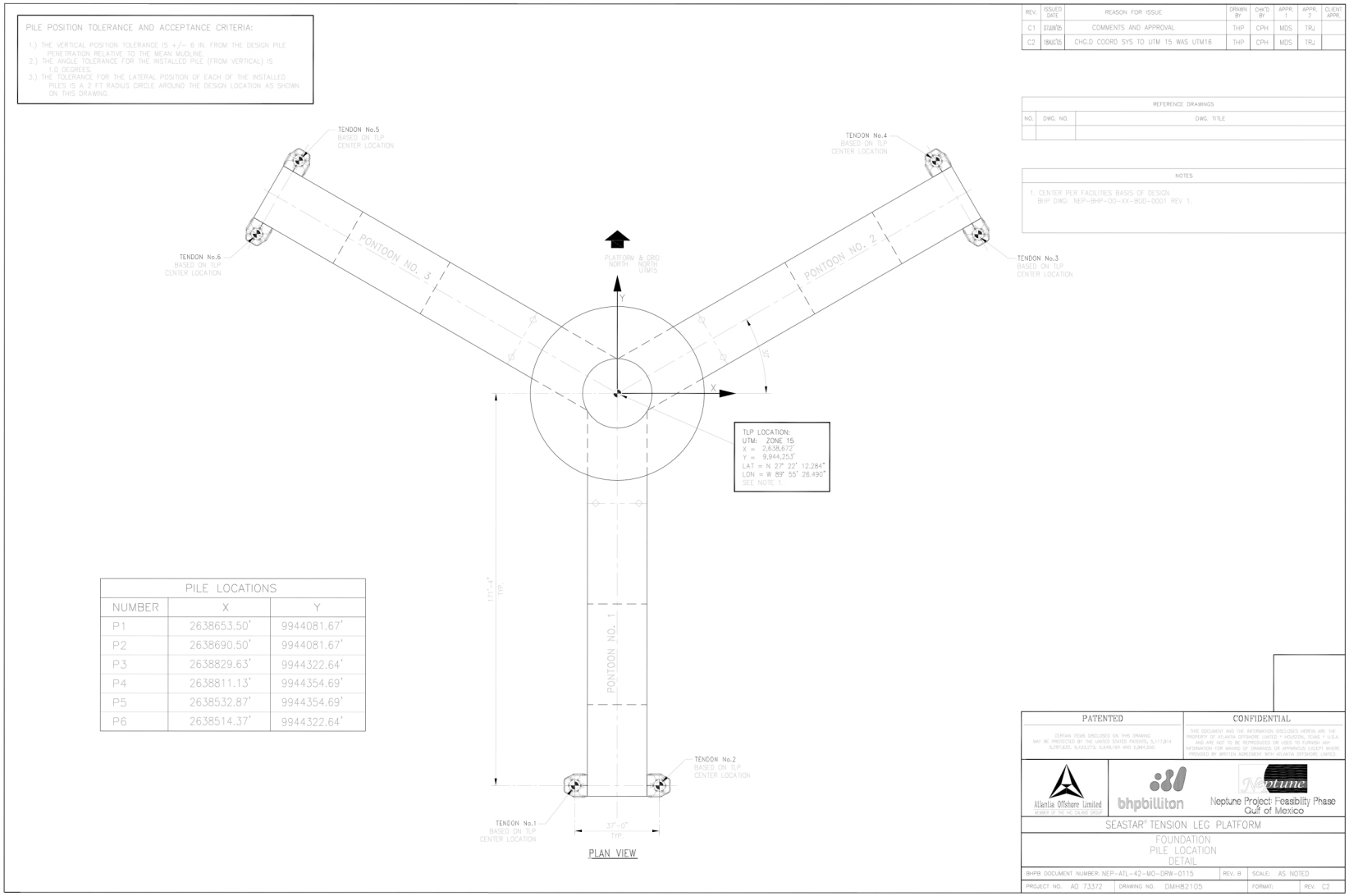


Artist's rendering of the Neptune TLP courtesy of Atlantia Offshore Limited

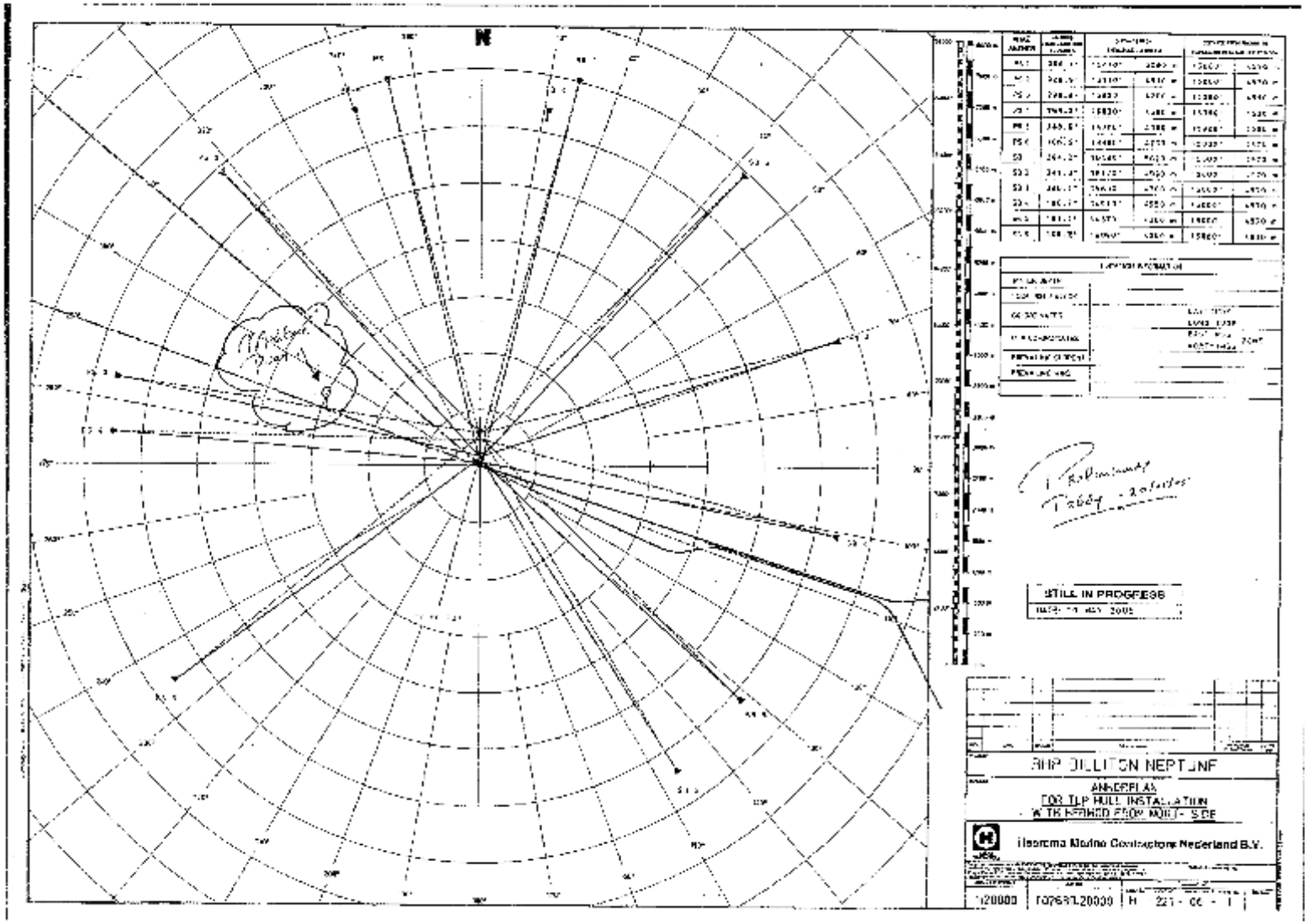
1.5.9 Figure 1-9: Topsides Depiction Looking Northeast



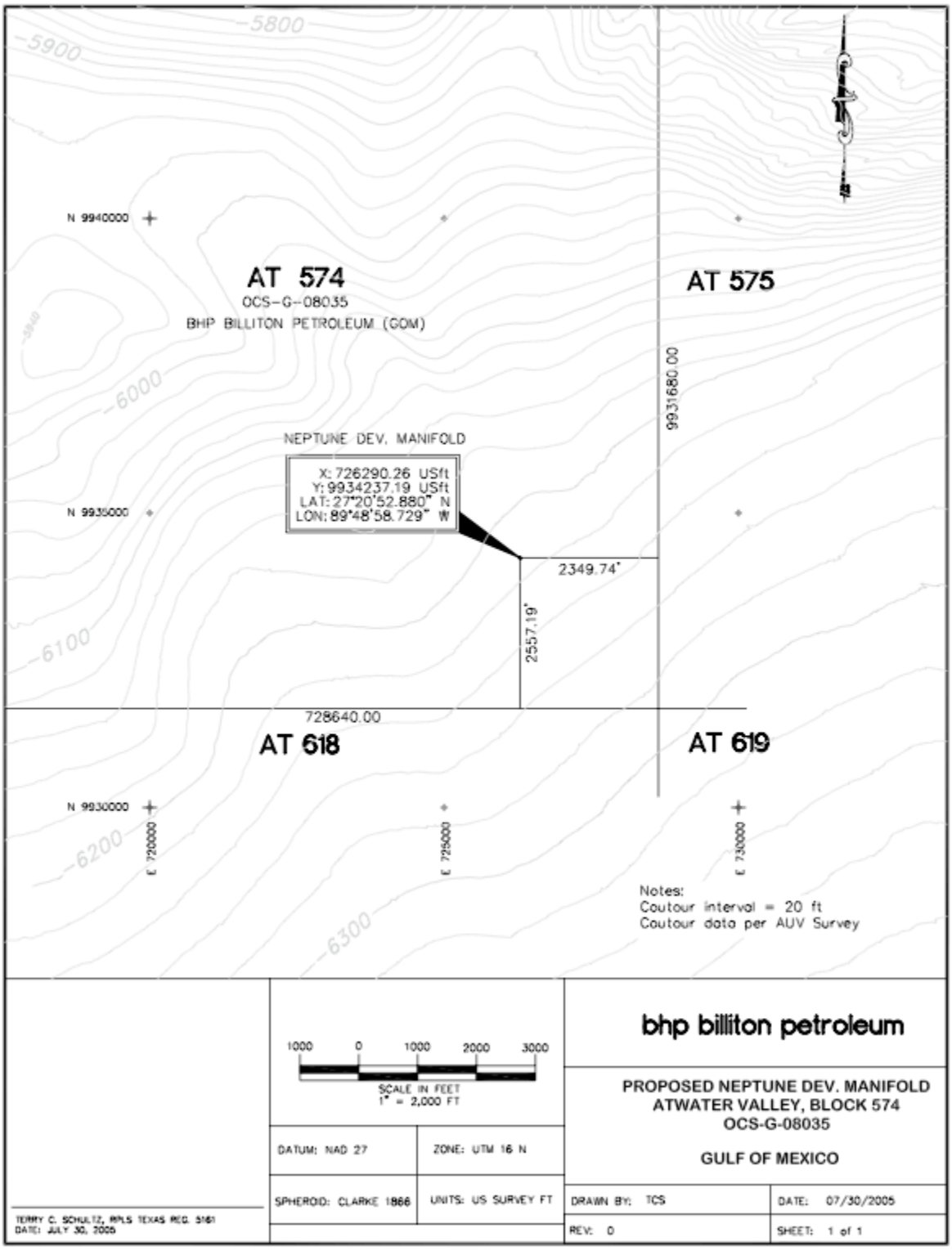
1.5.10 Figure 1-10: Foundation Pile/Vertical Tension Mooring and Pile Locations



1.5.11 Figure 1-11: Preliminary Anchor Plan for the Hermod for the TLP Hull Installation



1.5.12 Figure 1-12: Neptune Drill Center 5 Manifold Location Plat (UTM 16 coordinates)



1.5.13 Figure 1-13: Neptune Overview

NEPTUNE DEVELOPMENT SYSTEM OVERVIEW

Host Type	–	New-Build, Mono-Column, Tension Leg Platform (TLP)
Notional Host Location	–	Green Canyon Block 613; ~ 4250 ft WD
Hull Info	–	Weight is 6300 s. tons; Draft is 98'; Central Column is 76' diameter with a 30' diameter access shaft; Displacement is 27,000 s. tons
Pontoons	–	3 – 138' by 26'
Tendons	–	6 – 36" diameter
Topsides Info	–	Weight is 6200 s. tons; 3 Decks – Main, Production and Cellar
Subsea Configuration	–	Seven Subsea Wells, Pre-Drilled from 4 Drill Centers in Unit, Below the Sigsbee Escarpment in ~ 6200 ft WD
Flowline Configuration	–	Dual Loop, Nominal 8" Insulated Lines Tied Back to TLP. 'Southern' Flowline Connects 4 Drill Centers to Develop the Southern Fault Blocks, as well as a West Drill Center for Future Development of the Northwest Block. 'Northern' Flowline Connects 2 Additional (Future) Proposed Drill Centers, Reserved for Future Development of North Flank.
Slot Configuration	–	No Slots; Wet Tree System
Riser Configuration	–	Steel Caternary Risers Used for Production Flowlines, as well as Oil and Gas Export Lines.
Flowline Risers	–	Two (2) Nominal 8" Neptune Flowline Risers for Base Development
Riser Vertical Load	–	2400 s. tons
Umbilicals	–	One (1) Nominal 6" to 7" Neptune Umbilical for Base Development
Export Risers	–	One (1) Nominal 20" Oil Export Line (To Be Finalized After Selection of Export Option)
	–	One (1) Nominal 16" Gas Export Line (To Be Finalized After Selection of Export Option)
Gas Lift Riser (Future)	–	One (1) 4" Nominal Gas Lift Riser 'T'-d into the Production Risers (Future)
Future Riser Capability	–	Some Expansion for Future Risers Included in Design: Four (4) Nominal 8" Future Risers Two (2) Nominal 6" Future Umbilicals One (1) Nominal 6" Future Umbilical for Neptune North Flank
Production Design Basis	–	50 MBOPD Oil; 50 MMCFD Gas; 15 MBWPD
Flowline Gathering System	–	Pig-Capable, Dual Nominal 8" Flowlines (North & South). Initial Development wells expected to flow up both lines to TLP until flow assurance limitations associated with fluid arrival temperatures and/or slug flow occurs, then flow is directed up one flowline.
Export Option	–	LACT Unit Located on the Topsides Meters Volumes of Oil. Sales Gas Meters Measure Amount of Gas Transported into Selected Export Option. One (1) 18" Oil Export and One (1) 12" Gas Export Lines are Anticipated (To Be Finalized After Selection of Export Option).

2 GENERAL INFORMATION

2.1 Contact Person

Please contact the following individual as representing BHP Billiton for information and activities regarding this DOCD submittal:

Debra K. Beaubien
HSE & Regulatory Consultant
Ocean 1 Consulting, LLC
23315 Garden Chase Drive, Katy, TX 77494
deb@ocean1consulting.com
713-702-8524

2.2 Project Name

The BHP Billiton deepwater project for the Neptune Unit has been given the project name 'Neptune'. It will be operated by BHP Billiton Petroleum (GOM), Inc., on behalf of the Unit owners.

2.3 Production Rates and Life of Reserves

Public Information Copy

2.4 New or Unusual Technology

The Neptune Project was designed based on the use of proven technology. The proposed project does not include use of any new or unusual technology.

2.5 Bonding Information

The activities and facilities proposed in this DOCD are covered by an appropriate lease or area-wide surety bond according to 30 CFR 256, Subpart I.

Figure 2-1 includes the 16 June 2005 update to the Oil Spill Financial Responsibility demonstration for Covered Offshore Facilities.

The coverage will be revised to include the Neptune TLP location in GC 613. That application will be submitted to MMS separately.

2.6 Onshore Base and Support Vessels

BHP Billiton will use an existing Shore Base at Port Fourchon, LA as the primary base for operations. A small amount of vessel traffic may originate from other bases to address changes in weather, market and/or operational considerations. The project area is 114 miles from the nearest shoreline. The onshore shore base is about 120 miles from the project area and provides vehicle parking, office space, radio communication equipment, outside and warehouse storage space, crane, forklifts, water and fueling facilities and boat dock space. The base is in operation 24 hours a day, every day.

Figure 2-2 includes two photos of the shorebase. One is a wider photo showing the BHP Billiton shore base outlined in yellow. The other is a close-up of the BHP Billiton facility. Helicopter support will be provided out of existing facilities near Amelia, LA, about 168 miles from the project area, and Boothville, LA, about 140 miles from the project area.

Figure 2-3 depicts the routes between the project area and the onshore support base and airports, and the distance to the nearest shoreline. Vessels and helicopters will normally move via the most direct route between the shore base and the project area. A large format copy of this logistics support map is included in the Appendices Document, Section 2. No expansion of these facilities is expected to result from the proposed activities.

During installation activities, it is estimated that there may be 1 work boat a day, and 3 crew boats a week, required for support. Otherwise, it is estimated at a frequency of once per week during normal operations. Additional information regarding vessel support is contained in Section 6, *Oil Spill Information*, and Section 7, *Air Emissions Information*.

2.7 Lease Stipulations

The five leased blocks carry one lease stipulation and that concerns Cultural Resources. The Neptune field area has been surveyed with AUV based high resolution swath bathymetry (3m resolution) with backscatter intensity, sidescan sonar and subbottom profiler. ROV videos obtained prior to drilling the existing wells have been reviewed. No potential cultural resources have been identified in the Neptune Field area. An extensive ROV video survey of well sites and the planned flowline crossing of the escarpment has been completed. No potential cultural resources have been identified in the Neptune field area.

2.8 Oil Export System

The selected option for oil is the Caesar oil pipeline, depicted in **Figure 2-4**, Section 2.11, *Figures for Section 2*. This system, operated by BP Pipelines, provides two market outlets. Neptune will connect to Caesar via a new Right-of-Way (ROW) pipeline to a subsea connection located in Green Canyon Lease Area, Block 650 (GC 650), where it joins other volumes from Mad Dog and Atlantis to Ship Shoal Lease Area, Block 332 (SS 332). At SS 332 Caesar has a direct connection to Cameron Highway Pipeline system (CHOPS). CHOPS has market delivery options at two refining hubs in Texas, i.e., Texas City and Pt. Neches. Both are large refining centers with multiple market connections. In addition Caesar has confirmed that a connection to Amberjack will be completed to meet the schedule needs for the Neptune development. The Amberjack system delivers into the Mars system, which terminates in Clovelly, Louisiana. This is a large refining center with multiple market connections.

2.9 Gas Export System

The selected option for gas is the Cleopatra gas gathering system, depicted in **Figure 2-5**, Section 2.11, *Figures for Section 2*. This system is operated by BP Pipelines. The tariff reflects the cost and schedule synergies provided by ensuring that the gas export system is awarded to the same operator as the oil export. Neptune will connect to the Cleopatra system via a new Right-of-Way (ROW) pipeline to a subsea connection at Green Canyon Lease Area, Block 650 (GC 650), where it will join with gas volumes from Mad Dog and Atlantis to the Ship Shoal Lease Area, Block 332 (SS 332) platform where it connects to the Manta Ray Gas Gathering system. From SS 332 the gas will move to the SS 207 connection into the Nautilus Gas Pipeline. The Nautilus system will transport the gas to the beach for processing at the Neptune processing plant (not associated with the Neptune Project). There are multiple gas market connects from the Neptune processing plant.

2.10 Proposed Oil and Gas Lateral Pipelines

Enbridge Offshore Pipelines will construct and operate the natural gas gathering lateral and the crude oil lateral right-of-way (ROW) pipelines to connect the Neptune field to the existing Cleopatra and Caesar pipelines. The gas lateral will consist of 23 miles of 12-3/4 inch diameter pipe, while the oil lateral will consist of 23 miles of 20-inch diameter pipe. The laterals will have the capacity to deliver in excess of 100 million cubic feet per day of gas and more than 50,000 barrels per day of oil. The lateral pipelines are expected to be completed by year-end 2006. Connection to the producer-owned production facilities is scheduled for the second quarter of 2007. Neptune has safety equipment on board that will shut in the export lines in the 45 second shut in period.

2.11 Figures for Section 2

2.11.1 Figure 2-1: Updated Oil Spill Financial Responsibility (OSFR) Demonstration

United States Department of the Interior

MINERALS MANAGEMENT SERVICE
Gulf of Mexico OCS Region
1201 Elmwood Park Boulevard
New Orleans, Louisiana 70123-2394

In Reply Refer To: MS 5422

16 JUN 2005

Mr. Ron Campbell
BHP Petroleum (GOM) Inc.
1360 Post Oak Boulevard, Suite 500
Houston, Texas 77056-3020

Dear Mr. Campbell:

Based on your fax submittal received on June 15, 2005, we have updated your Oil Spill Financial Responsibility (OSFR) demonstration for the specified Covered Offshore Facilities (COFs) listed on the enclosure. The update reflects the deletion of two COFs, OCS-G 20043 and OCS-G 24159, from your OSFR coverage. In order to insure consistency and clarify our record keeping, we must maintain a complete file of original documentation. We, therefore, request that you send the original Form MMS-1022, Covered Offshore Facility Changes, within 15 days from the date of this letter.

In accordance with 30 CFR 253.42(b), you will continue to be responsible for these deleted facilities until we approve evidence for these COFs from another designated applicant, Deep Gulf Energy LP.

Please notify our OSFR program staff of any further changes to the list of COFs covered by this application. If you require assistance in this matter, contact Mr. Patrick Clancy, Jr. at (504) 736-2600 or fax to (504) 736-2655.

Sincerely,

John L. Rodi
Supervisor, Sales and Support Unit
Leasing and Environment

Enclosure

cc: Mr. Bob Priestly
BHP Petroleum (GOM) Inc.
1360 Post Oak Boulevard, Suite 150
Houston, Texas 77056-3020

Mr. Richard Clark
Deep Gulf Energy LP
14515 Briarhills Parkway, Suite 116
Houston, Texas 77077

TAKE PRIDE IN AMERICA

Thursday, June 16, 2005.max

OFCOFLST

UNITED STATES DEPARTMENT OF THE INTERIOR
MINERALS MANAGEMENT SERVICE
GULF OF MEXICO REGION
List COFs for a Designated Applicant

OSFR
06/15/2005
PAGE: 1

MMS#: 02010
BHP Billiton Petroleum (GOM) Inc.

1360 Post Oak Boulevard
Suite 150
Houston TX 77056-3020

Total Number of COFs:	47
Total Number of Active COFs:	43
Total Number of Deleted COFs:	4

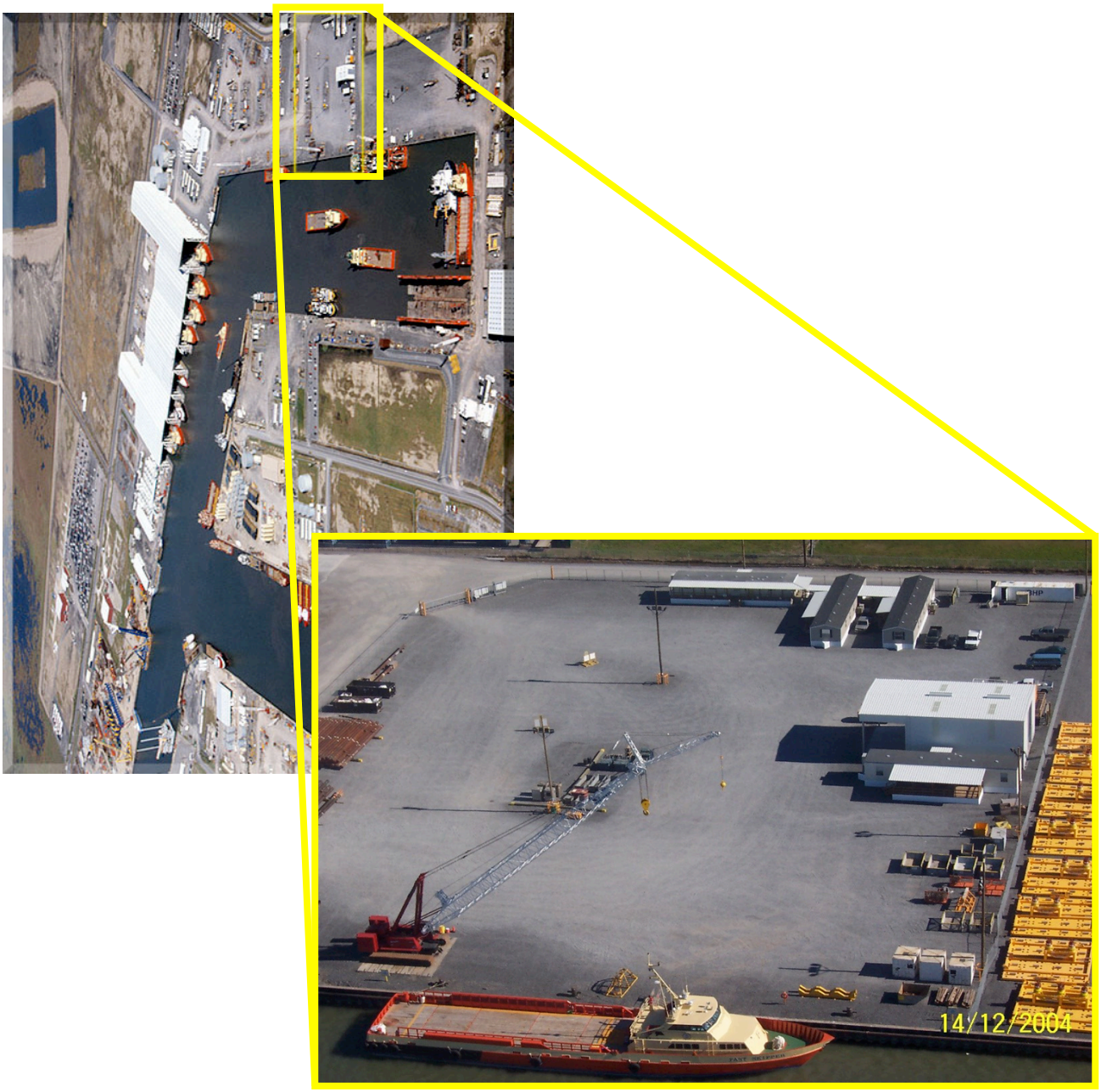
Financial Coverage	
Insurance	$ 0
Self-Insurance	$ 0
Indemnity	$ 70,000,000
Surety Bonds	$ 0
Other	$ 0
Total	$ 70,000,000

State	Lease Number	ROW/RUE Segment Number	Area	Block	Worst Case Volume	Effective Date	Expiration Date	Remark
	G08034		AT	573	1,001	11/01/2004	11/01/2005	
	G08035		AT	574	60,000	11/01/2004	11/01/2005	
	G08036		AT	575	1,001	11/01/2004	11/01/2005	
	G08037		AT	617	1,001	11/01/2004	11/01/2005	
	G08038		AT	618	1,001	11/01/2004	11/01/2005	
	G15522		MC	944	1,001	11/01/2004	11/01/2005	
	G15620		AT	406	1,001	11/01/2004	11/01/2005	
	G16629		MC	631	1,001	11/01/2004	11/01/2005	
	G16658		MC	936	1,001	05/18/2005	11/01/2005	
	G16659		MC	937	1,001	05/18/2005	11/01/2005	
	G16662		MC	943	1,001	11/01/2004	11/01/2005	
	G16727		GC	282	29,000	11/01/2004	11/01/2005	
	G16764		GC	609	1,001	11/01/2004	11/01/2005	
	G16765		GC	610	1,001	11/01/2004	11/01/2005	
	G16825		GC	872	1,001	11/01/2004	11/01/2005	
	G16842		GC	959	1,001	11/01/2004	11/01/2005	
	G16848		GC	1002	1,001	11/01/2004	11/01/2005	

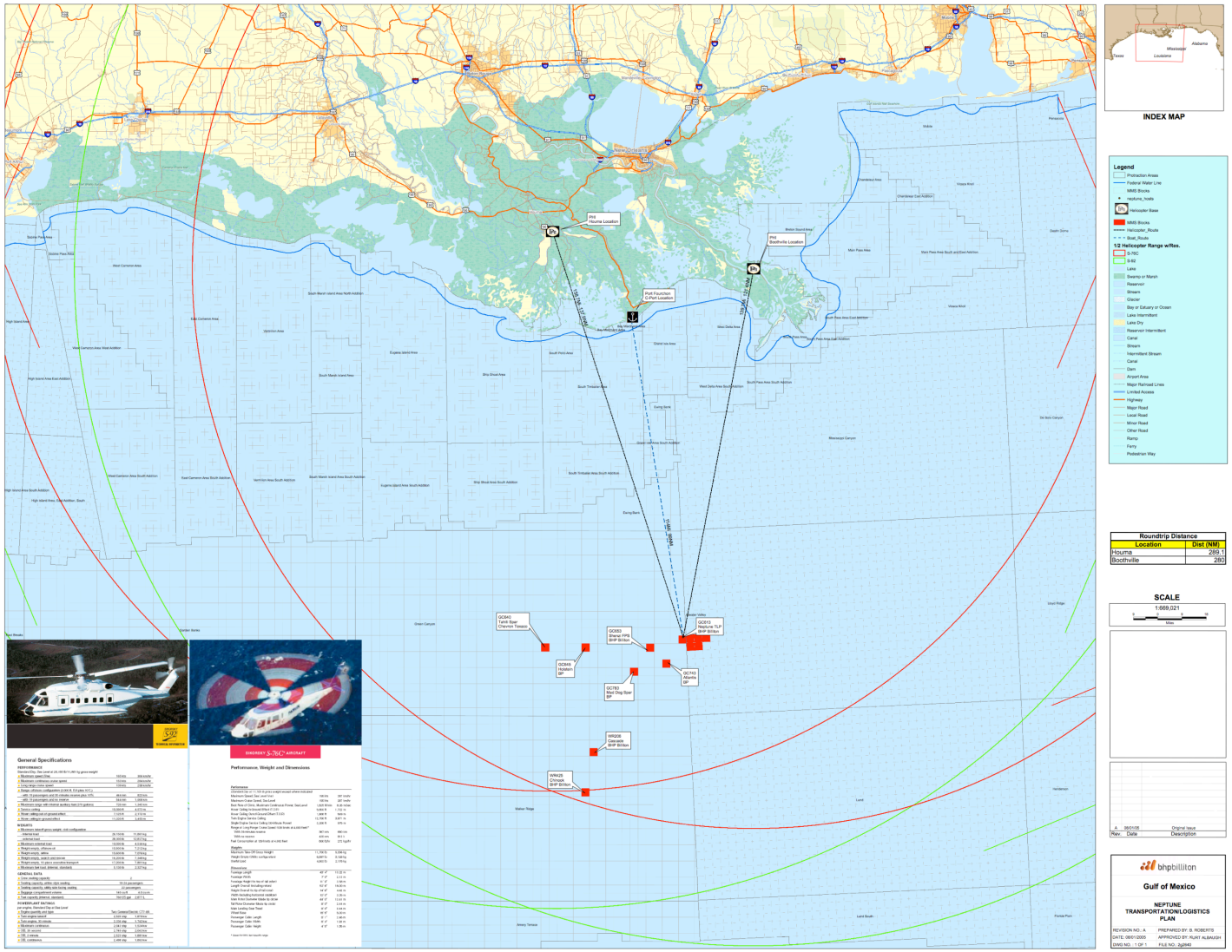
* * * * * * UNCLASSIFIED * * * * * *

2.11.2 Figure 2-2: Port Fourchon and BHP Billiton Shorebase Photos

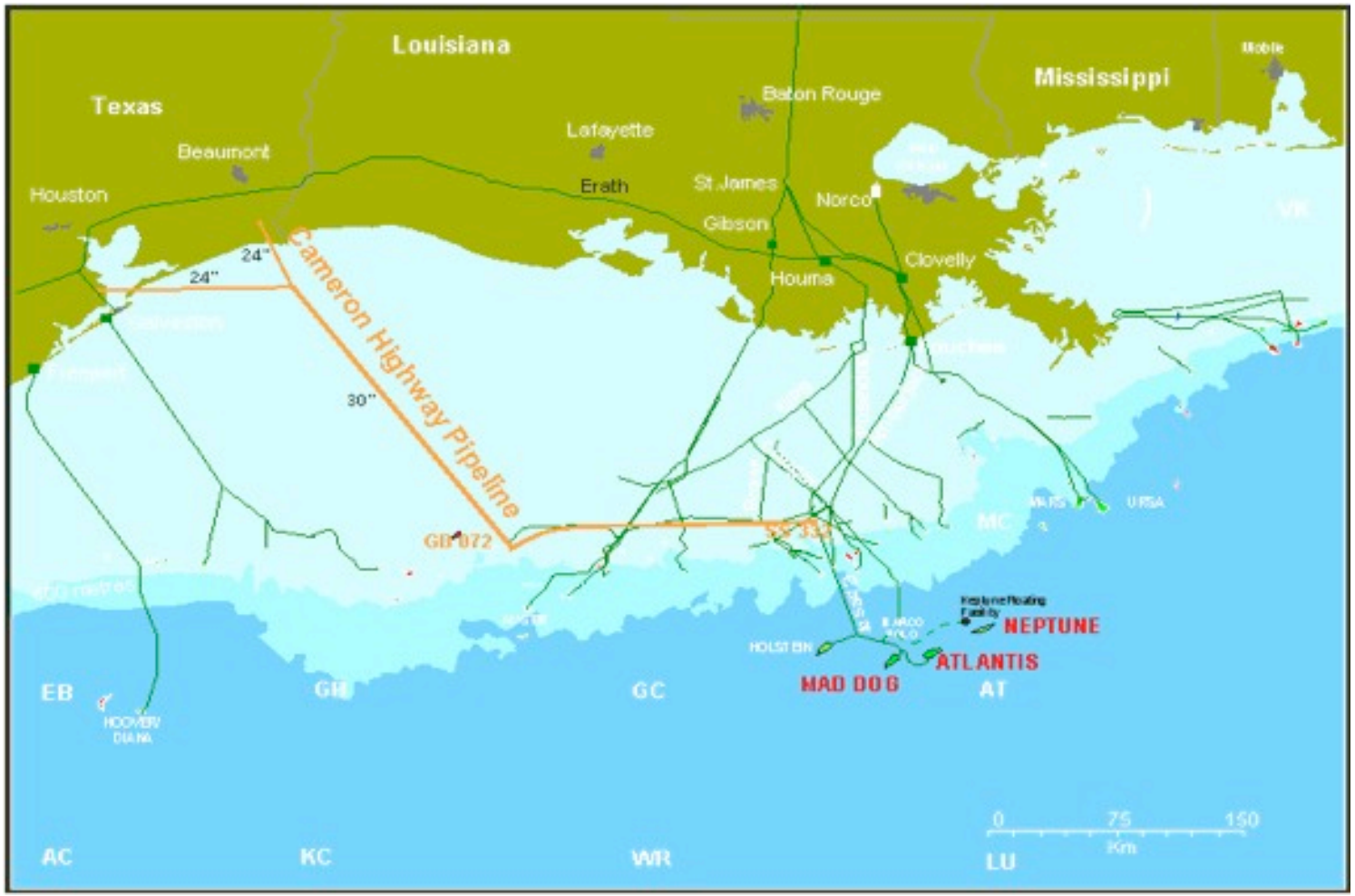
The top photo depicts a portion of Port Fourchon, with the BHP Billiton Shore Base outlined in yellow on the right. The bottom photo is a close-up of the BHP Billiton Shore Base.



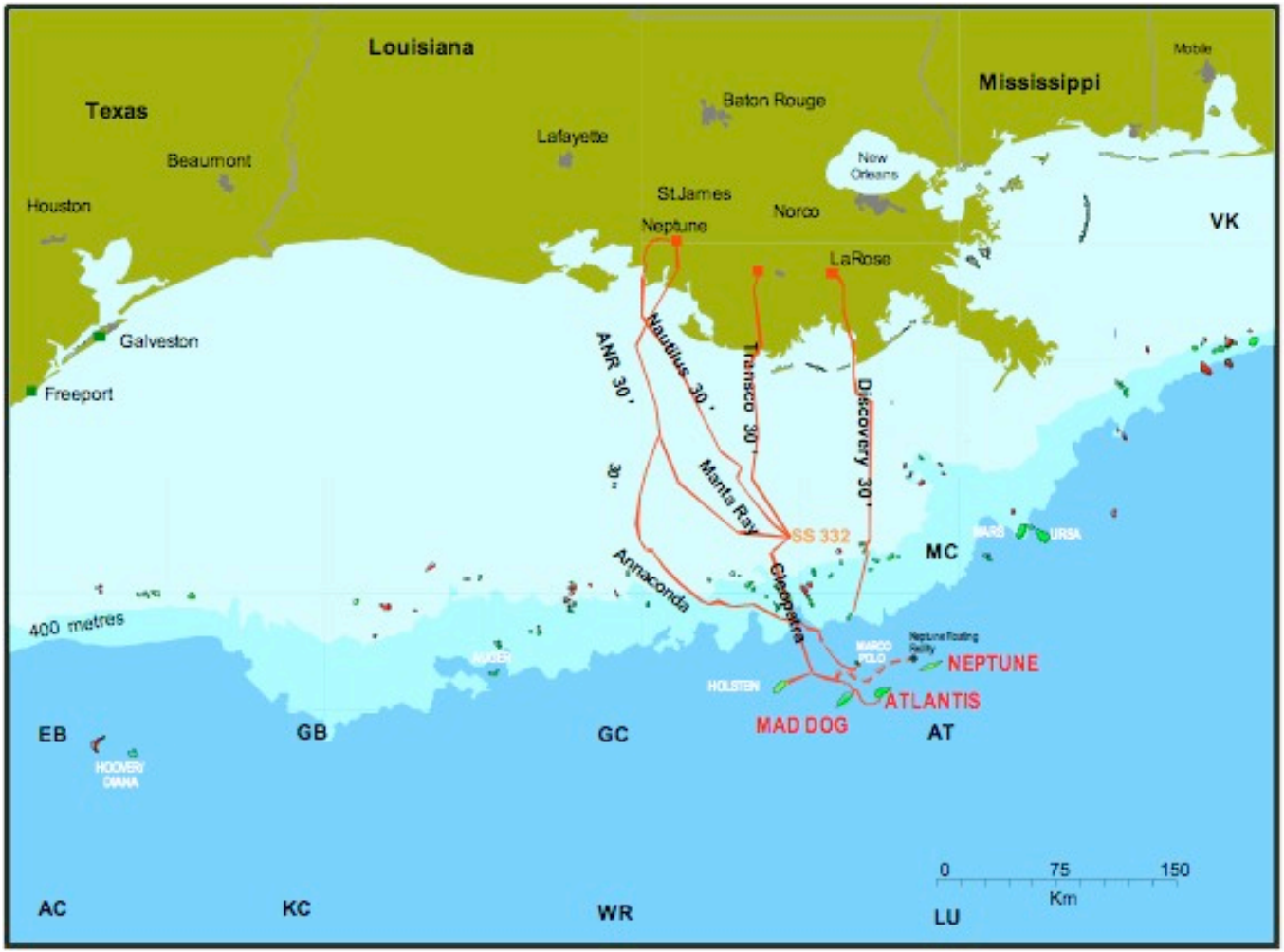
2.11.3 Figure 2-3: Map Showing Leases, Shoreline, and Transportation Routes



2.11.4 Figure 2-4: Caesar Oil Export System



2.11.5 Figure 2-5: Cleopatra Gas Export System



3 GEOLOGICAL, GEOPHYSICAL AND H_2S INFORMATION

This section describes the geological and geophysical data and information that has been included with this DOCD. A complete analysis of the geological and geophysical data is part of the Conservation Information Document (CID), which will be submitted separately to the MMS.

3.1 Geological Structure Contour Maps

Geologic Structure Contour Maps for the M9 and M10 reservoirs are included as **Figures 3-1 and 3-2** in Section 3.5, *Figures for Section 3*. Large format copies of the maps are included in the Appendices Document, Section 3.

3.2 Geological Structure Cross-Sections

Geologic cross-sections, with and without seismic, for each of the production wells are included as follows in Section 3.5, *Figures for Section 3*:

Well SC002 – **Figures 3-4 and 3-5**

Well SC001 ST03 – **Figures 3-6 and 3-7**

Well SC003 – **Figures 3-8 and 3-9**

Well SA001 – **Figures 3-10 and 3-11**

Well SB001 ST01 – **Figures 3-12 and 3-13**

Wells SD 001 and SD 002 – **Figures 3-14 and 3-15**

Well SD001 ST01 – **Figures 3-16 and 3-17**

Previous Section 1.2.1 contains a table with information specific to each of the wells in the Neptune Pre-Drilling Program.

3.3 Shallow Hazards Reports

All currently planned well sites have been approved as Exploration Plan locations and several shallow drilling hazard reports have been written in support of those plans and the previously drilled wells. A partial listing of these documents is included below, and incorporated by reference herein:

"Hazard Study, OCS-G-8034, OCS-G-8035, OCS-G-8036, OCS-G-8037, OCS-G-8038, Blocks 573, 574, 575, 617 and 618, Atwater Valley Area, November 1994" by John E. Chance and Associates for BP Exploration.

"Neptune Prospect, Atwater Valley Blocks 573, 574, Supplemental Exploration Plan Locations for Field Appraisal, Shallow Drilling Hazards Assessment" by BHP Billiton, July 2002.

"Neptune Prospect, Atwater Valley Block 574, OCS-G-8035, Shallow Drilling Hazards Assessment, Supplemental Location J" by BHP Billiton, February 2003.

"Neptune Prospect, Atwater Valley Blocks 574, 575, 618, OCS-G-8035, OCS-G-8036, OCS-G-8038, Shallow Drilling Hazards Assessment, Supplemental Locations K, L, M, N, O" by BHP Billiton, November 2003.

"Neptune Prospect, Atwater Valley Blocks 573, 574, 575, 617, and 618, OCS-G-8034, -8035, -8036, -8037, -8038, Shallow Drilling Hazards Assessment, EP Locations P, Q, R, S, T", for BHP Billiton, January, 2005.

"Neptune Prospect, Atwater Valley Block 617, OCS-G—8037, Shallow Drilling Hazards Assessment, EP Location U", by BHP Billiton, April 2005.

3.3.1 Shallow Drilling Hazards Assessment Summary

The data available for hazards assessment include enhanced 3D surface seismic data, 2D high-resolution seismic data, ship-borne subbottom profiler data, very high quality AUV based sidescan sonar, swath bathymetry and subbottom profiler, soil samples from piston and box cores, and well data from 7 existing wells.

The seafloor at the planned drilling locations is smooth and dips at less than 2 degrees to the southeast. The water depths at the wells range from 6213 ft to 6261 ft. The seafloor consists of pelagic and hemipelagic mud and has been extensively sampled. **Map 3-1** is a seafloor rendering generated from the AUV swath bathymetry. **Map 3-2** is a contour map of the bathymetry. Large format copies of these maps are included in the Appendices Document, Section 3.

There are no seafloor faults or furrows, nor is there evidence of fluid expulsion features or chemosynthetic communities within 1500 ft of the proposed locations. No man-made obstructions affect these locations. **Figure 3-18** is a seafloor amplitude map generated from the 3D surface seismic data and **Figure 3-19** is an AUV sidescan sonar mosaic of the area near the existing and proposed wells.

In the shallow subsurface, there are well-documented shallow water flow sands, possible low saturation methane hydrate and small accumulations of possible free gas. The shallow water flow sands and hydrates have not posed a problem to BHP Billiton drilling operations and the possible free gas is avoided at the proposed locations. **Figure 3-20** is a map of buried amplitude anomalies indicative of free gas. **Figure 3-21** is a seismic cross section through the existing and planned well locations.

3.3.2 Shallow Hazards Assessment – Flowline Route Analyses

Analyses of the planned flowline route have been performed using all of the data available for the shallow drilling hazards assessments. Examples of the data are included here. **Figure 3-22** is a sidescan sonar mosaic of the area of the flowline crossing the escarpment. Features seen on the mosaic have been mapped and

correlated to the subbottom profiler and swath bathymetry data. An extensive soil sampling program consisting of piston cores, box cores and deep geotechnical borings has been performed and the soil data integrated with the geophysical data. **Figure 3-23** is a display of the subbottom profiler along the flowline route with the penetration and age dating for Piston Core BHP 007 indicated. There are no indications of inherent slope instability.

3.3.3 Shallow Hazards Assessment – Analyses of the TLP Mooring Area.

The planned TLP location is above the escarpment in an area of low (approximately 1.5 degree) seafloor dip. Two geotechnical borings for foundation design have been completed to 500 ft below the mudline and the samples analyzed. The initial boring consisted of continuous CPT measurements. These measurements were then used to pick sample points in a second nearby borehole. These data are being used for pile design. They have also been correlated to the geophysical data to demonstrate validity across the area of the TLP footprint.

A likely mooring radius for the topsides installation vessel is 15,000 ft. The area within this radius of the planned TLP location has been examined for indications of possible chemosynthetic community development. **Map 3-3** is a map of the mooring radius on the seafloor rendering with avoidance areas and the top of the Sigsbee escarpment indicated. These data, as well as the detailed bathymetry data are being provided to the installation contractor. A large format copy of this map is included in the Appendices Document, Section 3.

3.4 Hydrogen Sulfide (H_2S) Information

In accordance with 30 CFR 250.490(c), BHP Billiton requests the area proposed by this DOCD be classified as 'H_2S absent'. The wells drilled previously under approved Exploration Plans have not reported the presence of hydrogen sulfide gas in quantities greater than or equal to 20 ppm. A detailed list of these wells is contained in Section 1.1.7, *Neptune Wells History*.

3.5 Figures for Section 3

3.5.1 Figure 3-1: Geologic Structure Contour Map

Public Information Copy

3.5.2 Figure 3-2: Geologic Structure Contour Map

Public Information Copy

3.5.3 Figure 3-3: Geologic Structure Contour Map

Public Information Copy

3.5.4 Figure 3-4: Well Plane Seismic

Public Information Copy

3.5.5 Figure 3-5: Geologic Cross-Section

Public Information Copy

3.5.6 Figure 3-6: Well Plane Seismic

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3.5.7 Figure 3-7: Geologic Cross-Section

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3.5.8 Figure 3-8: Well Plane Seismic

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3.5.9 Figure 3-9: Geologic Cross-Section

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3.5.10 Figure 3-10: Well Plane Seismic

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3.5.11 Figure 3-11: Geologic Cross-Section

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3.5.12 Figure 3-12: Well Plane Seismic

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3.5.13 Figure 3-13: Geologic Cross-Section

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3.5.14 Figure 3-14: Well Plane Seismic

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3.5.15 Figure 3-15: Geologic Cross-Section

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3.5.16 Figure 3-16: Well Plane Seismic

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3.5.17 Figure 3-17: Geologic Cross Section

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3.5.18 Figure 3-18: Seafloor Amplitude Map - Area of Subsea Architecture – From 3D Surface Seismic Data

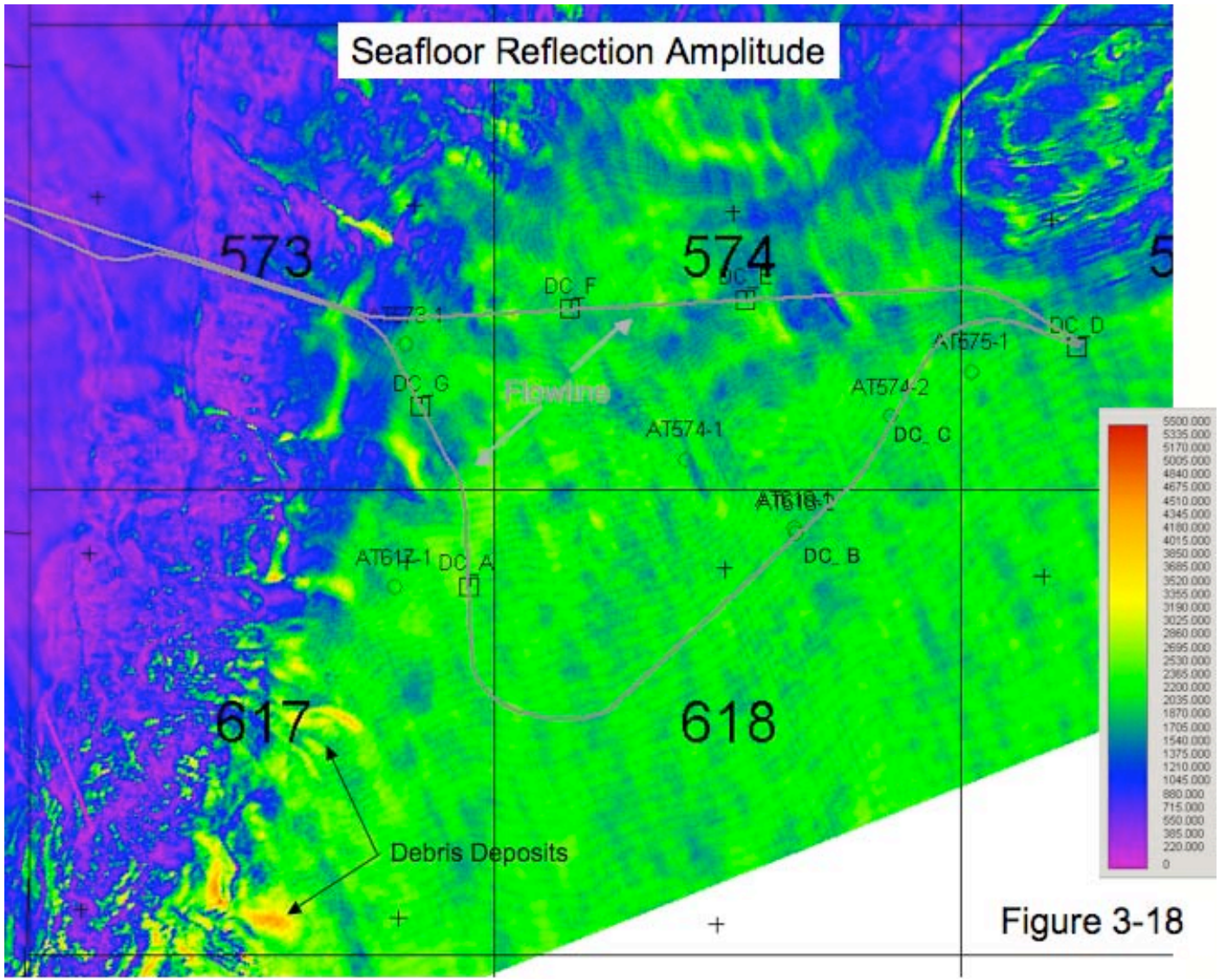
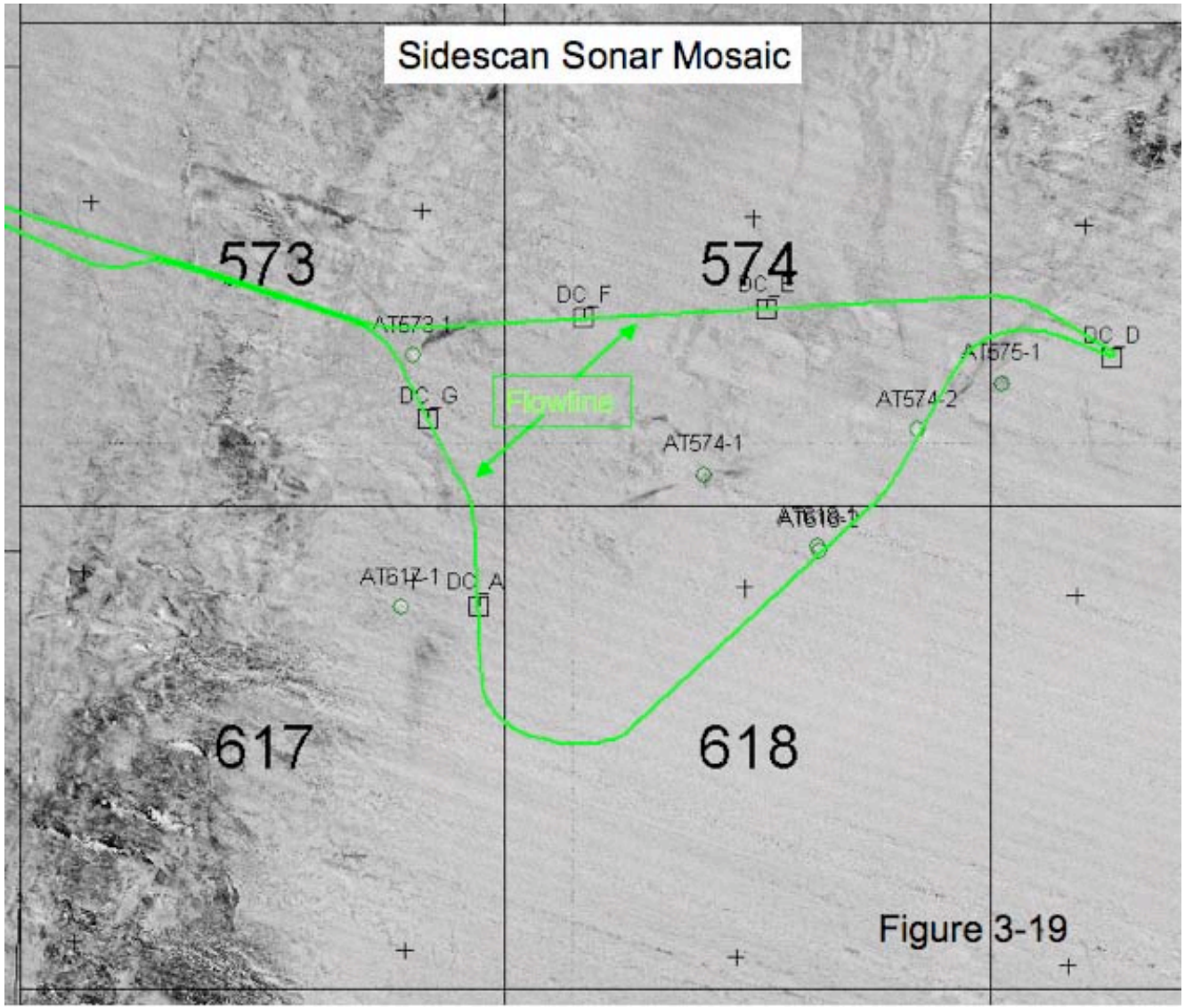


Figure 3-18

3.5.19 Figure 3-19: AUV Sidescan Sonar Mosaic - Area of Subsea Architecture, Existing & Proposed Wells



3.5.20 Figure 3-20: Buried Amplitude Anomalies Indicative of Free Gas

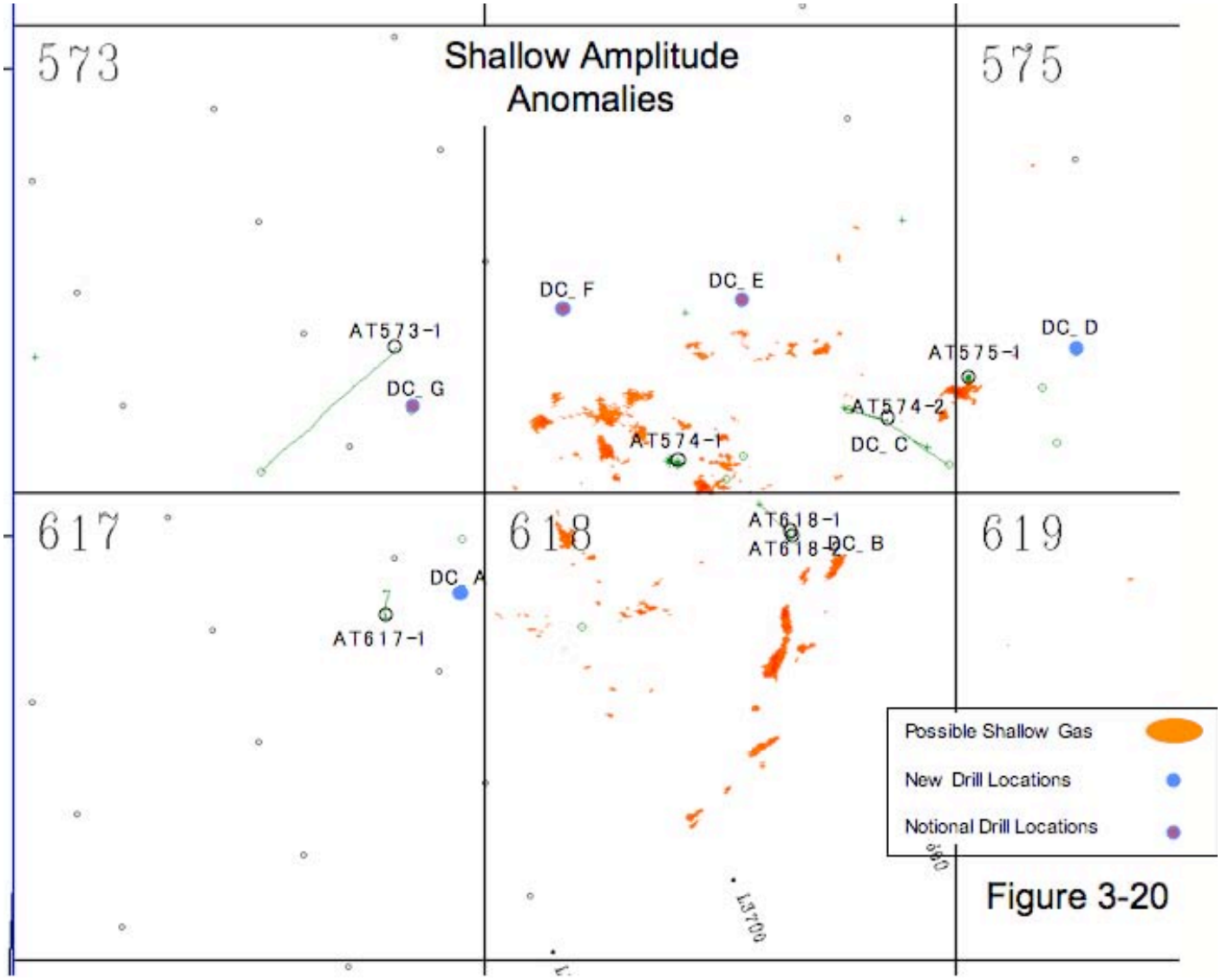
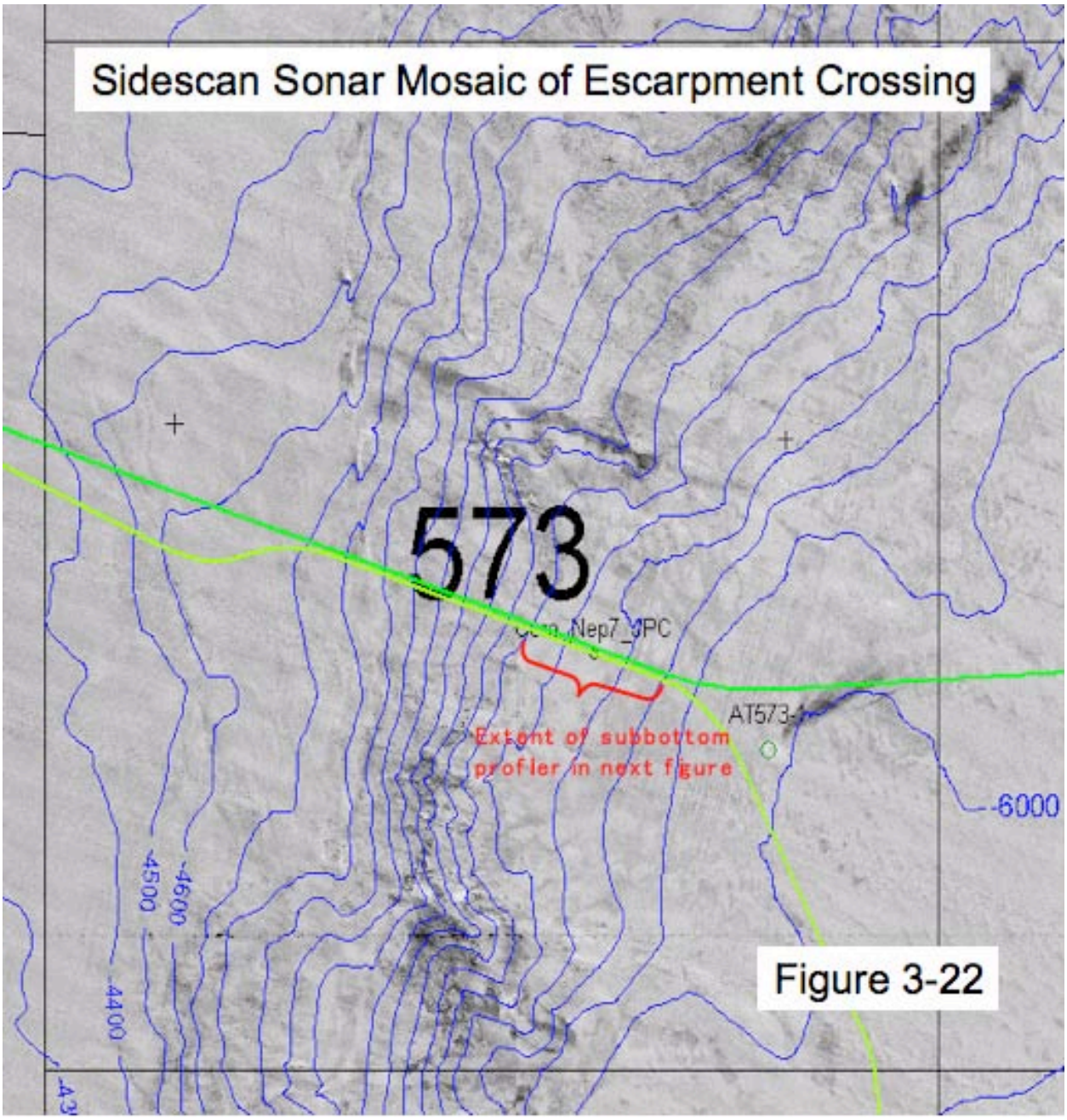


Figure 3-20

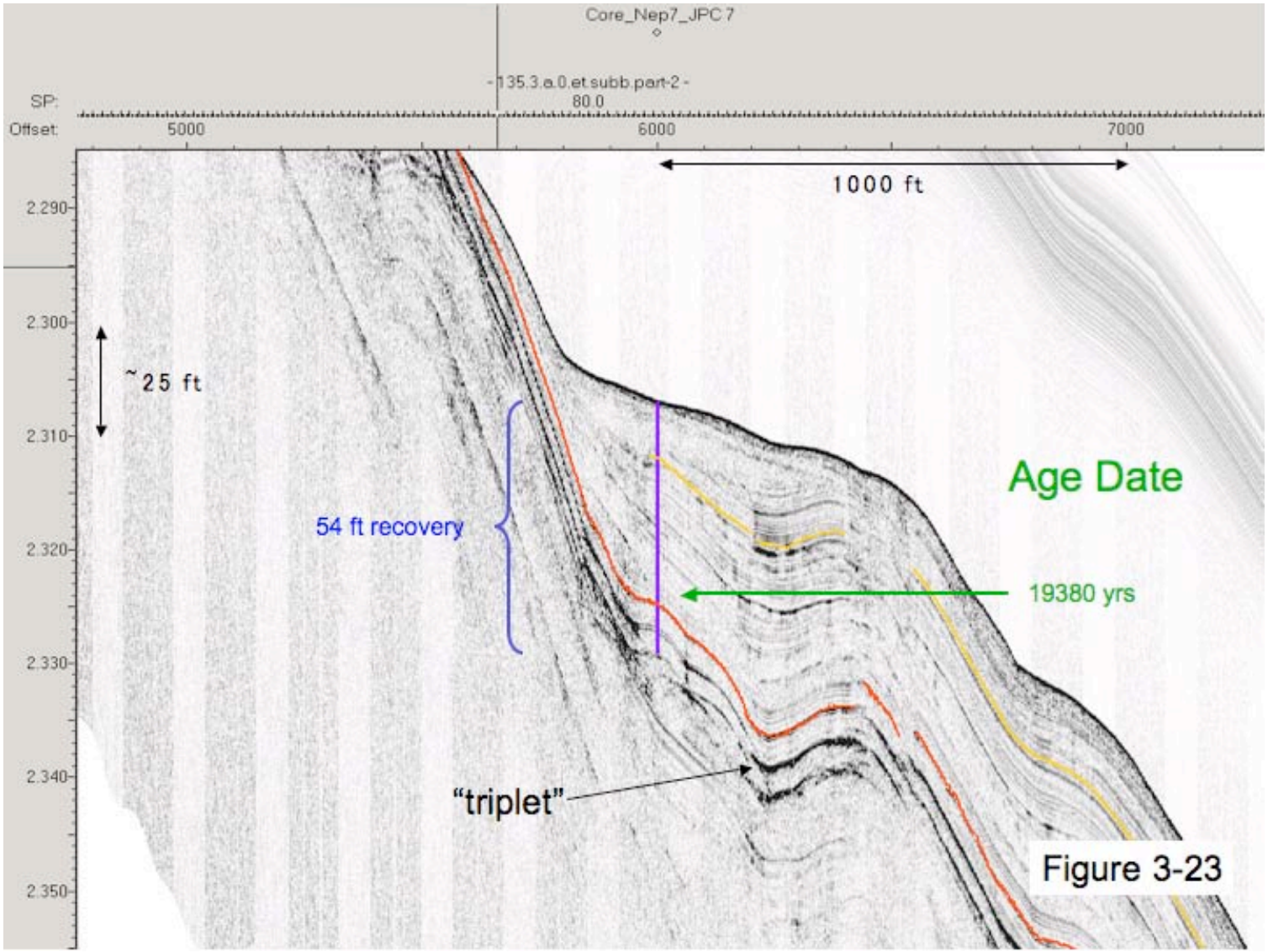
3.5.21 Figure 3-21: Seismic Cross Section Through Existing and Planned Well Locations

Public Information Copy

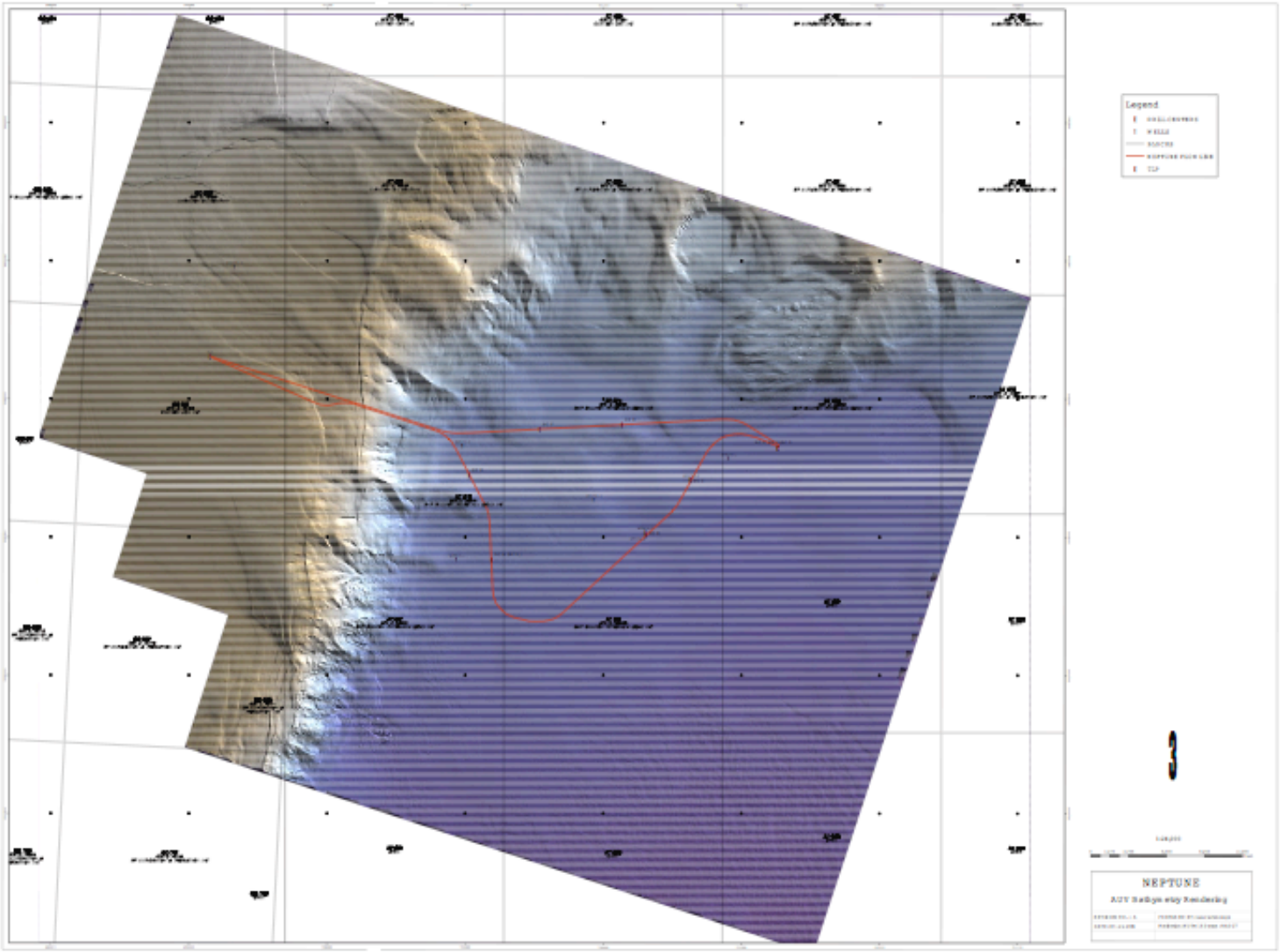
3.5.22 Figure 3-22: Sidescan Sonar Mosaic of Flowline Escarpment Crossing



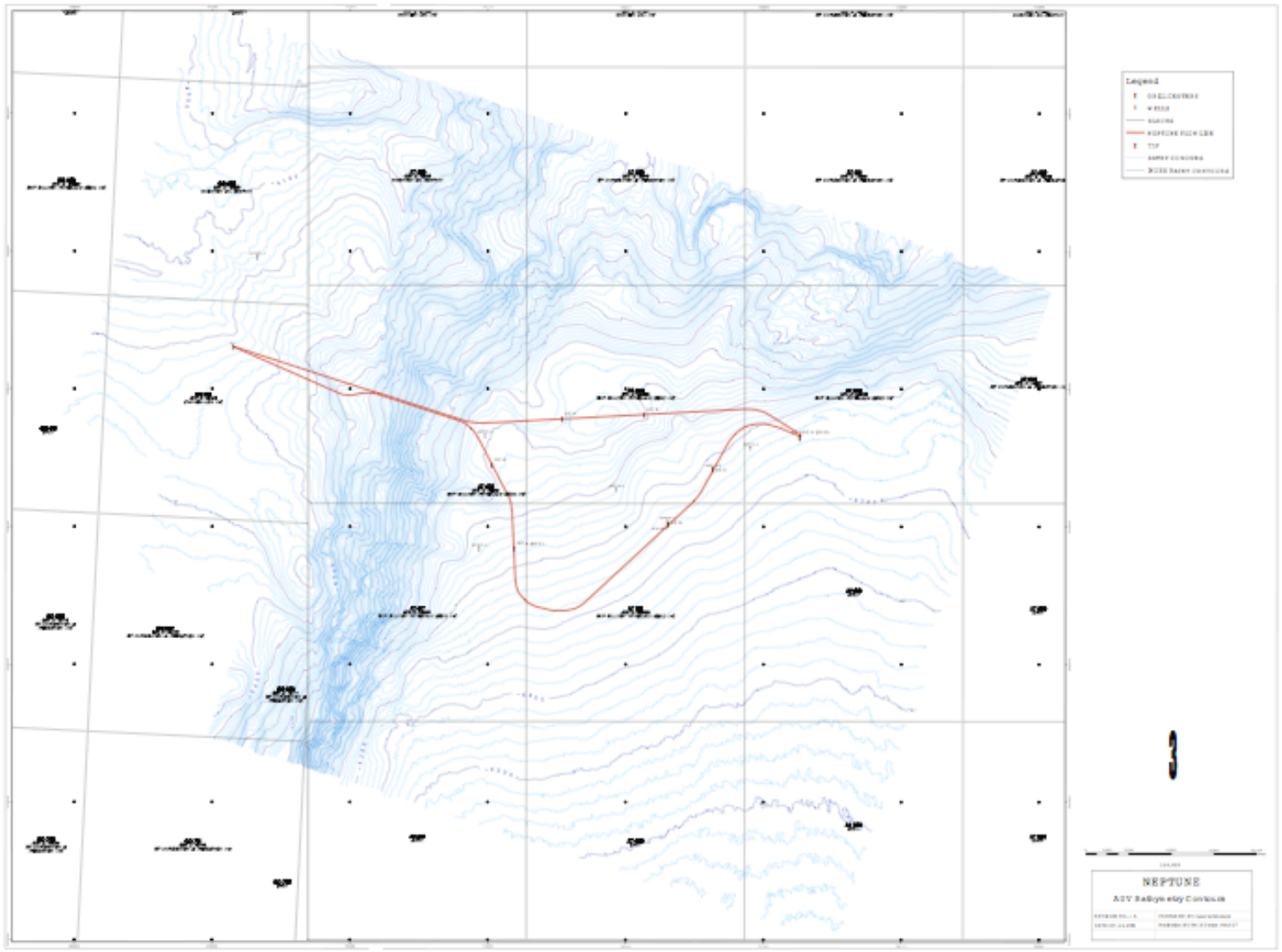
3.5.23 Figure 3-23: Subbottom Profiler Display Along Flowline Route



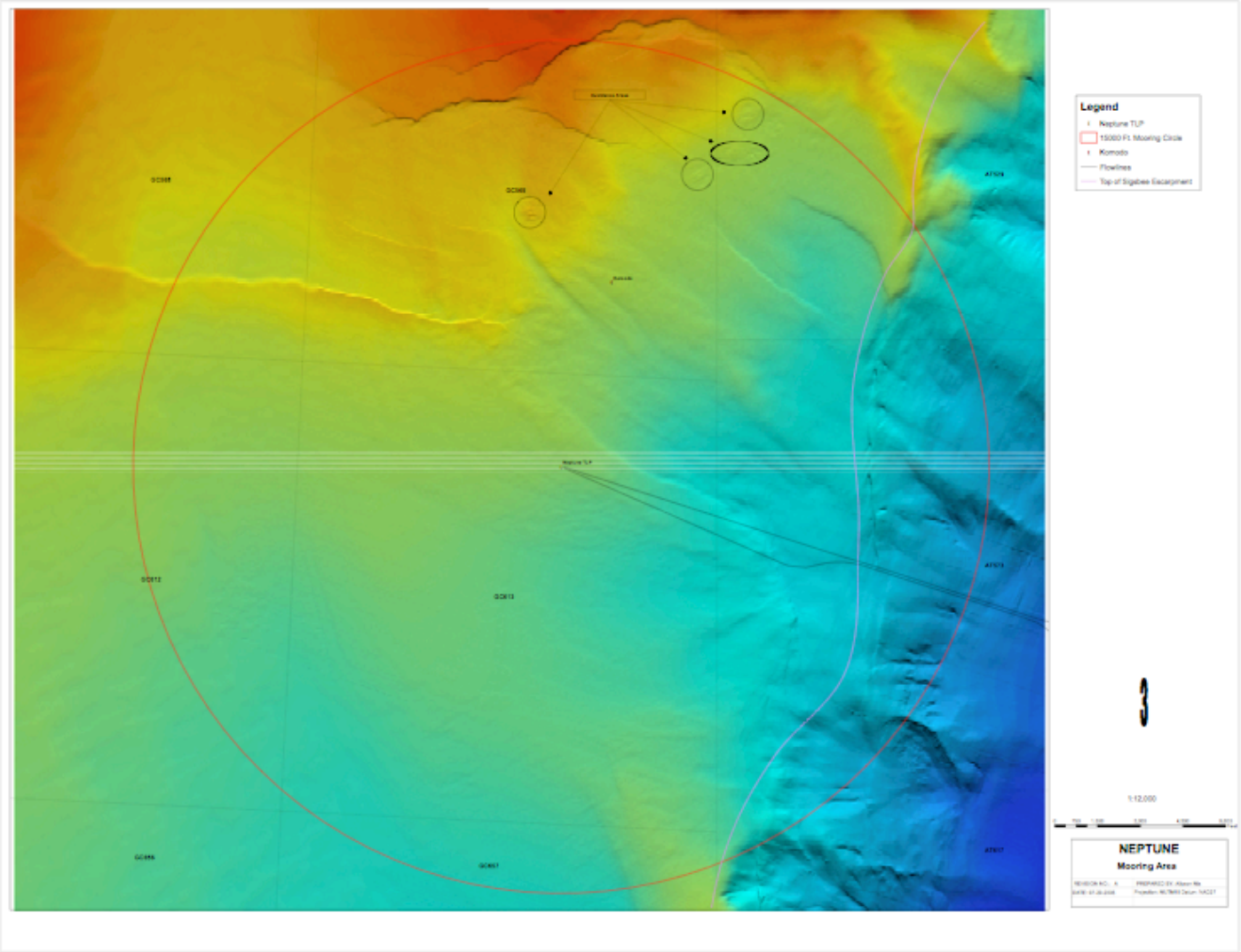
Map 3-1: AUV Bathymetry Rendering



Map 3-2: AUV Bathymetry Contours



Map 3-3: Neptune Mooring Area



4 BIOLOGICAL INFORMATION

4.1 Chemosynthetic Information

Available data as described in previous Section 3.3, *Shallow Hazards Reports*, have been examined for indications of possible chemosynthetic community development. No chemosynthetic communities have been specifically identified but a number of small features have been identified as having potential for community development. The features have been identified on the basis of seafloor reflection amplitude anomalies and/or local topographic expression.

Identified areas for potential chemosynthetic community development are highlighted in Figure **4-1** and a table of the locations is included here. No drilling activities will affect any possible chemosynthetic communities. The TLP topsides installation vessel mooring will avoid potential chemosynthetic communities. The flowline route has no indication of chemosynthetic community potential.

Potential Chemosynthetic Community Center Locations

	X	Y	
A	690,400	9,952,000	Slight amplitude increase, slightly rougher seafloor
B	696,280	9,953,330	Slight amplitude increase, slightly rougher seafloor
C	697,465	9,954,100	Slight amplitude increase, slightly rougher seafloor
D	698,050	9,955,450	Slight amplitude increase, slightly rougher seafloor
E	726,510	9,051,765	Slight amplitude increase, slight mound
F	734,010	9,946,660	Slight amplitude increase, mound

A 15,000 foot anchor radius has been evaluated around the TLP location. The vertical tendon mooring radius of the TLP is less than 200'. Although most of the installation will use a Dynamically-Positioned (DP) construction vessel, the mooring area has been 'cleared' for the potential use of a moored installation vessel for Topsides installation. The mooring area is depicted in **Map 3-3**, Section 3.6, *Appendix to Section 3*. These data, as well as the detailied bathymetry data are being provided to the installation contractor. A large format copy of this map is included in the Appendices Document, Section 3.

4.2 Biological Stipulations

The Neptune Field is not in or near any identified biologically sensitive area. All available ROV videos obtained during drilling operations have been reviewed for indications of sensitive biologic activity. No unusual or sensitive biota have been seen.

The Neptune Unit leases are not in an area affected by the Topographic Features, Live Bottom (Pinnacle Trend), or Archeological information requirements.

4.3 Remotely Operated Vehicle (ROV) Surveys

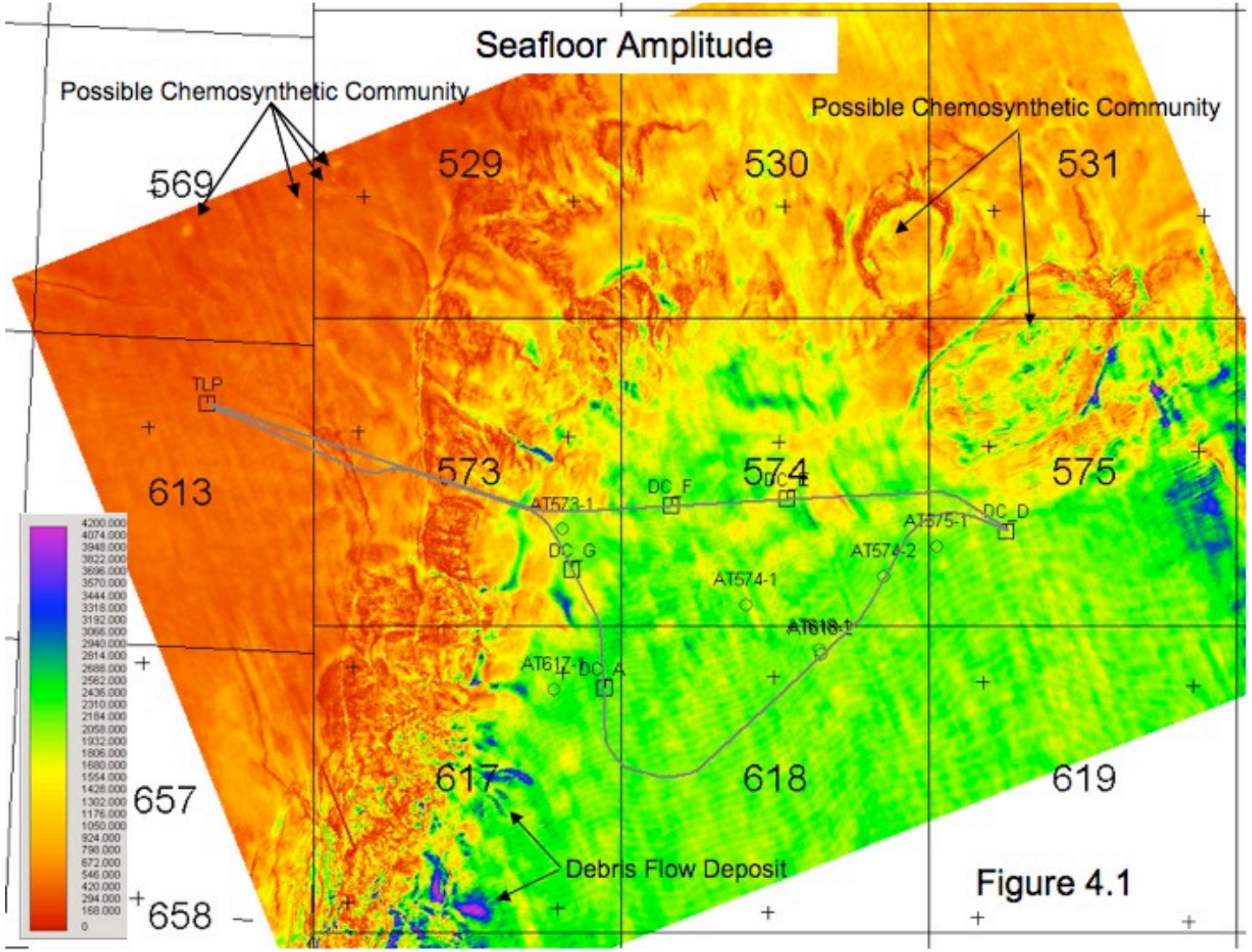
The wells will be pre-drilled, prior to installation of the TLP. The ROV requirements have been addressed in the Exploration Plans. Both the pre-drill program and the TLP are located in Grid 13. Grid 13 has been identified by MMS as an area with adequate ROV survey coverage.

BHP Billiton has substantial data on the project area as summarized in Section 3.3, Shallow Hazards Reports, most of which has been provided previously to MMS in support of Exploration Plans, or is included in this DOCD.

BHP Billiton believes the data that have been collected for the Neptune Project, in conjunction with its location in Grid 13, meets the requirements of the NTL No. 2003-G03, *Remotely Operated Vehicle Surveys in Deepwater*.

4.4 Figures for Section 4

4.4.1 Figure 4-1: Areas Identified for Potential Chemosynthetic Communities



5 WASTE AND DISCHARGE INFORMATION

5.1 Discharge

Project is located in Grid 13, which is an exempted area, having been 'cleared' by the Grid Environmental Assessment conducted for the Marco Polo Project.

Project activities will be subject to compliance with EPA NPDES General Permit for Region 6. The Neptune Unit leases are already covered under this General Permit.

Application for coverage for the TLP location in GC 613 will be submitted to EPA separately.

5.2 Disposed Wastes

An estimate of the proposed type and general characteristics of the disposed wastes, the amount, and onshore waste management contractors that are used by BHP Billiton are summarized in the following table.

Disposal Table (Wastes to be disposed of, not discharged) Neptune

Type of Waste Approximate Composition	Amount*	Rate per Day	Name/Location of Disposal Facility	Treatment and/or Storage, Transport and Disposal Method
Trash and debris	1.3 cu yd/day	1.3 cu yd/day	SWDI, Houma, LA	Transport in storage bins to Shore Base – Land Transportation for Disposal
Chemical product wastes	NONE	NONE	N/A	N/A
Workover fluids	50 bbls/3 years	50 bbls/ 3 years	Newpark Environmental Services, Port Fourchon, LA	Transport in tanks on crew boat to transfer station

*can be expressed as a volume, weight, or rate

6 OIL SPILL INFORMATION

BHP Billiton contracted Ms. Bea Stong, J. Connor Consulting, Inc., to develop the oil spill information required for this section of the DOCD.

6.1 Regional Oil Spill Response Plan Information

BHP Billiton Petroleum (GOM) Inc.'s Regional Oil Spill Response Plan (OSRP) was approved by MMS on October 22, 2003 and most recently updated on October 5, 2004. The approved Regional OSRP will cover activities proposed in this DOCD, and will be revised to include the worst case discharge for Neptune production.

6.2 Oil Spill Response Organization (OSRO) Information

BHP Billiton's primary equipment providers are Clean Gulf Associates (CGA) and the Marine Spill Response Corporation (MSRC). MSRC's STARS network will provide closest available personnel, as well as an MSRC supervisor to operate the equipment.

6.3 Worst-Case Scenario Comparison

The 'farshore' worst-case scenario in the Regional OSRP is applicable since the proposed activities are beyond 10 miles seaward of the coastline. The Neptune Worst-Case Scenario Comparison is summarized in the table below.

BHP Billiton has determined that the worst-case scenario from the activities proposed in this DOCD supercedes the worst-case scenario from our approved Regional OSRP for production operations greater than 10 miles from shore (i.e., GC 282 [Boris], 29,650 bbls/day). Therefore, a revised Appendix H to the Regional OSRP will be filed with the MMS under separate cover to incorporate this new worst-case scenario.

Worst-Case Scenario Comparison

Category	Regional OSRP WCD	Proposed Activity WCD	Proposed Activity WCD
Type of Activity	Production > 10 miles	Production > 10 miles	Production > 10 miles
Facility Location	AT 573, 574, 575, 617 & 618	GC 613	AT 573, 574, 575, 617 & 618
Facility Designation	Neptune Well SD002	Neptune TLP	Neptune Well SD002
Distance to Nearest Shoreline (miles)	114	114	114
Volume			
Storage tanks (total)	N/A	2,286	N/A
Flowlines (on Facility)	N/A	401	N/A
Lease term pipelines	N/A	N/A	N/A
Uncontrolled blowout (volume per day)	50,800 bbls	2,687 bbls	50,800 bbls
Total Volume	**50,800 bbls**	**2,687 bbls**	**50,800 bbls**
Type of Oil(s) – crude oil, condensate, diesel	Crude Oil	Crude Oil, Diesel	Crude Oil
API Gravity	21.8º	21.8º, 32.4º	21.8º

6.4 Required Statement

The certification statement is not required since the proposed activity will supersede the approved Regional OSRP Worst Case Discharge (WCD).

6.5 Facility Tanks, Production Vessels

The following information is provided as required for Neptune regarding facility tanks and production vessels, and installation vessel tanks:

Facility Tanks and Production Vessels (Capacity ≥ 25 bbls)

Type of Storage Tank	Type of Facility	Tank Capacity (bbls)	Number of Tanks	Total Capacity (bbls)	Fluid Gravity (API)
Inlet Separator	TLP Production	262	1	262	21.8º
Inter Press Separator	TLP Production	312	1	312	21.8º
E Cost Vessel	TLP Production	**1270***	1	1270	21.8º
HP Flare Scrubber	TLP Production	90	1	90	21.8º
LP Flare Scrubber	TLP Production	25	1	25	21.8º
Diesel Storage Ped	TLP Crane	265	1	265	32.4º
Emerg Gen Day Tk	TLP Production	29	1	29	32.4º
MGC Lube Oil Tk	TLP Production	33	1	33	
Total	*Largest single tank			**2,286**	21.8º, 32.4º

Installation Vessel Tanks

Type of Storage Tank	Type of Facility	Largest Tank Capacity (bbls)	Number of Tanks	Total Capacity (bbls)	Fluid Gravity (API)
Fuel Oil (Marine Diesel)	Deepwater Construction Vessel (HMC *Balder; Hermod*)	**8,626**	7	36,720	32.4º
Fuel Oil	Tug boats (Otto Candies; Sidney Candies)	5,198	2	5,348	32.4º & lube oil

6.6 Spill Response Sites

Since this is an initial DOCD for Neptune, with new multiwell structures for which the State of Louisiana is an affected state, as well as Neptune being a surface facility that supports a subsea development in water depths greater than 1,312', the following information is provided as required:

Spill Response Sites

Primary Response Equipment Location	Preplanned Staging Location(s)
Houma, Ft. Jackson and Lake Charles, LA	Venice, Cameron and Fourchon, LA

6.7 Diesel Oil Supply Vessels

The following information is provided as required since Neptune is a surface facility located in water depths greater than 1,312', and this is an initial DOCD with new multiwell structures for which the State of Louisiana is an affected State:

Diesel Oil Supply Vessels

Size of Fuel Supply Vessel	Capacity of Fuel Supply Vessel	Frequency of Fuel Transfers	Route Fuel Supply Vessel Will Take
240'	297,432 gallons	1/day (construction) 1/week (production)	From the Shore Base in Port Fourchon, LA, 6 miles to the mouth of Bayou Lafourche, then approximately 122 miles direct route through the open Gulf to Neptune TLP location in GC 613
280'	328,871 gallons	1/day (construction) 1/week (production)	From the Shore Base in Port Fourchon, LA, 6 miles to the mouth of Bayou Lafourche, then approximately 122 miles direct route through the open Gulf to Neptune TLP location in GC 613

6.8 Support Vessels Fuel Tanks

The following information is provided as required for Neptune, since this is an initial DOCD with new multiwell structures for which the State of Louisiana is an affected State, as well as a surface facility that supports a subsea development in water depths greater than 1,312':

Estimated Total Storage Capacity (Maximum Per Class of Vessel)

Type of Vessel	Number in Field Simultaneously	Estimated Maximum Fuel Tank Storage Capacity (gallons)
Tug boats	3	1 @ 218,300 gallons 1 @ 200,000 gallons
Supply vessels	2	1 @ 297,432 gallons 1 @ 328,871 gallons
Deepwater Construction Vessels (HMC *Balder* & *Hermod*)	2 (potentially, for a small amount of time at the TLP site)	1,542,240 gallons
Crew vessels	1	20,263 gallons

6.9 Produced Liquid Hydrocarbons Transportation Vessels

For the first well that is completed, a well test may be proposed. The wells are all at surface locations previously approved by MMS in Exploration Plans as summarized in previous Section 1.1.9, *Description of the Pre-Drilling Program*. The appropriate information and applications will be submitted pursuant to the respective EP during the pre-drilling program, should it be determined to proceed with the proposed flowback of the first completion.

6.10 Oil and Synthetic Based Drilling Fluids

The Neptune wells will be pre-drilled prior to installation of the TLP. The drilling activities have been addressed in previously approved surface locations in Exploration Plans as summarized in Section 1.1.9, *Description of the Pre-Drilling Program.*

6.11 Oil Characteristics

The required, estimated chemical and physical characteristics of the oils that will be handled, stored, or transported on/by the Neptune facility are summarized in the two tables below:

Oil Characteristics*

Characteristic	Value	Analytical Methodologies
Gravity (API) @ 60F	21.8	Anton Paar Oscillating U-Tube
Flash Point (ºC)	Not Tested	Not Tested
Pour Point (ºC)	-42	ASTM D-97
Viscosity (Centipoise at 25ºC)	239	ASTM D-445
Wax Content (wt %)	1.47	UOP 64-46
Asphaltene Content (wt %)	7.4	IP – 143
Resin Content (wt %)	22.1	AFP 9305
Sulfur (wt %)	2.88	D-5623

Simulated Distillation*

Weight % Off	Boiling Point	Analytical Methodology
IBP	51	ASTM D-2887
5	133	
10	180	
15	222	
20	257	
25	289	
30	318	
35	350	
40	380	
45	410	
50	437	
55	463	
60	489	
65	515	
70	543	
75	574	
80	606	
85	640	
90	681	
95	>733	
99	>733	
FBP	>733	

*The data shown is representative of the oil that is expected to be produced from Neptune wells. Not all characteristics were tested in each well, and different labs were involved in the analyses. Oil characteristics reported are based on samples taken from he M9 interval in the following wells:

Information on Oil Samples Used for Oil Characteristics Analyses

Neptune Well No.	Lease Area & Block	Lease No. OCS-G-	MMS Well Name	API Well No.
N5	AT 574 #2	08035	002ST00BP00	608184004400
N3	AT 617 #1	08037	001ST00BP00	608184003000

6.12 Blowout Scenario

The worst case discharge scenario for the Neptune field development project is defined as an uncontrollable discharge to the surface through the 5-7/8" work string during completion operations. Since the proposed producing reservoir is currently behind pipe, this occurrence would likely take place after perforating operations. Mechanically speaking, this scenario assumes that the pipe rams function on the sub-sea BOP stack but the shear/blind rams, internal BOP and TIW systems fail, allowing full wellbore fluid up the drillpipe and flowing to atmospheric pressure at the surface of the drill rig floor. It is also assumed, due to the high rate of production expected during the uncontrollable flow period, the well would experience a failed gravel pack and sand up relatively quickly. The maximum crude oil discharge is calculated to be 50,800 barrels of crude oil per day.

Should a blowout occur, the formation types present in the GOM tend to bridge over in most cases. If the wellhead and BOP system are still intact, wellbore intervention should be possible in as little as 7 to 10 days. In a relief well scenario, rig availability is typically not an issue. The time required to drill a relief well would be in the 30 to 60 day range depending on the well intersection depth.

6.13 Spill Response Discussion

The largest spill volume originating from the proposed activity would be a well blowout during completion operations, estimated to be 50,800 barrels of crude oil with an API gravity of 21.8º.

6.13.1 Land Segment and Resource Identification

Trajectories of a spill and the probability of it impacting a land segment have been projected utilizing information in MMS Oil Spill Risk Analysis Model (OSRAM) for the Central and Western Gulf of Mexico available on MMS website. The results are shown in the following table.

Trajectory by Land Segment

Trajectory of a spill and the probability of it impacting a land segment have been projected utilizing BHP Billiton Petroleum's WCD and information in MMS Oil Spill Risk Analysis Model (OSRAM) for the Central and Western Gulf of Mexico available on MMS website using thirty (30) day impact. The results are tabulated below.				
Lease Area and Block	OCS-G-	Launch Area	Land Segment and/or Resource	Conditional Probability (%) within 30 days
Atwater Valley 573 574 575 617 618	08034 08035 08036 08037 08038	C62	Jefferson County, TX Cameron Parish, LA Vermilion Parish, LA	1 2 1

Production > 10 miles from shore 114 miles from shore			Terrebonne Parish, LA Lafourche Parish, LA **Plaquemines Parish, LA**	1 1 **3**

The MMS OSRAM identifies a 3% probability of impact to the shorelines of Plaquemines Parish, Louisiana within thirty days. Plaquemines Parish includes Barataria Bay, the Mississippi River Delta, Breton Sound and the affiliated islands and bays. This region is an extremely sensitive habitat, and serves as a migratory, breeding, feeding and nursery habitat for numerous species of wildlife. Beaches in this area vary in grain particle size, and can be classified as either fine sand, shell or perched shell beaches. Sandy and muddy tidal flats are also abundant. Additional discussion of protection strategies for potentially affected resources is included in BHP Billiton's Regional Oil Spill Response Plan.

6.13.2 Response

BHP Billiton will make every effort to respond to the Worst Case Discharge as effectively as possible. A description of the response equipment available to contain and recover the Worst Case Discharge is shown in **Figure 6-1**.

An ADIOS weathering model was run on a similar product from the ADIOS oil database. The results indicate 20% of the product would be evaporated/dispersed within 24 hours, leaving approximately 40,640 barrels on the water.

Figure 6-1 outlines equipment, personnel, materials and support vessels as well as temporary storage equipment to be considered in order to cope with an initial spill of 50,800 barrels. The list estimates individual times needed for procurement, load out, travel time to the site and deployment. If appropriate, 5 sorties (10,000 gallons) from the DC-4 and 10 sorties (10,000 gallons) from the DC-3 should disperse approximately 8,571 barrels of oil.

Offshore response strategies may also include attempting to skim utilizing the CGA HOSS barge, the R/V *Louisiana Responder*, the R/V *Gulf Coast Responder* and two (2) Fast Response Units (FRUs), with a total derated skimming capacity of 136,692 barrels. Temporary storage associated with the identified skimming equipment equals 32,530 barrels. If additional temporary storage is needed, a temporary storage barge may be mobilized.

Safety is first priority. Air monitoring will be accomplished and operations deemed safe prior to any containment and/or skimming attempts.

If the spill went unabated, shoreline impact in coastal environments would depend upon existing environmental conditions. Onshore response may include

the deployment of shoreline boom on beach areas, or protection and sorbent boom in vegetated areas. Strategies would be based upon surveillance and real time trajectories that depict areas of potential impact given actual sea and weather conditions. Strategies from the One Plan GOM Area Contingency Plan (ACP), and Unified Command would be consulted to ensure that environmental and special economic resources would be correctly identified and prioritized to ensure optimal protection. ACPs depict the protection response modes applicable for oil spill clean-up operations. Each response mode is schematically represented to show optimum deployment and operation of the equipment in areas of environmental concern. Supervisory personnel have the option to modify the deployment and operation of equipment allowing a more effective response to site-specific circumstances.

6.14 Pollution Prevention Measures

The safety, pollution prevention, and early spill detection measures that beyond those required by 30 CFR 250 include, but are not limited to the following:

- Both the rig and TLP will be ISO 14001 Environmental Management System compliant
- There will be a formal 'HSE Case' prepared for the rig
- Acoustic Dynamic Positioning (DP) System
- Accurate positions of seabed locations
- Highly automated tubular handling and riser running
- Tank cleaning system to eliminate personnel entry
- Dedicated clean pontoon storage and transfer system
- Vertical riser storage
- BOP elevator system

6.15 Figures for Section 6

6.15.1 Figure 6-1: Equipment Response Time

This table depicts equipment response time to AT 573, 574, 575, 617 and 618 for a Worst Case Discharge (WCD) Scenario for a Blowout during Production/Workover; 50,800 bbls of Crude Oil, API Gravity 21.8º.

EQUIPMENT					Owner/ Location	Staging	PROCUREMENT TIME (Hours) To Staging Area			Total Time to Procure (1)	Time to Load Out (2)	Travel Time (Staging/ Spill) (3)	Time to Deploy (4)	Total Estimated Response Time
	TYPE	Derated Capacity (BBLS)	Storage (BBLS)	No. of Units			Assemble Equipment	Personnel	Vessel					
A	DC 4 Spray Aircraft	--	--	1	ASI/Houma	Houma	1	1	0					
	DC 3 Spray Aircraft	--	--	2	ASI/Houma	Houma	1	1	0					
	Spotter Plane	--	--	1	ASI/Houma	Houma	1	1	0					
	Spotter Personnel	--	--	2	ASI/Houma	Houma	0	1	0					
	Dispersant	--	--	--	ASI/Houma	Houma	0	0	0	1	1	1.5	0	3.5
B	Hoss Barge	43,000	4,130	1	CGA/Houma	Houma	2	0	0					
	Operators	--	--	12	STARS*	Houma	0	2	0					
	Tugs	--	--	3	CENAC/Houma	Houma	0	0	3	3	2	27	1	33
C	Louisiana Responder	43,446	14,000	1	MSRC/Ft. Jackson	Ft. Jackson	2	2	1	2	1	7	1	11
C	Gulf Coast Responder	43,446	14,000	1	MSRC/Lake Charles	Cameron	2	2	1	2	1	10	1	14
D	FRU/Expandi	3,400	200	1	CGA/Houma	Fourchon	2	0	0					
	Operators	--	--	6	STARS*	Fourchon	0	2	0					
	Utility Boat	--	--	1	Vessel of Opp.	Fourchon	0	0	2					
	Crew Boat	--	--	1	Vessel of Opp.	Fourchon	0	0	2	2	1	10	1	14

Figure 6-1 Cont'd from previous page

E	FRU/Expandi	3400	200	1	CGA/Houma	Fourchon	2	0	0					
	Operators	--	--	6	STARS*	Fourchon	0	2	0					
	Utility Boat	--	--	1	Vessel of Opp.	Fourchon	0	0	2					
	Crew Boat	--	--	1	Vessel of Opp.	Fourchon	0	0	2	2	1	10	1	14
F	Initial Support													
	Spotter Helicopter	--	--	2	PHI/Bootheville	Spill Site	1	0	0	1	0	2	0	3
	Surveillance Helo	--	--	2	PHI/Boothville	Spill Site	1	0	0	1	0	2	0	3
	Communications	--	--	1	CGA/Lake Charles	Cameron	1	0	0	1	0	3.5	1	5.5
G	Offshore Barge	--	44,700	1	MSRC/Ft. Jackson	Ft. Jackson	1	2	0	2	1	20	1	24
	TOTAL	136,692	77,230											

7 AIR EMISSIONS INFORMATION

The Project Plan Emissions, Complex Total Emissions, and exemption amounts for this DOCD were calculated by:

Jesse Roberts
BHP Billiton Petroleum (Americas) Inc.
713-961-8419
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Based on these data, emissions from the proposed activities in this DOCD will not cause any significant impact on onshore air quality.

7.1 Summary Air Emissions Calculations

Air emissions for the Neptune Project have been calculated using required Form MMS-139 for DOCD's. A summary of the results is included below:

Summary Air Emissions Table

AIR EMISSION CALCULATIONS

OMB Control No. 1010-0049
OMB Approval Expires: August 31, 2006

COMPANY	AREA	BLOCK	LEASE	PLATFORM	WELL
BHP Billiton Petroleu	Atwater Valley; Green Canyo	AT 573, 574, 575, 617 and 6	OCS-G-08034, 08035, 0803	A' (Neptune TLP)	

Year	Emitted Substance				
	PM	SOx	NOx	VOC	CO
2005	0.00	0.00	0.00	0.00	0.00
2006	15.10	69.26	518.99	15.57	113.23
2007	23.89	107.87	885.55	45.98	232.38
2008	4.46	20.51	460.38	92.68	273.10
2009	4.46	20.51	459.56	92.46	272.58
2010	4.46	20.51	459.56	92.46	272.58
2011	12.92	59.31	749.79	97.86	333.22
2012	12.92	59.15	669.26	97.44	281.80
2013	5.23	23.84	404.08	89.30	223.69
2014	5.23	23.84	404.08	89.30	223.69
2015	32.88	150.71	1353.80	111.17	425.53
2016	12.92	59.14	668.23	90.78	276.20
2017	5.23	23.83	402.54	79.32	215.30
2018	12.92	59.13	666.60	83.93	270.23
2019	5.23	23.82	402.02	76.00	212.50
2020	4.46	20.33	375.94	72.06	204.38
2021	4.46	20.33	375.34	71.89	203.99
2022	4.46	20.32	374.83	68.56	201.19
2023	4.46	20.32	374.83	68.56	201.19
2024	2.15	9.71	147.40	23.99	76.23
Allowable	3796.20	3796.20	3796.20	3796.20	79937.18

Form MMS-139 (August 2003)
Page 1 of 1

Neptune Air Emiss DOCD Submittal.1.xls
SUMMARY

Air emissions from the 7 production wells to be pre-drilled under previously approved Exploration Plans have been omitted from these calculations since they have been provided with the respective Exploration Plans (Section 1.4, *Description of the Pre-drilling Program*).

7.2 Screening Questions

The air emissions screening question results for Neptune activities covered by this DOCD are summarized below:

Emissions Screening Questions for the Neptune DOCD

SCREENING QUESTIONS FOR DOCD'S	YES	NO
Is any calculated Complex Total (CT) Emission amount (in tons) associated with your proposed exploration activities more than 90% of the amounts calculated using the following formulas: CT = 3400D2/3 for CO, and CT = 33.3D for the other air pollutants (where D = distance to shore in miles)?		X
Do your emission calculations include any emission reduction measures or modified emission factors?		X
Does or will the facility complex associated with your proposed development and production activities process production from eight or more wells?		X
Do you expect to encounter H2S at concentrations greater than 20 parts per million (ppm)?		X
Do you propose to flare or vent natural gas in excess of the criteria set forth under 250.1105(a)(2) and (3)?		X
Do you propose to burn produced hydrocarbon liquids?		X
Are your proposed development and production activities located within 25 miles from shore?		X
Are your proposed development and production activities located within 200 kilometers of the Breton Wilderness Area?		X

Since the answer is 'no' to all of the above screening questions, the worksheets have not been included with this DOCD. However, they are available to be submitted should they be required by MMS.

7.3 Summary Peak Year Air Emissions Table

As required, the 'peak year emissions' results of the calculations in the required worksheets from Form MMS-139 are summarized in the table below:

Neptune Peak Year Air Emissions Summary

EMISSIONS SPREADSHEET SUMMARY					
Air Pollutant		**Plan Emission Amounts 1 (tons)**	**Calculated Exemption Amounts 2 (tons)**		**Calculated Complex Total Emission Amounts 3 (tons)**
Carbon monoxide (CO)		425.53	79937.18		
Particulate matter (PM)		32.88	3796.2		
Sulphur dioxide (SO2)		150.71	3796.2		
Nitrogen oxides (NOx)		1353.80	3796.2		
Volatile organic compounds (VOC)		111.17	3796.2		

1 - For activities proposed in your EP or DOCD, list the projected emissions calculated from the worksheets.
2 - List the exemption amounts for your proposed activities calculated by using the formulas in 30 CFR 250.303(d).
3 - List the complex total emissions associated with your proposed activities calculated from the worksheets.

7.4 Air Emissions Worksheets

The required worksheets from Form MMS-139 for projected air emissions from the Neptune activities covered by this DOCD are available for MMS review if required.

8 ENVIRONMENTAL IMPACT ANALYSIS (EIA)

The Neptune Project is in MMS Grid 13, one of the biologically based grids used to subdivide the western Gulf of Mexico. Grid 13 includes the Marco Polo Project, which required preparation of a Programmatic Environmental Assessment (PEA) in accordance with MMS implementation of National Environmental Policy Act (NEPA) requirements. The proposed Neptune Development Project does not include any new or unusual technology, and therefore, is covered by the PEA prepared by MMS for Grid 13 and Marco Polo.

The following Deepwater Grid graphic has been modified to indicate the proximate location of Neptune with respect to Grid 13, and the Marco Polo Project.

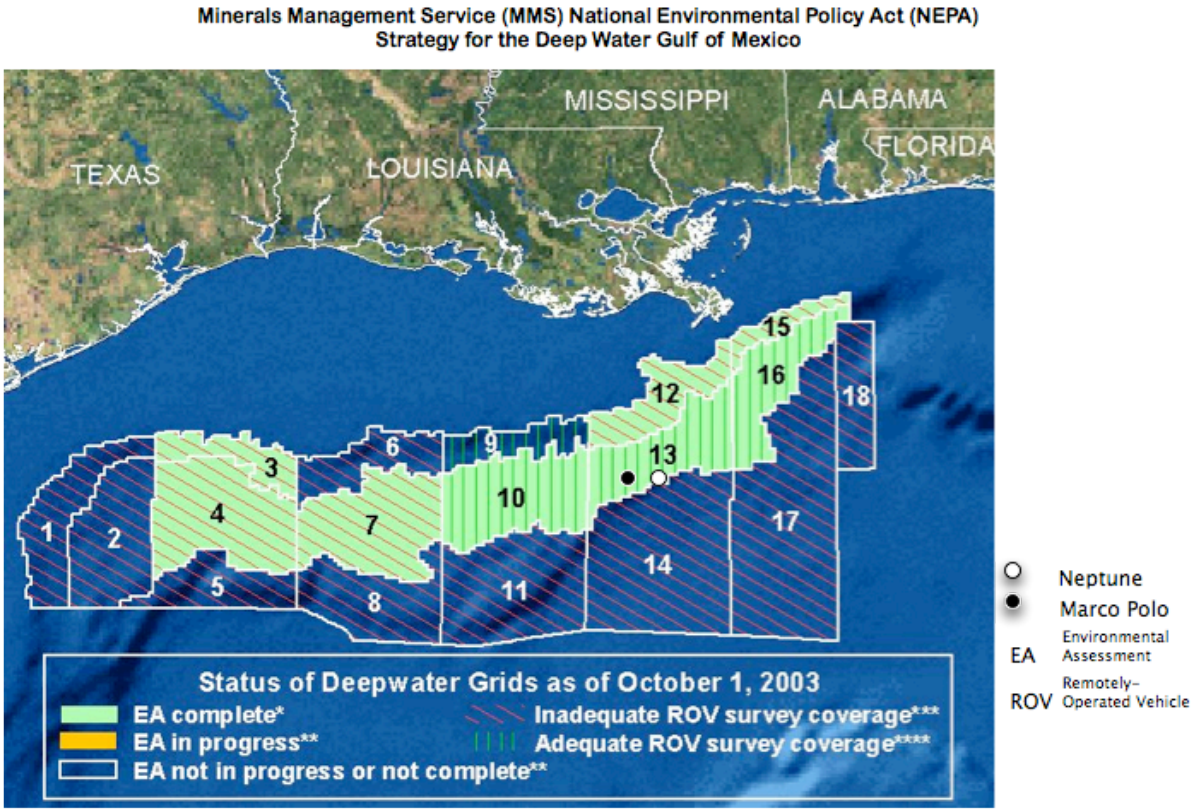

Figure 1. Grid Location of the Neptune Project. Approximate location of Neptune Project in relation to Marco Polo in Grid 13. The base graphic is from the MMS website page that depicts the status of information requirements for the biologically-based 'grids' in the deepwater Gulf of Mexico (GOM). Base page downloaded July 2004. (http://www.gomr.mms.gov/homepg/regulate/environ/ea_grid/ea_grid.asp).

MMS has determined that there is adequate ROV survey coverage for Grid 13, and that the Deepwater Grid EA requirement is complete. MMS also stated that no H_2S hazards have been encountered to date in Grid 13.

8.1 Impact Producing Factors (IPFs)

The potential Impact Producing Factors (IPFs) of the activities proposed for the Neptune Project were identified using the MMS worksheet. A copy of the worksheet is included as **Figure 8-1**, Section 8.3, *Figures for Section 8*.

8.2 Analysis

8.2.1 Designated Topographic Features

Impact producing factors for designated topographic features are physical disturbances to the seafloor, effluents and accidents. As indicated previously in Section 1.2, *Location Information*, the project area is not near any biologically sensitive areas, live bottoms, or topographic features.

In addition, the TLP has a vertical tendon mooring system, which limits the footprint of the facility to less than two acres, and will use driven piles.

No adverse impacts from physical disturbances to the seafloor, effluents or accidents are likely to occur. No shallow-water coral reefs occur in water depths of Grid 13 (USDOI, MMS, 2003, Grid 13 Programmatic Environmental Assessment)

8.2.2 Pinnacle Trend area live bottoms

Impact producing factors for Pinnacle Trend area live bottoms are physical disturbances to the seafloor, effluents and accidents. As indicated previously in Section 1.2, *Location Information*, the project area is not near any biologically sensitive areas, live bottoms, or topographic features. Therefore, no adverse impacts from physical disturbances to the seafloor, effluents or accidents are likely to occur from Neptune.

8.2.3 Eastern Gulf live bottoms

Impact producing factors for Eastern Gulf live bottoms are physical disturbances to the seafloor, effluents and accidents. As indicated previously in Section 1.2, *Location Information*, the project area is not in the Eastern Gulf, and is not near any biologically sensitive areas, live bottoms, or topographic features. Therefore, no adverse impacts from physical disturbances to the seafloor are likely to occur from Neptune.

8.2.4 Chemosynthetic Communities

Impact producing factors for chemosynthetic communities are physical disturbances to the seafloor, effluents and accidents.

The pre-drill program will be conducted by a dynamically positioned (DP) drill rig, which effectively eliminates the issue regarding physical disturbance to the seafloor from anchor placement. The Shallow Hazards information submitted

with the previously approved Exploration Plans for the drilling activities, contain additional data, and are incorporated herein by reference.

Most of the offshore installation will use a DP construction vessel, which eliminates the issue of physical disturbance to the seafloor from anchor placement. For topsides installation, however, a moored vessel will be used, and may be on location for up to five days. As discussed in Section 3.3.3, *Shallow Hazards Assessment – Analyses of the TLP Mooring Area*, a likely mooring radius for the topsides installation vessel is 15,000 ft. The area within this radius of the planned TLP location has been examined for indications of possible chemosynthetic community development. **Map 3-3**, Section 3.5, *Figures for Section 3*, is a map of the mooring radius on the seafloor rendering indicating avoidance areas and the top of the Sigsbee escarpment. These data, and the detailed bathymetry data are being provided to the installation contractor, so that potential chemosynthetic areas will be avoided. A large format copy of this map is included in the Appendices Document, Section 3.

Mitigation measures include siting of structure placement, anchoring and pipeline installation to avoid potential areas of chemosynthetic communities, and to conduct remote sensing surveys as part of plan and permit approvals. These measures have been incorporated for Neptune, and the potential impact is considered to be inconsequential.

8.2.5 Water Quality

Impact producing factors potentially affecting water quality include effluents and accidents. Effluents will be discharged in accordance with the requirements of USEPA, Region 6, General Permit for offshore discharges. Produced water is volumetrically the largest waste stream into GOM waters from oil and gas activities. Deepwater is generally considered to have substantially better water quality than the shallower areas. Natural seeps are the predominant source of hydrocarbons to GOM waters and sediments.

Neptune is outside the 'hypoxia zone', and is not included in the area subject to the permit requirement for a study of the hypoxic zone.

MMS examined environmental consequences of oil and gas exploration activities in 2002 EIS on GOM OCS Oil and Gas Lease Sales: 2003-2007, Central Planning Area Sales 185, 190, 194, 198 and 201, and Western Planning Area Sales 187, 192, 196, and 200. EPA adopted that EIS and prepared a Supplemental Environmental Assessment (SEA) to consider and evaluate potential impacts on GOM hypoxic zone. EPA determined that reissuance of the NPDES general permit for New and Existing Sources in the Western OCS GOM will resulting no significant impacts other than those considered in the MMS issued EIS.

In addition to effluents from the Neptune TLP, the sanitary and domestic effluents from onshore support bases and OCS service vessels could potentially increase turbidity in coastal waters. The MMS and EPA EIS reviews concluded that this waste stream will not result in any significant, long-term impact on coastal waters on an industry basis, therefore, the relative contribution from the Neptune project is considered inconsequential.

In terms of accidents, such as spills, MMS has requirements for Regional Oil Spill Plans, which include consideration of the 'Worst Case Discharge'. MMS also has reporting and notification requirements pertaining to spills, and funds extensive research on oil spill fate and effects, and response technologies. In the Programmatic Environmental Assessment for Grid 13, MMS found that no blowouts are projected based on historical trends, and that spills, if any, would be few, volumetrically small, and occur near the project site. These same findings are considered applicable to Neptune, also in Grid 13.

8.2.6 Fisheries

Impact producing factors for fisheries include effluents, disturbance of seafloor, and accidents.

In the Deepwater Environmental Assessment (EA) (USDOI, MMS, 2000a, p.vii), MMS found that:

- Activities such as offshore discharge of drilling fluids and produced water are expected to cause negligible impacts and do not affect commercial fisheries deleteriously
- Actual effects from potential impact producing factors such as production platform emplacement, underwater OCS impediments, explosive platform removal, and accidental oil sills, are expected to be inconsequential
- Resultant influence on fisheries should be indistinguishable from natural population variations.

The relative potential for the Neptune project to cause adverse environmental impact is considered to be inconsequential.

8.2.7 Marine Mammals

Impact producing factors for marine mammals are emissions, accidents and vessel collision.

As reported in the MMS Multisale Lease Sale EIS (USDOI, 2002, Section 3.2.4) MMS studies have found that cetacean distribution is influenced by both bottom depth and by the presence of mesoscale hydrographic features. Several poorly known species of marine mammals are common in deepwater. Species include 28 cetaceans (marine mammals) and 1 sirenian (manatee). Five of 7 baleen

cetaceans are endangered or threatened. One of 21 toothed cetaceans, the sperm whale, is endangered.

In terms of effluents, as explained at 69 FR 29478 (June 30, 2004) EPA found that reissuance of the Region 6 General Permit for the OCS of the Western GOM will not adversely affect any listed threatened or endangered species or designated critical habitat. On July 12, 2004, the National Marine Fisheries Service (NMFS) concurred with EPA. Neptune intends to operate in compliance with the Region 6 Permit.

The MMS Floating Production, Storage and Offloading (FPSO) EIS (USDOI 2000b) found that normal operational activities would cause localized impacts on marine mammals, primarily from noise and/or visual disturbances from helicopters and service vessels, and increase the probability of collisions between the marine mammals and the vessels. With the exception of possible collision, no significant impacts to marine mammals were identified in the FPSO EIS.

Mitigation measures include vessel operator maneuvering requirements and guidelines; buffer zone requirements in areas of heavy sperm whale concentration for animals that are sighted.

Neptune is not in one of the three known concentration areas for marine mammals in the GOM. Potential impacts to marine mammals, and threatened or endangered species, is considered to be inconsequential from Neptune.

8.2.8 Sea Turtles

Impact producing factors for sea turtles are emissions, effluents, physical disturbances and accidents.

In terms of effluents, as explained at 69 FR 29478 (June 30, 2004) EPA found that reissuance of the Region 6 General Permit for the OCS of the Western GOM will not adversely affect any listed threatened or endangered species or designated critical habitat. On July 12, 2004, the National Marine Fisheries Service (NMFS) concurred with EPA. Neptune intends to operate in compliance with the Region 6 Permit, therefore, potential impacts to marine mammals, and threatened or endangered species, is considered to be inconsequential.

8.2.9 Air Quality

The impact producing factor for air quality is emissions. MMS regulations for air emissions are based on potential impacts. The greater the distance from shore, the larger the allowable emissions before additional Air Quality Impact Analysis is required.

The results of the Neptune Air Emissions worksheets are summarized in Section 7, *Air Emissions Information*. Based on these data, emissions from the proposed

activities in this DOCD will not cause any significant impact on onshore air quality.

8.2.10 Shipwreck sites (known or potential)

The impact producing factor for shipwreck sites would be physical disturbance to the sea floor. The MMS Deepwater Environmental Assessment (EA) (USDOI, 2000a) found that the greatest potential impact on archeological resources would be contact between OCS activity and any historic shipwrecks.

The Neptune Field and host facility do not fall within the revised list of blocks requiring archeological surveys and reports as specified in NTL 2005-G10, issued June 24, 2005. Therefore, the potential for Neptune to impact a shipwreck site is considered to be minimal.

8.2.11 Prehistoric archeological sites

The impact producing factor for prehistoric archeological sites would be physical disturbance to the sea floor.

As mentioned previously in Section 2 of this document, the five leased blocks carry one lease stipulation and that concerns Cultural Resources. The Neptune field area has been surveyed with AUV based high resolution swath bathymetry (3m resolution) with backscatter intensity, sidescan sonar and subbottom profiler. ROV videos obtained prior to drilling the existing wells have been reviewed. No potential cultural resources have been identified in the Neptune Field area. An extensive ROV video survey of well sites and the planned flowline crossing of the escarpment has been completed. No potential cultural resources have been identified in the Neptune field area.

The Neptune Field and host facility do not fall within the revised list of blocks requiring archeological surveys and reports as specified in NTL 2005-G10, issued June 24, 2005.

The potential impact of Neptune on prehistoric archeological sites is considered to be minimal.

8.2.12 Essential Fish Habitat

Impact producing factors for Essential Fish Habitat (EFH) include accidents, effluents and physical disturbance to seafloor.

EPA determined the issuance of the Region 6 General Permit is not likely to adversely effect Essential Fish Habitat (EFH). EPA submitted the proposed permit and Fact Sheet to the National Marine Fisheries Service for review prior to issuing the revised permit. On September 16, 2004, NMFS concurred with the EPA determination that issuance of the permit is not likely to adversely effect Essential Fish Habitat.

The EPA and NMFS determinations were made on the cumulative impact of the discharges covered by the Region 6 General Permit.

Neptune's potential impact to EFH is considered inconsequential

8.2.13 Marine and Pelagic Birds

The impact producing factor for marine and pelagic birds would be accidents, such as spills.

In terms of accidents, such as spills, MMS has requirements for Regional Oil Spill Plans, which include consideration of the 'Worst Case Discharge'. MMS also has reporting and notification requirements pertaining to spills, and funds extensive research on oil spill fate and effects, and response technologies.

In the Programmatic Environmental Assessment for Grid 13, MMS found that no blowouts are projected based on historical trends, and that spills, if any, would be few, volumetrically small, and occur near the project site. These same findings are considered applicable to Neptune, also in Grid 13, and the potential impact of Neptune on marine and pelagic birds is considered to be minimal.

8.2.14 Public health and safety

There are no impact producing factors from Neptune that could impact public health and safety. The facility is 114 miles offshore, and is in an area that is H_2S absent.

8.2.15 Beaches

The impact producing factors for beaches are accidents, such as spills. Information specific to Neptune is included in Section 6, *Oil Spill Information*.

In terms of accidents, such as spills, MMS has requirements for Regional Oil Spill Plans, which include consideration of the 'Worst Case Discharge'. MMS also has reporting and notification requirements pertaining to spills, and funds extensive research on oil spill fate and effects, and response technologies.

In the Programmatic Environmental Assessment for Grid 13, MMS found that no blowouts are projected based on historical trends, and that spills, if any, would be few, volumetrically small, and occur near the project site. These same findings are considered applicable to Neptune, also in Grid 13, and the potential impact of Neptune on beaches is considered to be minimal.

8.2.16 Wetlands

The impact producing factor for wetlands is accidents, such as spills. Information specific to Neptune is included in Section 6, *Oil Spill Information*.

In terms of accidents, such as spills, MMS has requirements for Regional Oil Spill Plans, which include consideration of the 'Worst Case Discharge'. MMS

also has reporting and notification requirements pertaining to spills, and funds extensive research on oil spill fate and effects, and response technologies.

In the Programmatic Environmental Assessment for Grid 13, MMS found that no blowouts are projected based on historical trends, and that spills, if any, would be few, volumetrically small, and occur near the project site. These same findings are considered applicable to Neptune, also in Grid 13, and the potential impact of Neptune on wetlands is considered to be minimal.

8.2.17 Shorebirds and Coastal Nesting Birds

The impact producing factor for shorebirds and coastal nesting birds is accidents, such as spills. Information specific to Neptune is included in Section 6, *Oil Spill Information*.

In terms of accidents, such as spills, MMS has requirements for Regional Oil Spill Plans, which include consideration of the 'Worst Case Discharge'. MMS also has reporting and notification requirements pertaining to spills, and funds extensive research on oil spill fate and effects, and response technologies.

In the Programmatic Environmental Assessment for Grid 13, MMS found that no blowouts are projected based on historical trends, and that spills, if any, would be few, volumetrically small, and occur near the project site. These same findings are considered applicable to Neptune, also in Grid 13, and the potential impact of Neptune on shorebirds and coastal nesting birds is considered to be minimal.

8.2.18 Coastal wildlife refuges

The impact producing factor coastal wildlife refuges is accidents, such as spills. Information specific to Neptune is included in Section 6, *Oil Spill Information*.

In terms of accidents, such as spills, MMS has requirements for Regional Oil Spill Plans, which include consideration of the 'Worst Case Discharge'. MMS also has reporting and notification requirements pertaining to spills, and funds extensive research on oil spill fate and effects, and response technologies.

In the Programmatic Environmental Assessment for Grid 13, MMS found that no blowouts are projected based on historical trends, and that spills, if any, would be few, volumetrically small, and occur near the project site. These same findings are considered applicable to Neptune, also in Grid 13, and the potential impact of Neptune on shorebirds and coastal wildlife refuges is considered to be minimal.

8.2.19 Wilderness areas

The impact producing factors for wilderness areas are emissions and accidents, such as spills. Information specific to Neptune is included in Section 6, *Oil Spill Information*, and Section 7, *Air Emissions Information*.

In terms of accidents, such as spills, MMS has requirements for Regional Oil Spill Plans, which include consideration of the 'Worst Case Discharge'. MMS also has reporting and notification requirements pertaining to spills, and funds extensive research on oil spill fate and effects, and response technologies.

In the Programmatic Environmental Assessment for Grid 13, MMS found that no blowouts are projected based on historical trends, and that spills, if any, would be few, volumetrically small, and occur near the project site. These same findings are considered applicable to Neptune, also in Grid 13, and the potential impact of Neptune wilderness areas is considered to be minimal.

As noted in the MMS Programmatic Environmental Assessment for Grid 13, no Grid 13 blocks are within the 200 km buffer area around the Breton Sound National Wilderness Area. Neptune is in Grid 13 and the potential for Neptune to cause impacts to the Breton Sound Wilderness Area is considered to be inconsequential.

8.3 Potential Impacts of Environmental Conditions on the Project's Activities

Extensive studies of the soil strengths and slope stability have been carried out and there are no indications that slope sediment failure is likely to occur. Areas of potential failure, although unlikely, have been modeled and no significant impact of facilities is indicated.

The planned TLP location is above the escarpment in an area of low (approximately 1.5 degree) seafloor dip. Two geotechnical borings for foundation design have been completed to 500 ft below the mudline and the samples analyzed. The initial boring consisted of continuous CPT measurements. These measurements were then used to pick sample points in a second nearby borehole. These data are being used for pile design. They have also been correlated to the geophysical data to demonstrate validity across the area of the TLP footprint.

Data collection requirements of the current measurement NTL will be met on the drill rig and the TLP facility. Existing data from the project area was used in designing the facility. MMS approved an exclusion to use the existing data in support of design requirements, instead of installing a dedicated instrument for the one year of pre-installation data collection required by the NTL.

8.4 Alternatives

During the concept evaluation phase of the project, several different configurations and technologies were considered. The project team selected the proposed concept of a 'mini' TLP above the escarpment, with a daisy-chain flowline arrangement connecting drilling centers below the escarpment. There are environmental benefits from the proposed concept over the other project

options that were evaluated. The proposed concept employes existing and proven technology for the water depths found above the escarpment. The type of TLP being constructed used vertical mooring technology, which substantially minimizes the seabed footprint – it is less than two acres – and bottom disturbance.

The daisy-chain flowline configuration represents a production gathering system that minimizes the seafloor disturbance and footprint compared to each of the seven production wells having dedicated flowlines back to the TLP facility. The TLP will have just the two production risers coming in for the seven wells total.

The bulk of the installation will use dynamically positioned (DP) vessels, thereby eliminating the potential seafloor impacts and disturbance associated with mooring. The topsides installation is the only portion that will require a moored vessel, and that will only be for a day or so.

The pre-drilling program is being conducted using a newbuild DP rig. The design basis of the new rig incorporated several safety and environmental considerations, such as energy efficiency and waste management and minimization.

The production facility design also incorporates several safety and environmental considerations, including energy efficiency, waste heat recovery, central power concept, and natural gas-fired equipment.

8.5 Mitigation Measures

As discussed in the previous section on alternatives considered to reduce environmental impacts, the project includes several self-imposed mitigation measures. The decision to locate the facility above the escarpment allowed for selection of the mini TLP, and use of vertical tendon mooring, to minimize the seafloor footprint and disturbance. Using the daisy-chained gathering flowline configuration reduced the total number of gathering lines and production risers to two, for seven production wells. DP vessels will be used for most of the installation activities, with the exception of the topsides installation, which will require a day or two of a moored vessel. The facility design incorporates energy efficiency considerations and waste minimization, and the facility will operate in accordance with ISO 14001 environmental management plan guidelines.

8.6 Consultation

The agencies and persons that were consulted regarding potential impacts associated with the proposed activities are listed below:

Date	Agency	Person	Topic
March 15, 2004	MMS	Ed Richardson	Status of Grid 13 – Confirmation it was 'cleared' by the Marco Polo Programmatic EA.
April 28, 2005	MMS	Mike Conner, Fred Hefren	Ocean current monitoring requirements and plans, and implications for facility design considerations.
May 24, 2005	MMS	Lars Herbst, Dave Trocquet, Frank Patton	New build, semi submersible drill rig and design considerations and features.

8.7 References

USDOI, MMS, 2000a. Deepwater Environmental Assessment (EA).

USDOI, MMS, 2000b. Final Environmental Impact Statement (FEIS) for the proposed use of floating production, storage and offloading (FPSO) systems on the Gulf of Mexico (GOM) Outer Continental Shelf (OCS), western and central planning areas. OCS EIS/EA MMS 2000-090.

USDOI, MMS, 2002, Chapter 3.1, Multisale Final Environmental Impact Statement (EIS). OCS EIS/EA 2002-052.

USDOI, MMS, 2003, Grid 13 Programmatic Environmental Assessment (Marco Polo). OCS EIS/EA MMS 2003-067.

USEPA, 2004, Region 6 General Permit (GMG 290000), NPDES general permit for New and Existing Sources in the Western OCS GOM, effective November 06, 2004; expires November 05, 2007.

USEPA, 2004, Record of Decision (ROD) further to the Supplemental Environmental Assessment (SEA) regarding the reissuance of the Region 6 General Permit (GMG 290000).

69 FR 60150

30 CFR 250, 251 and 254

MMS Notices to Lessees (NTLs)

MMS Environmental Studies Program (ESP)

http://www.epa.gov/region6/6en/w/offshore

http://www.epa.gov/region6/6en/w/dmr.htm

http://www.mms.gov

Neptune Exploration Plans (N-4982, N-7528, S-4293, R-3141, R-3788, S-6113, S-6324, S-6640, S-6641, S-6670)

8.8 Figures for Section 8

8.8.1 Figure 8-1: Environmental Impact Analysis (EIA) Worksheet

ENVIRONMENTAL IMPACT ANALYSIS WORKSHEET

Identify the IPF's that can cause impacts to the listed environmental resources by placing an "x" in the space under each IPF category associated with your proposed activities that may impact a particular environmental resource. If you determine an IPF would not impact a particular environmental resource, leave the space blank. For those cells that are footnoted, provide a statement as to the applicability to your proposed operations, and, where there may be an effect, provide an analysis of the effect. If you are aware of other environmental resources at or near your activity's site that are not included on the worksheet, address them too.

Environmental Resources	Impact Producing Factors (IPFs) Categories and Examples Refer to a recent GOM OCS Lease Sale EIS for a more complete list of IPFs					
	Emissions (air, noise, light, etc.)	Effluents (muds, cuttings, other discharges to the water column or seafloor)	Physical disturbances to the seafloor (rig or anchor emplacements, etc.)	Wastes sent to shore for treatment or disposal	Accidents (e.g., oil spills, chemical spills, H_2S releases)	Other IPFs you identify *Habitat Enhancement **Vessel Collision
Site-specific at Offshore Location						
Designated topographic features		(1)	(1)		(1)	
Pinnacle Trend area live bottoms		(2)	(2)		(2)	
Eastern Gulf live bottoms		(3)	(3)		(3)	
Chemosynthetic communities			X (4)			
Water quality		X			X	
Fisheries		X			X	X*
Marine mammals	(8)				X (8)	X**
Sea turtles	(8)				X (8)	
Air quality	X (9)					
Shipwreck sites (known or potential)			(7)			
Prehistoric archaeological sites			(7)			
Vicinity of Offshore Location						
Essential fish habitat					X (6)	X*
Marine and pelagic birds					X	
Public health and safety					(5)	
Coastal and Onshore						
Beaches					X (6)	
Wetlands					X (6)	
Shore birds and coastal nesting birds					X (6)	
Coastal wildlife refuges						
Wilderness areas						
Other Resources You Identify						

The numbers in parentheses refer to the footnotes on page 2.

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Footnotes for Environmental Impact Analysis Matrix

1. Activities that may affect a marine sanctuary or topographic feature. Specifically, if the well or platform site or any anchors will be on the seafloor within the:
   (a) 4-mile zone of the Flower Garden Banks, or the 3-mile zone of Stetson Bank;
   (b) 1000-m, 1-mile or 3-mile zone of any topographic feature (submarine bank) protected by the Topographic Features Stipulation attached to an OCS lease;
   (c) Essential Fish Habitat (EFH) criteria of 500 ft from any no-activity zone; or
   (d) Proximityof any submarine bank (500 ft buffer zone) with relief greater than 2 meters that is not protected by the Topographic Features Stipulation attached to an OCS lease.
2. Activities with any bottom disturbance within a OCS lease block protected through the Live Bottom (Pinnacle Trend) Stipulation attached to an OCS lease.
3. Activities within any Eastern Gulf OCS block where seafloor habitats are protected by the Live Bottom (Low-Relief) Stipulation attached to an OCS lease.
4. Activities on blocks designated by the MMS as being in water depths 400 meters or greater.
5. Exploration or production activities where H_2S concentrations greater than 500 ppm might be encountered.
6. All activities that could result in an accidental spill of produced liquid hydrocarbons or diesel fuel that you determine would impact these environmental resources. If the proposed action is located a sufficient distance from a resource that no impact would occur, the EIA can note that in a sentence or two.
7. All activities that involve seafloor disturbances, including anchor emplacements, in any OCS block designated by the MMS as having high-probability for the occurrence of shipwrecks or prehistoric sites, including such blocks that will be affected that are adjacent to the lease block in which your planned activity will occur. If the proposed activities are located a sufficient distance from a shipwreck or prehistoric site that no impact would occur, the EIA can note that in a sentence or two.
8. All activities that you determine might have an adverse effect on endangered or threatened marine mammals or sea turtles or their critical habitats.
9. Production activities that involve transportation of produced fluids to shore using shuttle tankers or barges.

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9 COASTAL ZONE MANAGEMENT CONSISTENCY INFORMATION

9.1 Coastal Zone Consistency Certification

Figure 9-1 contains the Coastal Zone Consistency Certification for the State of Louisiana. Relevant enforceable policies were considered in certifying consistency.

9.2 Public Notice

Notification of review of the DOCD is posted by the State of Louisiana, Coastal Management Division on its website.

9.3 Figures for Section 9

9.3.1 Figure 9-1: Coastal Zone Management Consistency Certification

COASTAL ZONE MANAGEMENT CONSISTENCY CERTIFICATION

INITIAL DEVELOPMENT OPERATIONS AND COORDINATION DOCUMENT (DOCD)

For the Neptune Unit

Atwater Valley Block 573, OCS-G-08034
Atwater Valley Block 574, OCS-G-08035
Atwater Valley Block 575, OCS-G-08036
Atwater Valley Block 617, OCS-G-08037
Atwater Valley Block 618, OCS-G-08038

And

TLP Location

Green Canyon Block 613, OCS-G-18403

The proposed activities described in detail in this OCS Plan comply with the State of Louisiana's approved Coastal Management Program and will be conducted in a manner consistent with such Program.

Relevant enforceable policies were considered in certifying consistency.

BHP BILLITON PETROLEUM (GOM), INC.

Certifying Official

8/16/05

Date

10 SUMMARY OF OPERATIONS

10.1 Figure 10-1: Form MMS 137, OCS Plan Information Form

U.S. Department of the Interior
Minerals Management Service

OMB Control Number: 1010-0049
OMB Approval Expires: August 31, 2006

OCS PLAN INFORMATION FORM

General Information

Type of OCS Plan:	[ ] Exploration Plan (EP)	[X] Development Operations Coordination Document (DOCD)	
Company Name: BHP Billiton Petroleum (Americas) Inc.		MMS Operator Number: 02010	
Address: 1360 Post Oak Boulevard		Contact Person: Debra K. Beaubien	
Suite 150		Phone Number: 713-702-8524	
Houston, TX 77056-3020		E-Mail Address: deb@ocean1consulting.com	
Lease(s): [illegible]	Area: [illegible]	Block(s): [illegible]	Project Name (If Applicable): Neptune
Objective(s): [X] Oil [X] Gas [ ] Sulphur [ ] Salt		Onshore Base: Fourchon, LA	Distance to Closest Land (Miles): 114

Description of Proposed Activities (Mark all that apply)

	Exploration drilling		Development drilling
	Well completion	X	Installation of production platform
	Well test flaring (for more than 48 hours)	X	Installation of production facilities
	Installation of caisson or platform as well protection structure		Installation of satellite structure
X	Installation of subsea wellheads and/or manifolds	X	Commence production
	Installation of lease term pipelines		Other (Specify and describe)

Have you submitted or do you plan to submit a Conservation Information Document to accompany this plan?	X	Yes		No
Do you propose to use new or unusual technology to conduct your activities?		Yes	X	No
Do you propose any facility that will serve as a host facility for deepwater subsea development?	X	Yes		No
Do you propose any activities that may disturb an MMS-designated high-probability archaeological area?		Yes	X	No
Have all of the surface locations of your proposed activities been previously reviewed and approved by MMS?		Yes	X	No

Tentative Schedule of Proposed Activities

Proposed Activity	Start Date	End Date	No. of Days
Note: Pre-Drill & Complete 7 wells under EPs S6324, S6113, S6640, S6670 & N4982 before TLP Installation	Oct. 05	Feb. 07	493
Topsides Fabrication & Transport	Nov. 05	Apr. 07	~ 600
Hull Fabrication & Transport	Dec. 2005	Mar. 07	~ 510
Install Flowlines, Risers & Umbilicals (Note: Pipeline ROW required, since includes GC 613, not leased by BHP Billiton)	Dec. 06	May 07	~ 200
Install Piles	Late Sep. 06	Mid Oct. 06	13
Install Tendons	Late Feb. 07	Mid Mar. 07	14
Install Hull	Mid Mar. 07	Late Mar. 07	10
Install SCRs	Late Mar. 07	Early Apr. 07	6
Install Topsides	Mid Apr. 07	Mid Apr. 07	5
Topsides Hook-Up and Commissioning	Apr. 07	Jul. 07	~ 60
First Oil	Dec.07	N/A	N/A

Description of Drilling Rig / **Description of Production Platform**

	Drilling Rig		Drilling Rig		Production Platform		Production Platform
	Jackup		Drillship		Caisson	X	Tension leg platform
	Gorilla Jackup		Platform rig		Well protector		Compliant tower
	Semisubmersible		Submersible		Fixed platform		Guyed tower
	DP Semisubmersible		Other (Attach Description)		Subsea manifold		Floating production system
Drilling Rig Name (If Known):					Spar		Other (Attach Description)

Description of Lease Term Pipelines

From (Facility/Area/Block)	To (Facility/Area/Block)	Diameter (Inches)	Length (Feet)

MMS Form MMS-137 (August 2003 - Supersedes all previous editions of form MMS-137, which may not be used.)
Page 1 of 2

OCS PLAN INFORMATION FORM (CONTINUED)
Include one copy of this page for each proposed well/structure

Proposed Well/Structure Location			
Well or Structure Name/Number (If renaming well or structure, reference previous name): Platform A (Neptune TLP)		Subsea Completion	
Anchor Radius (if applicable) in feet: TLP Mooring < 200' radius; 15,000 Anchor Radius mapped for Construction Vessel		Yes	No
	Surface Location	**Bottom-Hole Location (For Wells)**	
Lease No.	OCS G-18403	OCS	
Area Name	Green Canyon		
Block No.	613		
Blockline Departures (in feet)	N/S Departure: 3267.2 F N L	N/S Departure: F L	
	E/W Departure: 5460.59 F E L	E/W Departure: F L	
Lambert X-Y coordinates	X: 2638671.7 (UTM 15)	X:	
	Y: 9944252.8 (UTM 15)	Y:	
Latitude/ Longitude	Latitude N 27d 22' 12.284"	Latitude	
	Longitude W 89d 55' 28.490"	Longitude	
	TVD (Feet):	MD (Feet):	Water Depth (Feet): 4229'

Anchor Locations for Drilling Rig or Construction Barge (If anchor radius supplied above, not necessary)

Anchor Name or No.	Area	Block	X Coordinate	Y Coordinate	Length of Anchor Chain on Seafloor
TLP Pile 1	GC	613	X = 2638653.50	Y = 9944081.67	0
TLP Pile 2	GC	613	X = 2638690.50	Y = 9944081.67	0
TLP Pile 3	GC	613	X = 2638829.63	Y = 9944322.64	0
TLP Pile 4	GC	613	X = 2638811.13	Y = 9944354.69	0
TLP Pile 5	GC	613	X = 2638532.87	Y = 9944354.69	0
TLP Pile 6	GC	613	X = 2638514.37	Y = 9944322.64	0
			X =	Y =	
			X =	Y =	

Paperwork Reduction Act of 1995 Statement: The Paperwork Reduction Act of 1995 (44 U.S.C. Chapter 35) requires us to inform you that MMS collects this information as part of an applicant's Exploration Plan or Development Operations Coordination Document submitted for MMS approval. We use the information to facilitate our review and data entry for OCS plans. We will protect proprietary data according to the Freedom of Information Act and 30 CFR 250.196. An agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a currently valid Office of Management and Budget Control Number. The use of this form is voluntary. The public reporting burden for this form is included in the burden for preparing Exploration Plans and Development Operations Coordination Documents. We estimate that burden to average 580 hours per response, including the time for reviewing instructions, gathering and maintaining data, and completing and reviewing the form. Direct comments regarding the burden estimate or any other aspect of this form to the Information Collection Clearance Officer, Mail Stop 4230, Minerals Management Service, 1849 C Street, N.W., Washington, DC 20240.

MMS **Form MMS-137 (August 2003 -** Supersedes all previous editions of form MMS-137, which may not be used.)
Page 2 of 2

OCS PLAN INFORMATION FORM (CONTINUED)
Include one copy of this page for each proposed well/structure

Proposed Well/Structure Location			
Well or Structure Name/Number (If renaming well or structure, reference previous name): SC002 (EP S-6324) (AT 574 No.2)			Subsea Completion
Anchor Radius (if applicable) in feet:			X Yes ___ No
	Surface Location	**Bottom-Hole Location (For Wells)**	
Lease No.	OCS 08035	OCS	
Area Name	Atwater Valley		
Block No.	574		
Blockline Departures (in feet)	N/S Departure: 2575.77 F_S_L	N/S Departure: F____L	
	E/W Departure: 2286.66 F_E_L	E/W Departure: F____L	
Lambert X-Y coordinates	X: 726353.3 (UTM 16)	X:	
	Y: 9934255.8 (UTM 16)	Y:	
Latitude/ Longitude	Latitude N 27d 20' 53.078"	Latitude	
	Longitude W 89d 48' 58.035"	Longitude	
	TVD (Feet):	MD (Feet):	Water Depth (Feet): 6213'

Anchor Locations for Drilling Rig or Construction Barge (If anchor radius supplied above, not necessary)

Anchor Name or No.	Area	Block	X Coordinate	Y Coordinate	Length of Anchor Chain on Seafloor
			X =	Y =	
			X =	Y =	
			X =	Y =	
			X =	Y =	
			X =	Y =	
			X =	Y =	
			X =	Y =	
			X =	Y =	

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OCS PLAN INFORMATION FORM (CONTINUED)
Include one copy of this page for each proposed well/structure

Proposed Well/Structure Location			
Well or Structure Name/Number (If renaming well or structure, reference previous name): Well SC001 ST03 (EP S-6113) (AT 574 #2 ST3)			Subsea Completion
Anchor Radius (if applicable) in feet:			X Yes / No
	Surface Location	**Bottom-Hole Location (For Wells)**	
Lease No.	OCS 08035	OCS	
Area Name	Atwater Valley		
Block No.	574		
Blockline Departures (in feet)	N/S Departure: 2494.11 F_S_L	N/S Departure: 2039 F___L	
	E/W Departure: 2331.17 F_E_L	E/W Departure: 1746 F___L	
Lambert X-Y coordinates	X: 726308.8 (UTM 16)	X:	
	Y: 9934174.1 (UTM 16)	Y:	
Latitude/ Longitude	Latitude N 27d 20' 52.260"	Latitude	
	Longitude W 89d 48' 58.508"	Longitude	
	TVD (Feet):	MD (Feet):	Water Depth (Feet): 6213'

Anchor Locations for Drilling Rig or Construction Barge (If anchor radius supplied above, not necessary)

Anchor Name or No.	Area	Block	X Coordinate	Y Coordinate	Length of Anchor Chain on Seafloor
			X =	Y =	
			X =	Y =	
			X =	Y =	
			X =	Y =	
			X =	Y =	
			X =	Y =	
			X =	Y =	
			X =	Y =	

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OCS PLAN INFORMATION FORM (CONTINUED)
Include one copy of this page for each proposed well/structure

Proposed Well/Structure Location			
Well or Structure Name/Number (If renaming well or structure, reference previous name): Well SD001 (EP S-6640) (AT 575 #2)			Subsea Completion: X Yes ___ No
Anchor Radius (if applicable) in feet:			
	Surface Location		**Bottom-Hole Location (For Wells)**
Lease No.	OCS 08036		OCS
Area Name	Atwater Valley		
Block No.	575		
Blockline Departures (in feet)	N/S Departure: 4785.23 F_S_ L		N/S Departure: F____ L
	E/W Departure: 4092.26 F_W_ L		E/W Departure: F____ L
Lambert X-Y coordinates	X: 732732.3 (UTM 16)		X:
	Y: 9936465.2 (UTM 16)		Y:
Latitude/ Longitude	Latitude N 27d 21' 16.362"		Latitude
	Longitude W 89d 47' 47.903"		Longitude
	TVD (Feet):	MD (Feet):	Water Depth (Feet): 6251'

Anchor Locations for Drilling Rig or Construction Barge (If anchor radius supplied above, not necessary)

Anchor Name or No.	Area	Block	X Coordinate	Y Coordinate	Length of Anchor Chain on Seafloor
			X =	Y =	
			X =	Y =	
			X =	Y =	
			X =	Y =	
			X =	Y =	
			X =	Y =	
			X =	Y =	
			X =	Y =	

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OCS PLAN INFORMATION FORM (CONTINUED)
Include one copy of this page for each proposed well/structure

Proposed Well/Structure Location			
Well or Structure Name/Number (If renaming well or structure, reference previous name): Well SA001 (EP S-6670) (AT 617 #2)			Subsea Completion
Anchor Radius (if applicable) in feet:			X Yes / No
	Surface Location	**Bottom-Hole Location (For Wells)**	
Lease No.	OCS 08037	OCS	
Area Name	Atwater Valley		
Block No.	617		
Blockline Departures (in feet)	N/S Departure: 3280 F N L	N/S Departure: F L	
	E/W Departure: 860 F E L	E/W Departure: 76 F L	
Lambert X-Y coordinates	X: 711940.0 (UTM 16)	X:	
	Y: 9928400.0 (UTM 16)	Y:	
Latitude/ Longitude	Latitude N 27d 19' 51.890"	Latitude	
	Longitude W 89d 51' 36.247"	Longitude	
	TVD (Feet):	MD (Feet):	Water Depth (Feet): 6168'

Anchor Locations for Drilling Rig or Construction Barge (If anchor radius supplied above, not necessary)

Anchor Name or No.	Area	Block	X Coordinate	Y Coordinate	Length of Anchor Chain on Seafloor
			X =	Y =	
			X =	Y =	
			X =	Y =	
			X =	Y =	
			X =	Y =	
			X =	Y =	
			X =	Y =	
			X =	Y =	

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OCS PLAN INFORMATION FORM (CONTINUED)
Include one copy of this page for each proposed well/structure

Proposed Well/Structure Location

Well or Structure Name/Number (If renaming well or structure, reference previous name): Well SC003 (EP S-6324) (AT 574 #4)			Subsea Completion: X Yes ___ No
Anchor Radius (if applicable) in feet:			
	Surface Location	**Bottom-Hole Location (For Wells)**	
Lease No.	OCS 08035	OCS	
Area Name	Atwater Valley		
Block No.	574		
Blockline Departures (in feet)	N/S Departure: 2538.62 F_S_L	N/S Departure: F___L	
	E/W Departure: 2412.83 F_E_L	E/W Departure: F___L	
Lambert X-Y coordinates	X: 726227.2 (UTM 16)	X:	
	Y: 9934218.6 (UTM 16)	Y:	
Latitude/ Longitude	Latitude N 27d 20' 52.682"	Latitude	
	Longitude W 89d 48' 59.423"	Longitude	
	TVD (Feet):	MD (Feet):	Water Depth (Feet): 6213'

Anchor Locations for Drilling Rig or Construction Barge (If anchor radius supplied above, not necessary)

Anchor Name or No.	Area	Block	X Coordinate	Y Coordinate	Length of Anchor Chain on Seafloor
			X =	Y =	
			X =	Y =	
			X =	Y =	
			X =	Y =	
			X =	Y =	
			X =	Y =	
			X =	Y =	
			X =	Y =	

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OCS PLAN INFORMATION FORM (CONTINUED)
Include one copy of this page for each proposed well/structure

Proposed Well/Structure Location			
Well or Structure Name/Number (If renaming well or structure, reference previous name): Well SD002 (EP S-6640) (AT 575 #3)			Subsea Completion: X Yes ___ No
Anchor Radius (if applicable) in feet:			
	Surface Location		**Bottom-Hole Location (For Wells)**
Lease No.	OCS 08036		OCS
Area Name	Atwater Valley		
Block No.	575		
Blockline Departures (in feet)	N/S Departure: 4820 F_S_ L		N/S Departure: F____ L
	E/W Departure: 4006 F_W_ L		E/W Departure: F____ L
Lambert X-Y coordinates	X: 732646.0 (UTM 16)		X:
	Y: 9936500.0 (UTM 16)		Y:
Latitude/ Longitude	Latitude N 27d 21' 16.687"		Latitude
	Longitude W 89d 47' 48.868		Longitude
	TVD (Feet):	MD (Feet):	Water Depth (Feet): 6251

Anchor Locations for Drilling Rig or Construction Barge (If anchor radius supplied above, not necessary)

Anchor Name or No.	Area	Block	X Coordinate	Y Coordinate	Length of Anchor Chain on Seafloor
			X =	Y =	
			X =	Y =	
			X =	Y =	
			X =	Y =	
			X =	Y =	
			X =	Y =	
			X =	Y =	
			X =	Y =	

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OCS PLAN INFORMATION FORM (CONTINUED)
Include one copy of this page for each proposed well/structure

Proposed Well/Structure Location			
Well or Structure Name/Number (If renaming well or structure, reference previous name): Well SD001ST01 (EP S-6640) (AT 575 #2 ST1)			Subsea Completion: X Yes ___ No
Anchor Radius (if applicable) in feet:			
	Surface Location	**Bottom-Hole Location (For Wells)**	
Lease No.	OCS 08036	OCS	
Area Name	Atwater Valley		
Block No.	575		
Blockline Departures (in feet)	N/S Departure: 4785.23 F_S_ L	N/S Departure: F____ L	
	E/W Departure: 4092.26 F_W_ L	E/W Departure: F____ L	
Lambert X-Y coordinates	X: 732732.26 (UTM 16)	X:	
	Y: 9936465.23 (UTM 16)	Y:	
Latitude/ Longitude	Latitude N 21d 21' 16.362"	Latitude	
	Longitude W 89d 47' 47.903"	Longitude	
	TVD (Feet):	MD (Feet):	Water Depth (Feet): 6251

Anchor Locations for Drilling Rig or Construction Barge (If anchor radius supplied above, not necessary)

Anchor Name or No.	Area	Block	X Coordinate	Y Coordinate	Length of Anchor Chain on Seafloor
			X =	Y =	
			X =	Y =	
			X =	Y =	
			X =	Y =	
			X =	Y =	
			X =	Y =	
			X =	Y =	
			X =	Y =	

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OCS PLAN INFORMATION FORM (CONTINUED)
Include one copy of this page for each proposed well/structure

Proposed Well/Structure Location			
Well or Structure Name/Number (If renaming well or structure, reference previous name): Well SB001ST01 (EP N-4982) (AT 574 #5)			Subsea Completion
Anchor Radius (if applicable) in feet:			X Yes ☐ No
	Surface Location	**Bottom-Hole Location (For Wells)**	
Lease No.	OCS 08038	OCS	
Area Name	Atwater Valley		
Block No.	618		
Blockline Departures (in feet)	N/S Departure: 1483.01 F N L	N/S Departure: F____ L	
	E/W Departure: 5547.53 F E L	E/W Departure: F____ L	
Lambert X-Y coordinates	X: 723092.5 (UTM 16)	X:	
	Y: 9930197.0 (UTM 16)	Y:	
Latitude/ Longitude	Latitude N 27d 20' 12.187"	Latitude	
	Longitude W 89d 49' 33.147"	Longitude	
	TVD (Feet):	MD (Feet):	Water Depth (Feet): 6261'

Anchor Locations for Drilling Rig or Construction Barge (If anchor radius supplied above, not necessary)

Anchor Name or No.	Area	Block	X Coordinate	Y Coordinate	Length of Anchor Chain on Seafloor
			X =	Y =	
			X =	Y =	
			X =	Y =	
			X =	Y =	
			X =	Y =	
			X =	Y =	
			X =	Y =	
			X =	Y =	

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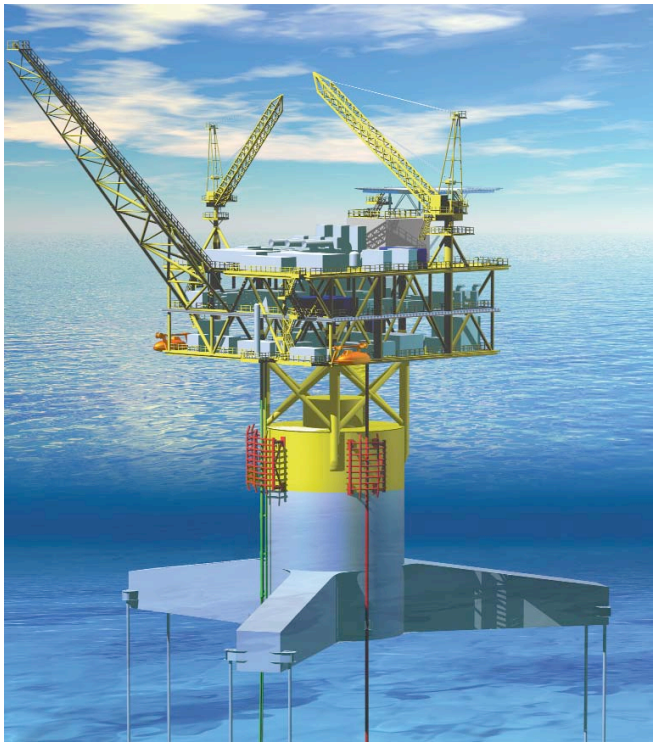
bhpbilliton

Neptune

Neptune Project: Execution Phase
Gulf Of Mexico

INITIAL NEPTUNE UNIT DEVELOPMENT OPERATIONS COORDINATION DOCUMENT (DOCD) APPENDICES



Document Control Number	Project ID	Discipline	Doc. Type	System Code	Sequence No.	Revision No.
	NEP	BHP	00	RG	PLN	0101

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MMS SOP Approval (August 1, 2005 through October 31, 2005)

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TLP Location Plat

MMS Approval, Exclusion B, Current Measurements NTL

TLP Drawing

Pile Drawing

Drill Center C Manifold Location Plat

United States Department of the Interior

MINERALS MANAGEMENT SERVICE
Gulf of Mexico OCS Region
1201 Elmwood Park Boulevard
New Orleans, Louisiana 70123-2394

In Reply Refer To: MS 5322

July 26, 2005

Mr. Mark S. Miller
BHP Billiton Petroleum (GOM) Inc.
1360 Post Oak Boulevard, Suite 150
Houston, Texas 77056-3020

Dear Mr. Miller:

Your letter dated July 14, 2005, requests a suspension of production (SOP) and a revised activity schedule for the Atwater Valley Block 574 Unit, Agreement No. 754395004, offshore Louisiana. This unit consists of Leases OCS-G 8034, 8035, 8036, 8037, and 8038 and is held by an SOP through July 31, 2005.

During an underwater inspection of the Global Santa Fe DDI rig, numerous thruster problems were discovered. The rig must now be moved to Grand Isle Block 92, where all the thrusters will be removed and transported to Fourchon, Louisiana, for repair. Subsequent to thruster reinstallation and acceptance testing, the rig will be mobilized to the subject unit and begin development drilling prior to November 1, 2005.

We hereby approve, in accordance with Articles IX, XVI, and XVII of the Unit Agreement and 30 CFR 250.174, an SOP for the Atwater Valley Block 574 Unit from August 1 through October 31, 2005. You are to follow the enclosed revised SOP activity schedule and to notify this office in writing (progress report) by the end of each month in which a deadline is scheduled. If we can be of further assistance, please contact Mr. Mike Nixdorff at (504) 736-2660.

Sincerely,

J. Michael Melancon
Regional Supervisor
Production and Development

Enclosure

ACTIVITY SCHEDULE/PLAN OF OPERATIONS
ATWATER VALLEY BLOCK 574 UNIT

Activity	Deadline
Commence hull and topsides fabrication.	September 2005
Commence development drilling. (SOP expires October 31, 2005)	October 2005
Submit update on hull and topsides fabrication and development drilling.	May 2006
Commence installation of flowlines and risers.	January 2007
Commence hull installation.	March 2007
Commence final hook up.	August 2007
Commence production.	October 2007

bhpbilliton

BHP Billiton Petroleum (GOM) Inc.
1360 Post Oak Boulevard Suite 150
Houston Texas 77056-3020 USA
Telephone 713 961 8500
Facsimile 713 961 8400
bhpbilliton.com

Via Facsimile and Overnight Delivery

March 14, 2005

Minerals Management Service
Gulf of Mexico OCS Region
1201 Elmwood Park Blvd.
New Orleans, LA 70123-2394
Attention: Mr. Nick Wetzel

Re: Request for Right-of-Use and Easement
OCS-G 18403 Green Canyon Block 613
Neptune Project Host Location
Atwater Valley Block 574 Unit (Unit Agreement No. 754395004)
OCS-Gulf of Mexico

Gentlemen:

The Atwater Valley Block 574 Unit (Unit Agreement No. 754395004) (the "Neptune Unit") is presently under a Suspension of Production (SOP) through April 30, 2005. BHP Billiton Petroleum (GOM) Inc. ("BHP Billiton"), Operator of the Neptune Unit, is on schedule in moving the Neptune Project forward to first oil in December 2007. BHP Billiton's Neptune project team has diligently studied the optimal location in the Neptune area to locate the Neptune host tension-leg platform ("Neptune Host").

As the Minerals Management Service ("MMS") is aware, the slope of the Sigsbee escarpment in this area is very steep, posing a significant problem when trying to select a host location. The majority of the Neptune Unit lies directly on top of the Sigsbee escarpment which does not allow for a host facility to be located within the Neptune Unit area. Through BHP Billiton's study, we have identified OCS-G 18403 Green Canyon Block 613 as the preferred location for the Neptune Host. This area is described by a circle of 2,000-foot radius centered around the coordinates (in UTM Zone 15) X = 2,638,672 feet; Y = 9,944,253 feet. The location lies in the Northeast quarter of Green Canyon Block 613, and the center of the area is 3,267 feet South of the Green Canyon Block 613 North Block line, and 9,232 feet East of the Green Canyon Block 613 West Block line (see Attachment "A" Plat). This location has been selected to take advantage of a preferred corridor across the Sigsbee escarpment, allowing for adequate separation between the top of the escarpment and the host location to assure minimal opportunity for escarpment failure. The preferred host requires that a 500-foot diameter around this location be maintained for anchoring. No offset piles or anchors are anticipated.

Under letter dated September 22, 2004 (copy enclosed), BHP Billiton received approval from Chevron U.S.A. Inc. ("Chevron"), a lessee and operator of OCS-G 18403 Green Canyon Block 613, to conducted soil boring operations on that block to confirm BHPB's supposition that Green Canyon Block 613 is the optimal location for the Neptune Host. At the time Chevron approved the soil boring operation, Chevron advised BHP Billiton that they had no exploration plans for the block, and BHP Billiton's proposed soil boring operations would not cause any interference. As BHP Billiton made clear in the

September 22 letter, if the soil boring analysis verified depositional stability for the host anchors, BHP Billiton would seek approval to locate the Neptune Host on Green Canyon Block 613.

The soil-boring program did confirm BHP Billiton's supposition that Green Canyon Block 613 is the optimal location for the Neptune Host. Accordingly, by letter dated December 17, 2004 (copy enclosed), BHP Billiton advised Chevron of the results of the soil boring analysis and as required requested Chevron's consent to locate the Neptune Host on Green Canyon Block 613. After several unacceptable verbal proposals by Chevron to grant consent in return for consideration, Chevron has formally responded to BHP Billiton with its letter dated February 16, 2005 (copy enclosed), stating that "after a thorough review of your proposal, it has been determined that the location of the Neptune host facility on Green Canyon Block 613 would interfere with Chevron U.S.A. Inc.'s future plans for the exploration and potential development of the subject lease." There are no current operations on Green Canyon Block 613 with which the Neptune Host would interfere. Further, to our knowledge, Chevron, and its partner EnCana Gulf of Mexico LLC ("EnCana"), have no future exploration or potential development plans for the block. Therefore, in light of the foregoing, BHP Billiton can only conclude that Chevron's response has been directed at BHP Billiton's unwillingness to grant consideration in return for Chevron's consent.

As Chevron has declined to approve BHP Billiton's Neptune Host location request, BHP Billiton hereby applies to the MMS, pursuant to 30 CFR 250.160, for a Right-of-Use and Easement on OCS-G 18403 Green Canyon Block 613 in order to locate the Neptune Host facility on said block (see Attachment "A" Plat). Additionally, and in accordance with 30 CFR 250.160, BHP Billiton, under separate letter dated March 14, 2005 (copy enclosed), has requested that Chevron and EnCana provide their comments to the MMS in regard to this application for a Right-of-Use and Easement.

BHP Billiton appreciates the MMS's consideration of BHP Billiton's request for a Right-of-Use and Easement on Green Canyon Block 613. Our aggressive schedule to move the challenged Neptune development project to targeted first production is obviously impacted by this matter. Therefore, BHP Billiton would be happy to meet with the MMS, and happy to include Chevron and EnCana if the MMS deems it appropriate, in order to get this matter resolved quickly.

If you have any questions or need any additional information, please contact the undersigned at (713) 499-5822.

Sincerely,

Mark S. Miller
Sr. Staff Negotiator

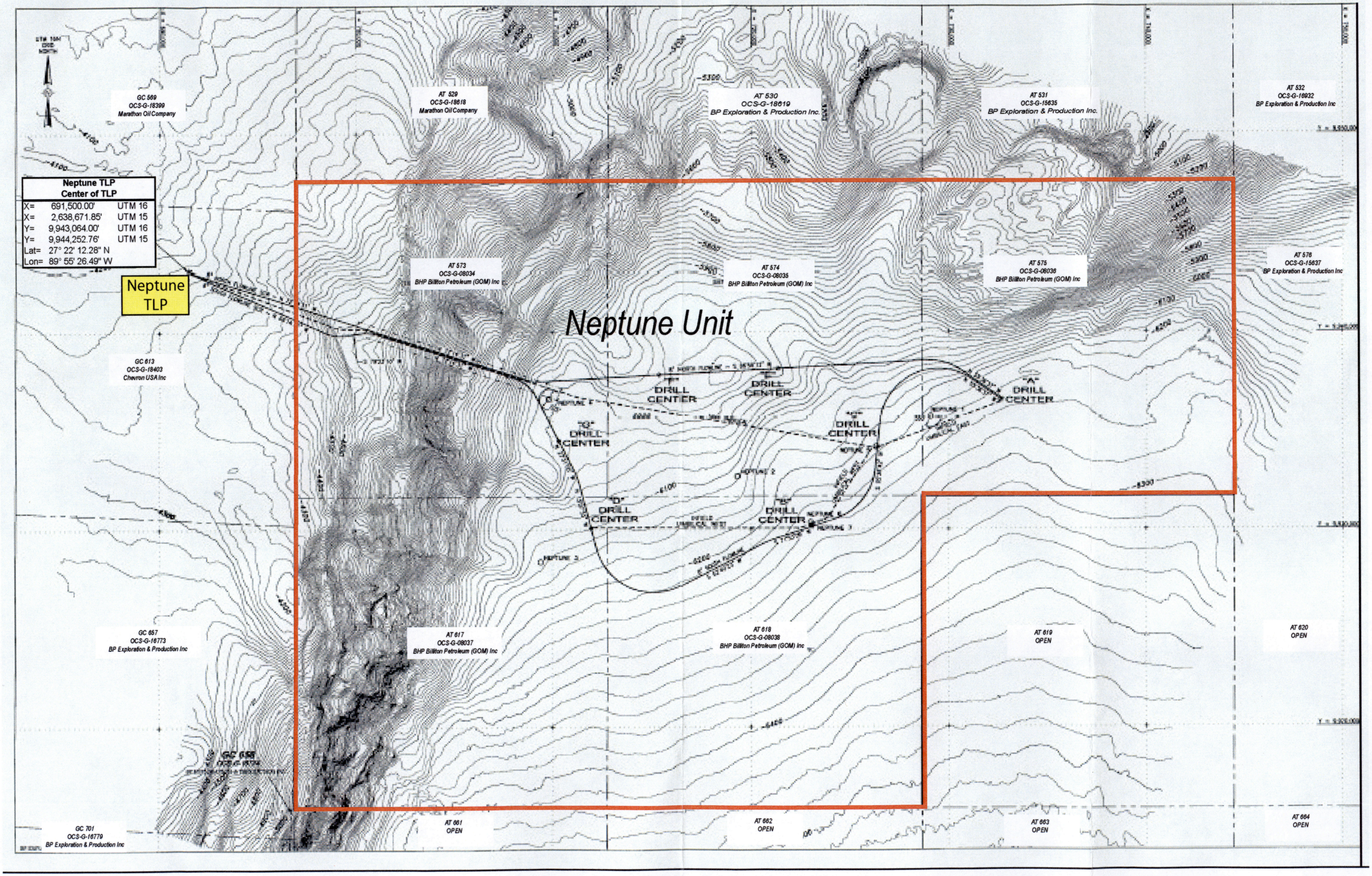
Attachment/Enclosures

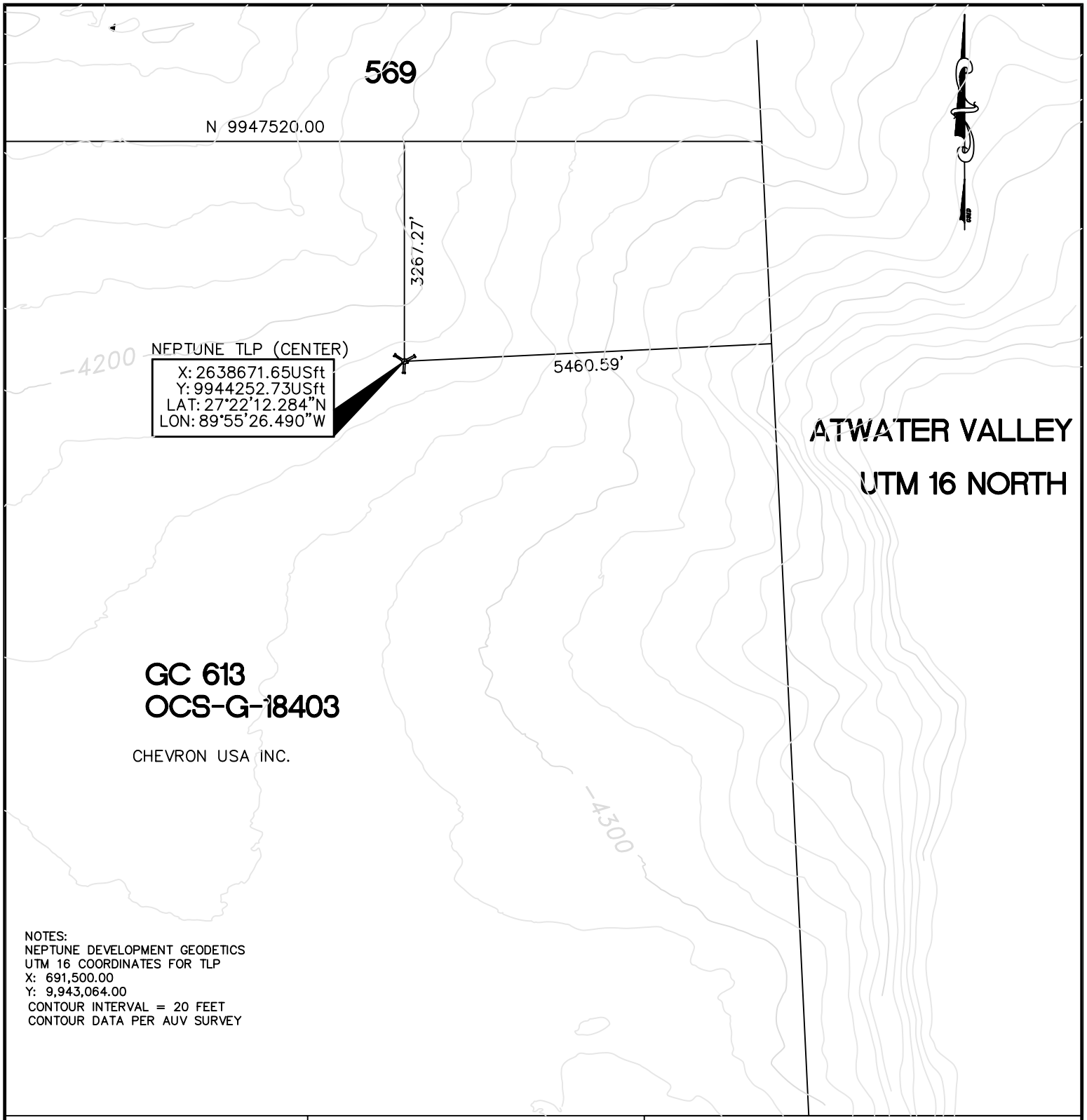
cc: J. Michael Melancon – Minerals Management Service

Attachment "A"

Proposed Neptune Host Location - Green Canyon Block 613

Neptune Unit





NOTES:
NEPTUNE DEVELOPMENT GEODETICS
UTM 16 COORDINATES FOR TLP
X: 691,500.00
Y: 9,943,064.00
CONTOUR INTERVAL = 20 FEET
CONTOUR DATA PER AUV SURVEY

1000 0 1000 2000 3000
SCALE IN FEET
1" = 2,000 FT

DATUM: NAD 27 | ZONE: UTM 15 N

SPHEROID: CLARKE 1866 | UNITS: US SURVEY FT

TERRY C. SCHULTZ, RPLS TEXAS REG. 5161
DATE: JULY 29, 2005

bhp billiton petroleum

PROPOSED NEPTUNE DEV. TLP
GREEN CANYON, BLOCK 613
OCS-G-18403

GULF OF MEXICO

DRAWN BY: TCS | DATE: 07/28/2005

REV: 0 | SHEET: 1 of 1

United States Department of the Interior

MINERALS MANAGEMENT SERVICE
Gulf of Mexico OCS Region
1201 Elmwood Park Boulevard
New Orleans, Louisiana 70123-2394

In Reply Refer To: MS 5220

June 29, 2005

Mr. Scott A. Bergeron
BHP Billiton Petroleum (Americas) Inc.
1360 Post Oak Boulevard, Suite 150
Houston, Texas 77056-3020

Dear Mr. Bergeron:

Your letter dated May 19, 2005, requesting exclusion from the requirements of Notice to Lessees and Operators (NTL) No. 2005-G02 Deepwater Ocean Current Monitoring on Floating Facilities has been reviewed. Your request asked for approval under Exclusion B of the NTL from collecting 1 full year of current data before you install your floating production facility located on Lease OCS-G 8035, Atwater Valley Block 574, Platform A (Neptune TLP). In addition, BHP Billiton Petroleum (Americas) Inc. met with the Minerals Management Service (MMS), Technical Assessment and Operations Support Section, on April 28, 2005, to review the design of the facility and the current monitoring program at the Neptune TLP.

Under Exclusion B of the NTL, the MMS Gulf of Mexico Regional Office will consider this exclusion provided that you submit a written request that includes a record of the ocean currents you have collected, a brief explanation citing your reasons for requesting the exclusion, and any plans to collect additional data.

Your submittal meets the requirements of Exclusion B of the NTL as follows:

1. Sufficient current data has been collected in a nearby area;

2. You have incorporated the site specific data into your designs and you have demonstrated that the design of your facility and its moorings and risers exceed the anticipated current conditions; and

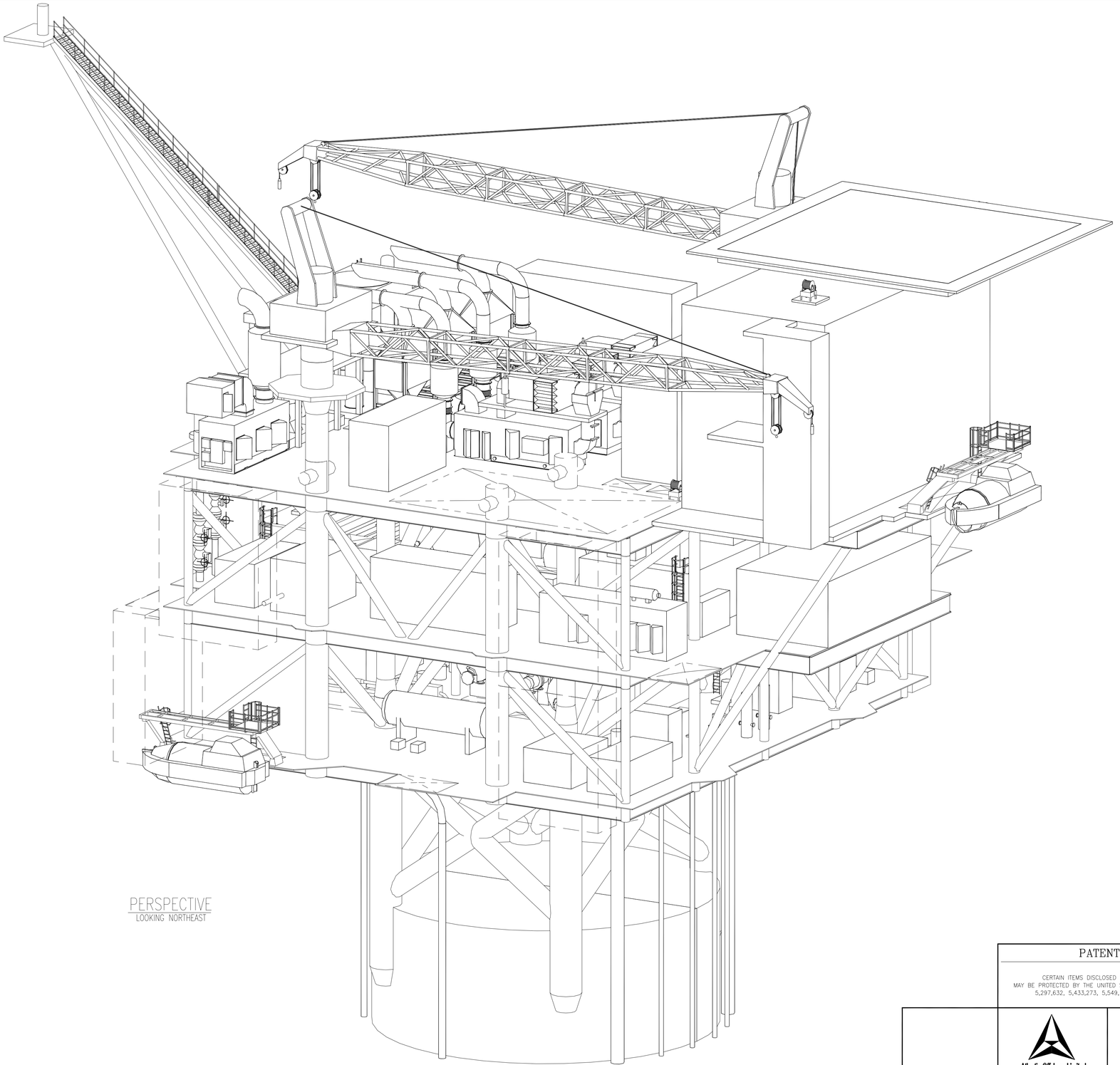
3. You have outlined plans to measure currents when the Neptune TLP is installed and operational.

We have completed our review of this request and have concurred that the intent of our NTL No. 2005-G02 has been met and your request for exclusion from providing 1 full year of site specific current data prior to installation is hereby granted. You should also be aware that the exclusion applies to the proposal as described. If you experience currents that exceed your designs or if analysis determines that the service life of your equipment has been diminished due to effects from ocean currents, additional mitigation may be required.

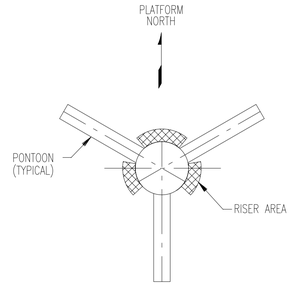
You are reminded that you are to consider the site-specific environmental conditions in the design of your Outer Continental Shelf floating structures and in your daily operations. Please direct any questions to Mr. Fred Hefren at (504) 736-2924.

Sincerely,

for Donald C. Howard
Regional Supervisor
Field Operations



PERSPECTIVE
LOOKING NORTHEAST



KEY PLAN
(NOT TO SCALE)

Atlantia Offshore Limited
MEMBER OF THE IHC CALAND GROUP

bhpbilliton

Neptune

Neptune Project: Feasibility Phase
Gulf of Mexico

REV.	ISSUED DATE	REASON FOR ISSUE	DRAWN BY	CHK'D BY	APPR. 1	APPR. 2	CLIENT APPR.
C2	16FEB05	APPROVED FOR DESIGN/GEN. REV.	DM	EOT	RG	MC/MH	
C1	21JAN05	COMMENTS AND APPROVAL	DM	EOT	RG	MC/MH	
I1	07JAN05	INTER DISCIPLINARY CHECK	DM	EOT	RG	MC/MH	

SEASTAR® TENSION LEG PLATFORM

TOPSIDES
OVERALL PLATFORM PERSPECTIVE LOOKING NORTHEAST
DRAWING

BHPB DOCUMENT NUMBER: NEP-ATL-63-PI-DRW-0100	REV. B	SCALE: NONE	
PROJECT NO. AO 73372	DRAWING NO. DPT92207	FORMAT:	REV. C2

PILE POSITION TOLERANCE AND ACCEPTANCE CRITERIA:

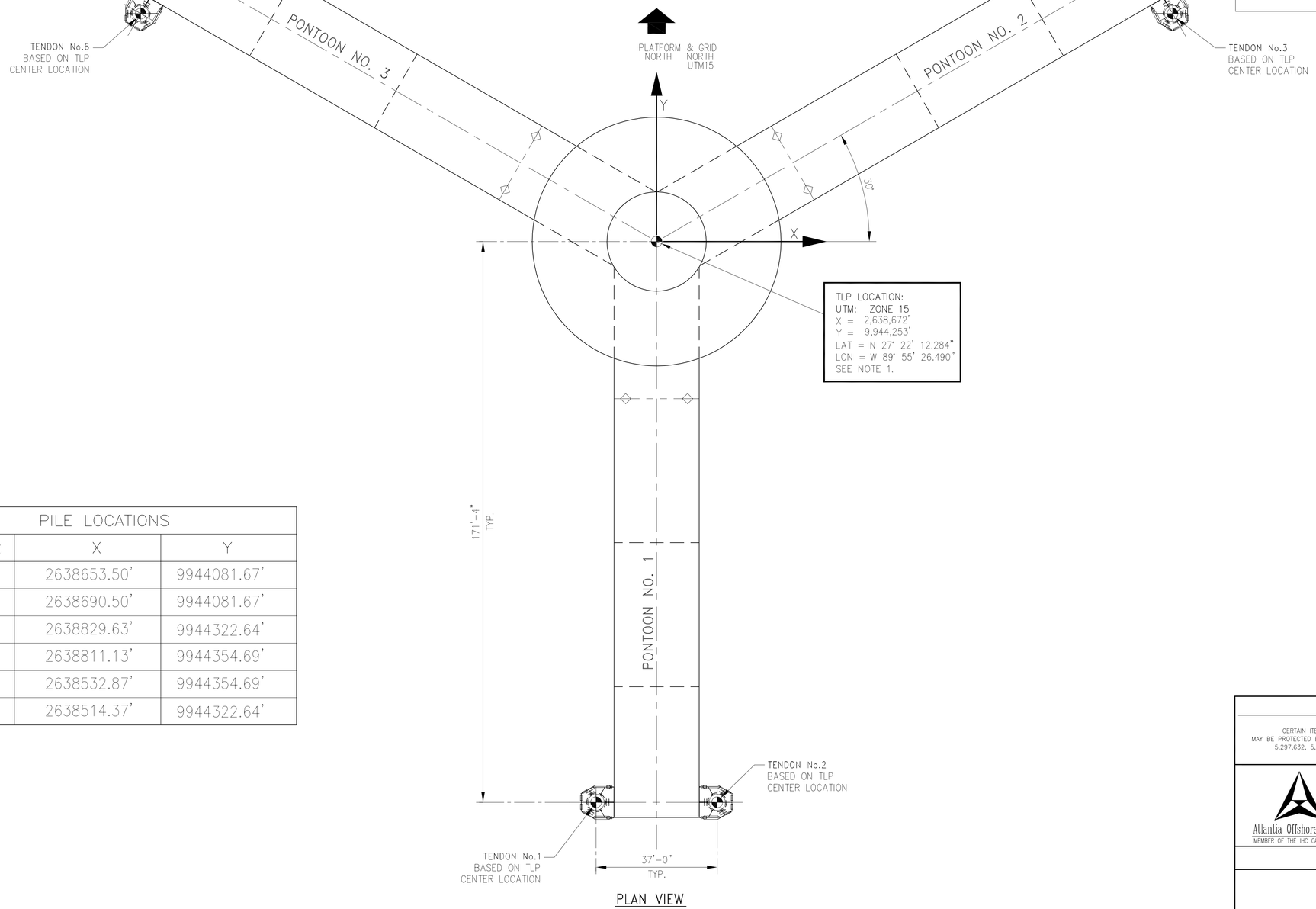
1.) THE VERTICAL POSITION TOLERANCE IS +/− 6 IN. FROM THE DESIGN PILE PENETRATION RELATIVE TO THE MEAN MUDLINE.
2.) THE ANGLE TOLERANCE FOR THE INSTALLED PILE (FROM VERTICAL) IS 1.0 DEGREES.
3.) THE TOLERANCE FOR THE LATERAL POSITION OF EACH OF THE INSTALLED PILES IS A 2 FT RADIUS CIRCLE AROUND THE DESIGN LOCATION AS SHOWN ON THIS DRAWING.

REV.	ISSUED DATE	REASON FOR ISSUE	DRAWN BY	CHK'D BY	APPR. 1	APPR. 2	CLIENT APPR.
C1	07JUN'05	COMMENTS AND APPROVAL	THP	CPH	MDS	TRJ	
C2	18AUG'05	CHG.D COORD SYS TO UTM 15 WAS UTM16	THP	CPH	MDS	TRJ	

REFERENCE DRAWINGS		
NO.	DWG. NO.	DWG. TITLE

NOTES

1. CENTER PER FACILITIES BASIS OF DESIGN BHP DWG: NEP-BHP-00-XX-B0D-0001 REV 1.



PLAN VIEW

PILE LOCATIONS		
NUMBER	X	Y
P1	2638653.50'	9944081.67'
P2	2638690.50'	9944081.67'
P3	2638829.63'	9944322.64'
P4	2638811.13'	9944354.69'
P5	2638532.87'	9944354.69'
P6	2638514.37'	9944322.64'

Atlantia Offshore Limited
MEMBER OF THE IHC CALAND GROUP

bhpbilliton

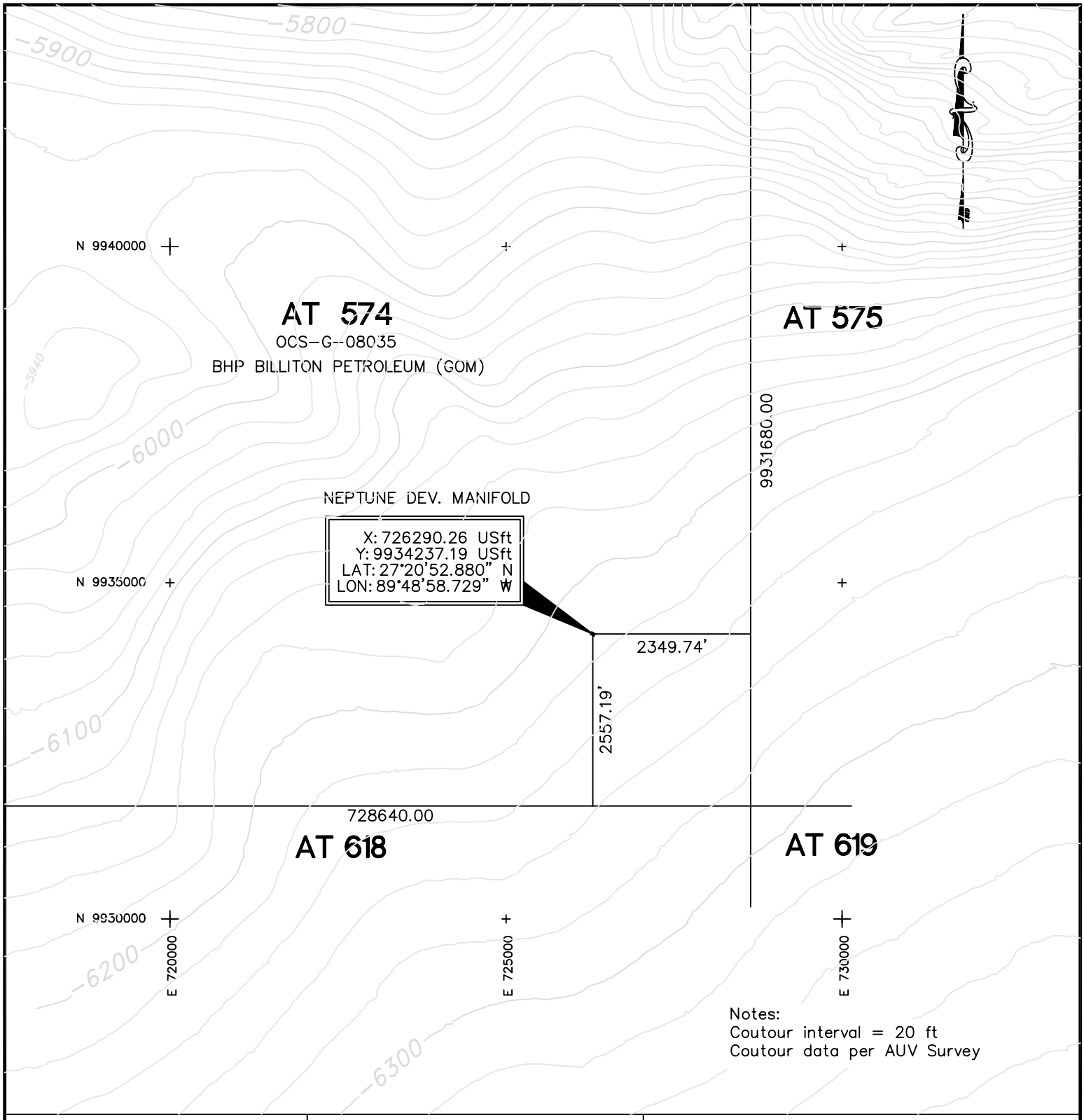
Neptune

Neptune Project: Feasibility Phase
Gulf of Mexico

SEASTAR® TENSION LEG PLATFORM

FOUNDATION
PILE LOCATION
DETAIL

BHPB DOCUMENT NUMBER: NEP-ATL-42-MO-DRW-0115	REV. B	SCALE: AS NOTED	
PROJECT NO. AO 73372	DRAWING NO. DMH82105	FORMAT:	REV. C2



Notes:
Coutour interval = 20 ft
Coutour data per AUV Survey

1000 0 1000 2000 3000

SCALE IN FEET
1" = 2,000 FT

bhp billiton petroleum

PROPOSED NEPTUNE DEV. MANIFOLD
ATWATER VALLEY, BLOCK 574
OCS-G-08035

GULF OF MEXICO

DATUM: NAD 27	ZONE: UTM 16 N
SPHEROID: CLARKE 1866	UNITS: US SURVEY FT
DRAWN BY: TCS	DATE: 07/30/2005
REV: 0	SHEET: 1 of 1

TERRY C. SCHULTZ, RPLS TEXAS REG. 5161
DATE: JULY 30, 2005

2 APPENDICES TO SECTION 2

Logistics Support Route Map

PHI
Houma Location

PHI
Boothville Location

Port Fourchon
C-Port Location

158.7Mi 137.9NM

139.2Mi 121.4NM

114M 99NM

GC640
Tahiti Spar
Chevron Texaco

GC645
Holstein
BP

GC653
Shenzi FPS
BHP Billiton

GC613
Neptune TLP
BHP Billiton

GC743
Atlantis
BP

GC783
Mad Dog Spar
BP

WR206
Cascade
BHP Billiton

WR425
Chinook
BHP Billiton

SIKORSKY S92 TECHNICAL INFORMATION

General Specifications

PERFORMANCE

Standard Day, Sea Level at 26,150 lb/11,861 kg gross weight

Maximum speed (Vne)	165 kts	306 km/hr
Maximum continuous cruise speed	153 kts	284 km/hr
Long range cruise speed	139 kts	258 km/hr
Range: offshore configuration (3,000 ft, ISA plus 10°C.)		
- with 19 passengers and 30-minutes reserve plus 10%	444 nm	823 km
- with 19 passengers and no reserve	544 nm	1,008 km
Maximum range with internal auxiliary fuel (370 gallons)	726 nm	1,345 km
Service ceiling	15,000 ft	4,572 m
Hover ceiling out-of-ground effect	7,125 ft	2,172 m
Hover ceiling in-ground effect	11,320 ft	3,450 m

WEIGHTS

Maximum takeoff gross weight, civil configuration		
- internal load	26,150 lb	11,861 kg
- external load	26,300 lb	12,837 kg
Maximum external load	10,000 lb	4,536 kg
Weight empty, offshore oil	15,900 lb	7,212 kg
Weight empty, airline	15,600 lb	7,076 kg
Weight empty, search and rescue	16,200 lb	7,348 kg
Weight empty, 10-place executive transport	17,200 lb	7,801 kg
Maximum fuel load, (internal, standard)	5,130 lb	2,327 kg

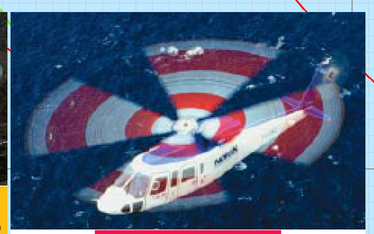
GENERAL DATA

Crew seating capacity	2	
Seating capacity, airline-style seating	19-24 passengers	
Seating capacity, utility side-facing seating	22 passengers	
Baggage compartment volume	140 cu ft	4.0 cu m
Fuel capacity (internal, standard)	760 US gal	2,877 L

POWERPLANT RATINGS

per engine, Standard Day at Sea Level

Engine quantity and type	Two General Electric CT7-8A	
Twin-engine takeoff	2,520 shp	1,879 kw
Twin-engine, 30 minute	2,336 shp	1,742 kw
Maximum continuous	2,043 shp	1,524 kw
OEI, 30 second	2,740 shp	2,043 kw
OEI, 2 minute	2,523 shp	1,881 kw
OEI, continuous	2,498 shp	1,863 kw



SIKORSKY S-76C* AIRCRAFT

Performance, Weight and Dimensions

Performance		
(Standard Day at 11,700 lb gross weight except where indicated)		
Maximum Speed, Sea Level (Vne)	155 kts	287 km/hr
Maximum Cruise Speed, Sea Level	155 kts	287 km/hr
Best Rate of Climb, Maximum Continuous Power, Sea Level	1,625 ft/min	8.26 m/sec
Hover Ceiling In-Ground Effect (T.O.P)	5,650 ft	1,722 m
Hover Ceiling Out-of-Ground Effect (T.O.P)	1,800 ft	549 m
Twin Engine Service Ceiling	12,700 ft	3,871 m
Single Engine Service Ceiling (30-Minute Power)	3,200 ft	975 m
Range at Long Range Cruise Speed (139 knots at 4,000 feet)*		
With 30-minutes reserve	367 nm	680 km
With no reserve	439 nm	813 k
Fuel Consumption at 139 knots at 4,000 feet	600 lb/hr	272 kgs/hr
Weights		
Maximum Take-Off Gross Weight	11,700 lb	5,306 kg
Weight Empty (Utility configuration)	6,897 lb	3,128 kg
Useful Load	4,803 lb	2,178 kg
Dimensions		
Fuselage Length	43' 4"	13.22 m
Fuselage Width	7' 0"	2.13 m
Fuselage Height (to top of tail pylon)	11' 9"	3.58 m
Length Over-all (including rotors)	53' 6"	16.00 m
Height Over-all (to tip of tail rotor)	14' 6"	4.42 m
Width (including horizontal stabilizer)	10' 0"	3.05 m
Main Rotor Diameter (blade tip circle)	44' 0"	13.41 m
Tail Rotor Diameter (blade tip circle)	8' 0"	2.44 m
Main Landing Gear Tread	8' 0"	2.44 m
Wheel Base	16' 5"	5.00 m
Passenger Cabin Length	8' 1"	2.46 m
Passenger Cabin Width	6' 4"	1.93 m
Passenger Cabin Height	4' 6"	1.35 m

** Based for 99% best specific range*

INDEX MAP

Legend

- Protraction Areas
- Federal Water Line
- MMS Blocks
- neptune_hosts
- Helicopter Base
- MMS Blocks
- Helicopter_Route
- Boat_Route

1/2 Helicopter Range w/Res.

- S-76C
- S-92
- Lake
- Swamp or Marsh
- Reservoir
- Stream
- Glacier
- Bay or Estuary or Ocean
- Lake Intermittent
- Lake Dry
- Reservoir Intermittent
- Canal
- Stream
- Intermittent Stream
- Canal
- Dam
- Airport Area
- Major Railroad Lines
- Limited Access
- Highway
- Major Road
- Local Road
- Minor Road
- Other Road
- Ramp
- Ferry
- Pedestrian Way

Roundtrip Distance	
Location	**Dist (NM)**
Houma	289.1
Boothville	280

SCALE

1:669,021

9 0 9 18

Miles

Rev.	Date	Description
A	08/01/05	Original Issue

bhpbilliton

Gulf of Mexico

NEPTUNE TRANSPORTATION/LOGISTICS PLAN

REVISION NO.: A	PREPARED BY: B. ROBERTS
DATE: 08/01/2005	APPROVED BY: KURT ALBAUGH
DWG NO. : 1 OF 1	FILE NO.: 2g2640

3 APPENDICES TO SECTION 3

Map 3-1: Seafloor Rendering of AUV Swath Bathymetry

Map 3-2: Contour Map of the Bathymetry

Map 3-3: Mooring Area (15,000' Anchor Radius)

Map 3-4: Geologic Structure Contour Map

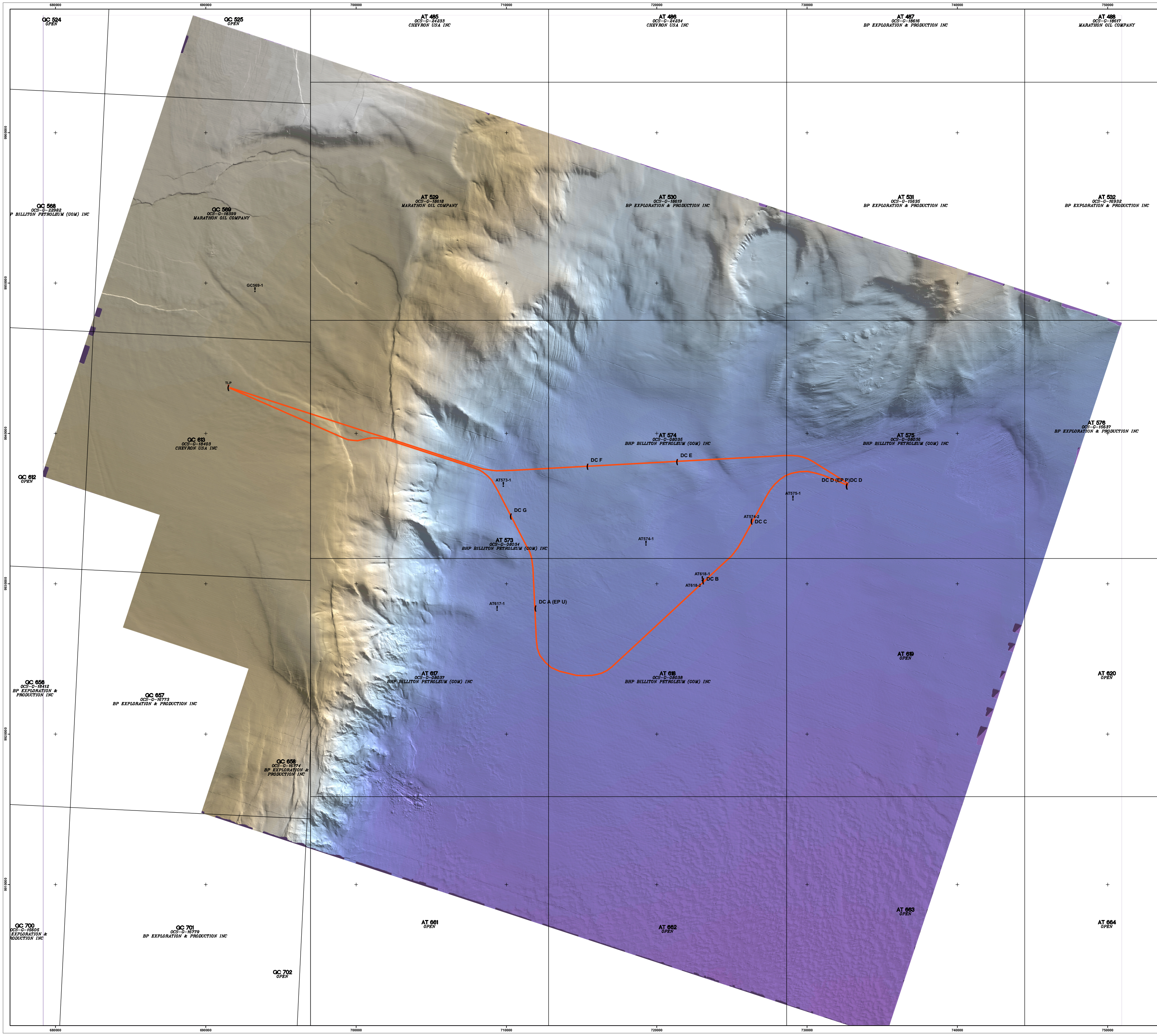
Public Information Copy

Map 3-5: Geologic Structure Contour Map

Public Information Copy

Map 3-6: Geologic Structure Contour Map

Public Information Copy



Legend

- (DRILL CENTERS
- ! WELLS
- BLOCKS
- NEPTUNE FLOWLINE
- (TLP

3

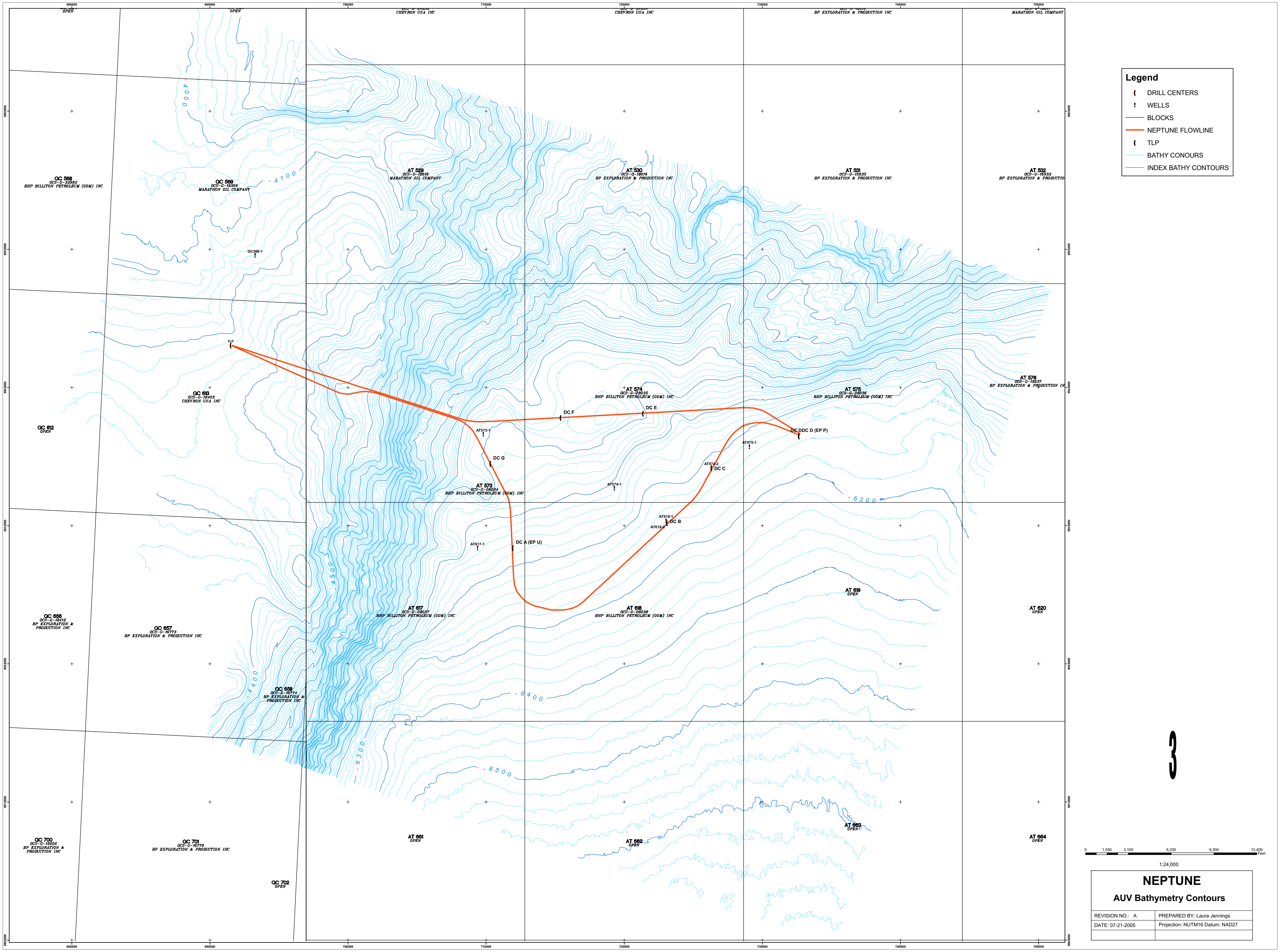
1:24,000

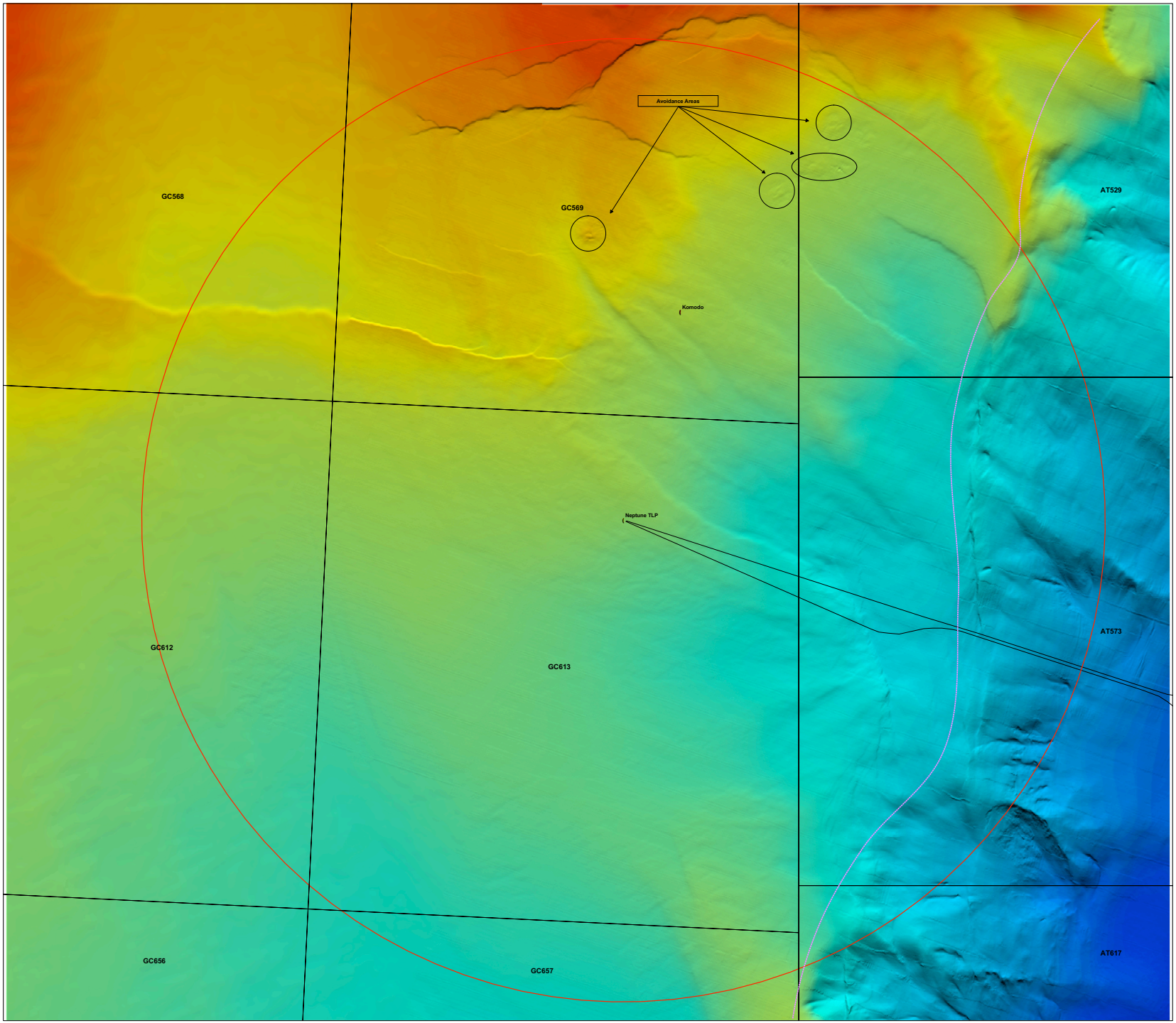
0 1,375 2,750 5,500 8,250 11,000 Feet

NEPTUNE

AUV Bathymetry Rendering

REVISION NO.: A	PREPARED BY: Laura Jennings
DATE: 07-21-2005	Projection: NUTM16 Datum: NAD27


Legend
DRILL CENTERS
WELLS
BLOCKS
NEPTUNE FLOWLINE
TLP
BATHY CONOURS
INDEX BATHY CONTOURS
GC 568
BHP BILLITON PETROLEUM (GOM) INC
GC 569
MARATHON OIL COMPANY
AT 529
MARATHON OIL COMPANY
AT 530
BP EXPLORATION & PRODUCTION INC
AT 531
BP EXPLORATION & PRODUCTION INC
AT 532
GC 613
CHEVRON USA INC
GC 612
OPEN
AT 573
BHP BILLITON PETROLEUM (GOM) INC
AT 574
BHP BILLITON PETROLEUM (GOM) INC
AT 575
BHP BILLITON PETROLEUM (GOM) INC
AT 576
BP EXPLORATION & PRODUCTION INC
GC 656
BP EXPLORATION & PRODUCTION INC
GC 657
BP EXPLORATION & PRODUCTION INC
GC 658
BP EXPLORATION & PRODUCTION INC
AT 617
BHP BILLITON PETROLEUM (GOM) INC
AT 618
BHP BILLITON PETROLEUM (GOM) INC
AT 619
OPEN
AT 620
OPEN
GC 700
BP EXPLORATION & PRODUCTION INC
GC 701
BP EXPLORATION & PRODUCTION INC
GC 702
OPEN
AT 661
OPEN
AT 662
OPEN
AT 663
OPEN
AT 664
OPEN
CHEVRON USA INC
MARATHON OIL COMPANY
TLP
DC F
DC E
DC G
DC DDC D (EP P)
DC C
DC B
DC A (EP U)
GC569-1
AT573-1
AT574-1
AT574-2
AT575-1
AT617-1
AT618-1
AT618-2
-4000
-4100
-4400
-4500
-6300
-6400
-6500
3
0
1,550
3,100
6,200
9,300
12,400
Feet
1:24,000
NEPTUNE
AUV Bathymetry Contours
REVISION NO.: A
PREPARED BY: Laura Jennings
DATE: 07-21-2005
Projection: NUTM16 Datum: NAD27



Legend

- Neptune TLP
- 15000 Ft. Mooring Circle
- Komodo
- Flowlines
- Top of Sigsbee Escarpment

3

1:12,000

0 750 1,500 3,000 4,500 6,000 Feet

NEPTUNE

Mooring Area

REVISION NO.: A	PREPARED BY: Allyson Nix
DATE: 07-20-2005	Projection: NUTM16 Datum: NAD27

4 APPENDICES TO SECTION 4

None for Section 4

5 APPENDICES TO SECTION 5

None for Section 5

6 APPENDICES TO SECTION 6

None for Section 6

7 APPENDICES TO SECTION 7

None for Section 7

8 APPENDICES TO SECTION 8

None for Section 8

9 APPENDICES TO SECTION 9

Coastal Zone Consistency Certification for Louisiana

COASTAL ZONE MANAGEMENT CONSISTENCY CERTIFICATION

INITIAL DEVELOPMENT OPERATIONS AND COORDINATION DOCUMENT (DOCD)

For the Neptune Unit

Atwater Valley Block 573, OCS-G-08034
Atwater Valley Block 574, OCS-G-08035
Atwater Valley Block 575, OCS-G-08036
Atwater Valley Block 617, OCS-G-08037
Atwater Valley Block 618, OCS-G-08038

And

TLP Location

Green Canyon Block 613, OCS-G-18403

The proposed activities described in detail in this OCS Plan comply with the State of Louisiana's approved Coastal Management Program and will be conducted in a manner consistent with such Program.

Relevant enforceable policies were considered in certifying consistency.

BHP BILLITON PETROLEUM (GOM), INC.

Scott Bergeron

Certifying Official

8/16/05

Date

10 APPENDICES TO SECTION 10

Form MMS 137, OCS Plan Information Forms

U.S. Department of the Interior
Minerals Management Service

OMB Control Number: 1010-0049
OMB Approval Expires: August 31, 2006

OCS PLAN INFORMATION FORM

General Information

Type of OCS Plan:		Exploration Plan (EP)	X Development Operations Coordination Document (DOCD)
Company Name:	BHP Billiton Petroleum (Americas) Inc.	MMS Operator Number:	02010
Address:	1360 Post Oak Boulevard	Contact Person:	Debra K. Beaubien
	Suite 150	Phone Number:	713-702-8524
	Houston, TX 77056-3020	E-Mail Address:	deb@ocean1consulting.com

Lease(s):	OCS-G-08034,08035,08036,08037,08038 OCS-G-18403	Area:	Atwater Valley & Green Canyon	Block(s):	AT573,574,575,617,618 GC613	Project Name (If Applicable):	Neptune				
Objective(s):	X	Oil	X	Gas		Sulphur		Salt	Onshore Base:	Fourchon, LA	Distance to Closest Land (Miles): 114

Description of Proposed Activities (Mark all that apply)

	Exploration drilling		Development drilling
	Well completion	X	Installation of production platform
	Well test flaring (for more than 48 hours)	X	Installation of production facilities
	Installation of caisson or platform as well protection structure		Installation of satellite structure
X	Installation of subsea wellheads and/or manifolds	X	Commence production
	Installation of lease term pipelines		Other (Specify and describe)

Have you submitted or do you plan to submit a Conservation Information Document to accompany this plan?	X	Yes		No
Do you propose to use new or unusual technology to conduct your activities?		Yes	X	No
Do you propose any facility that will serve as a host facility for deepwater subsea development?	X	Yes		No
Do you propose any activities that may disturb an MMS-designated high-probability archaeological area?		Yes	X	No
Have all of the surface locations of your proposed activities been previously reviewed and approved by MMS?		Yes	X	No

Tentative Schedule of Proposed Activities

Proposed Activity	Start Date	End Date	No. of Days
Note: Pre-Drill & Complete 7 wells under EPs S6324, S6113, S6640, S6670 & N4982 before TLP Installation	Oct. 05	Feb. 07	493
Topsides Fabrication & Transport	Nov. 05	Apr. 07	~ 600
Hull Fabrication & Transport	Dec. 2005	Mar. 07	~ 510
Install Flowlines, Risers & Umbilicals (Note: Pipeline ROW required, since includes GC 613, not leased by BHP Billiton) Install Piles	Dec. 06 Late Sep. 06	May 07 Mid Oct. 06	~ 200 13
Install Tendons Install Hull	Late Feb. 07 Mid Mar. 07	Mid Mar. 07 Late Mar. 07	14 10
Install SCRs Install Topsides	Late Mar. 07 Mid Apr. 07	Early Apr. 07 Mid Apr. 07	6 5
Topsides Hook-Up and Commissioning First Oil	Apr. 07 Dec.07	Jul. 07 N/A	~ 60 N/A

Description of Drilling Rig

	Jackup		Drillship		Caisson	X	Tension leg platform
	Gorilla Jackup		Platform rig		Well protector		Compliant tower
	Semisubmersible		Submersible		Fixed platform		Guyed tower
	DP Semisubmersible		Other (Attach Description)		Subsea manifold		Floating production system
Drilling Rig Name (If Known):					Spar		Other (Attach Description)

Description of Lease Term Pipelines

From (Facility/Area/Block)	To (Facility/Area/Block)	Diameter (Inches)	Length (Feet)

OCS PLAN INFORMATION FORM (CONTINUED)
Include one copy of this page for each proposed well/structure

Proposed Well/Structure Location			
Well or Structure Name/Number (If renaming well or structure, reference previous name): Platform A (Neptune TLP)		Subsea Completion	
Anchor Radius (if applicable) in feet: TLP Mooring < 200' radius; 15,000 Anchor Radius mapped for Construction Vessel		Yes	No

	Surface Location	**Bottom-Hole Location (For Wells)**
Lease No.	OCS G-18403	OCS
Area Name	Green Canyon	
Block No.	613	
Blockline Departures (in feet)	N/S Departure: 3267.2 F_N_ L	N/S Departure: F____ L
	E/W Departure: 5460.59 F_E_ L	E/W Departure: F____ L
Lambert X-Y coordinates	X: 2638671.7 (UTM 15)	X:
	Y: 9944252.8 (UTM 15)	Y:
Latitude/ Longitude	Latitude N 27d 22' 12.284"	Latitude
	Longitude W 89d 55' 28.490"	Longitude
	TVD (Feet):	MD (Feet): Water Depth (Feet): 4229'

Anchor Locations for Drilling Rig or Construction Barge (If anchor radius supplied above, not necessary)

Anchor Name or No.	Area	Block	X Coordinate	Y Coordinate	Length of Anchor Chain on Seafloor
TLP Pile 1	GC	613	X = 2638653.50	Y = 9944081.67	0
TLP Pile 2	GC	613	X = 2638690.50	Y = 9944081.67	0
TLP Pile 3	GC	613	X = 2638829.63	Y = 9944322.64	0
TLP Pile 4	GC	613	X = 2638811.13	Y = 9944354.69	0
TLP Pile 5	GC	613	X = 2638532.87	Y = 9944354.69	0
TLP Pile 6	GC	613	X = 2638514.37	Y = 9944322.64	0
			X =	Y =	
			X =	Y =	

Paperwork Reduction Act of 1995 Statement: The Paperwork Reduction Act of 1995 (44 U.S.C. Chapter 35) requires us to inform you that MMS collects this information as part of an applicant's Exploration Plan or Development Operations Coordination Document submitted for MMS approval. We use the information to facilitate our review and data entry for OCS plans. We will protect proprietary data according to the Freedom of Information Act and 30 CFR 250.196. An agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a currently valid Office of Management and Budget Control Number. The use of this form is voluntary. The public reporting burden for this form is included in the burden for preparing Exploration Plans and Development Operations Coordination Documents. We estimate that burden to average 580 hours per response, including the time for reviewing instructions, gathering and maintaining data, and completing and reviewing the form. Direct comments regarding the burden estimate or any other aspect of this form to the Information Collection Clearance Officer, Mail Stop 4230, Minerals Management Service, 1849 C Street, N.W., Washington, DC 20240.

OCS PLAN INFORMATION FORM (CONTINUED)
Include one copy of this page for each proposed well/structure

Proposed Well/Structure Location

Well or Structure Name/Number (If renaming well or structure, reference previous name): SC002 (EP S-6324) (AT 574 No.2)	Subsea Completion			
Anchor Radius (if applicable) in feet:	X	Yes		No

	Surface Location	Bottom-Hole Location (For Wells)
Lease No.	OCS 08035	OCS
Area Name	Atwater Valley	
Block No.	574	
Blockline Departures (in feet)	N/S Departure: 2575.77 F_S_ L	N/S Departure: F____ L
	E/W Departure: 2286.66 F_E_ L	E/W Departure: F____ L
Lambert X-Y coordinates	X: 726353.3 (UTM 16)	X:
	Y: 9934255.8 (UTM 16)	Y:
Latitude/ Longitude	Latitude N 27d 20' 53.078"	Latitude
	Longitude W 89d 48' 58.035"	Longitude

TVD (Feet):	MD (Feet):	Water Depth (Feet): 6213'

Anchor Locations for Drilling Rig or Construction Barge (If anchor radius supplied above, not necessary)

Anchor Name or No.	Area	Block	X Coordinate	Y Coordinate	Length of Anchor Chain on Seafloor
			X =	Y =	
			X =	Y =	
			X =	Y =	
			X =	Y =	
			X =	Y =	
			X =	Y =	
			X =	Y =	
			X =	Y =	

Paperwork Reduction Act of 1995 Statement: The Paperwork Reduction Act of 1995 (44 U.S.C. Chapter 35) requires us to inform you that MMS collects this information as part of an applicant's Exploration Plan or Development Operations Coordination Document submitted for MMS approval. We use the information to facilitate our review and data entry for OCS plans. We will protect proprietary data according to the Freedom of Information Act and 30 CFR 250.196. An agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a currently valid Office of Management and Budget Control Number. The use of this form is voluntary. The public reporting burden for this form is included in the burden for preparing Exploration Plans and Development Operations Coordination Documents. We estimate that burden to average 580 hours per response, including the time for reviewing instructions, gathering and maintaining data, and completing and reviewing the form. Direct comments regarding the burden estimate or any other aspect of this form to the Information Collection Clearance Officer, Mail Stop 4230, Minerals Management Service, 1849 C Street, N.W., Washington, DC 20240.

OCS PLAN INFORMATION FORM (CONTINUED)
Include one copy of this page for each proposed well/structure

Proposed Well/Structure Location

Well or Structure Name/Number (If renaming well or structure, reference previous name): Well SC001 ST03 (EP S-6113) (AT 574 #2 ST3)	Subsea Completion			
Anchor Radius (if applicable) in feet:	X	Yes		No

	Surface Location	Bottom-Hole Location (For Wells)
Lease No.	OCS 08035	OCS
Area Name	Atwater Valley	
Block No.	574	
Blockline Departures (in feet)	N/S Departure: 2494.11 F_S_ L	N/S Departure: [redacted] F____ L
	E/W Departure: 2331.17 F_E_ L	E/W Departure: [redacted] F____ L
Lambert X-Y coordinates	X: 726308.8 (UTM 16)	X:
	Y: 9934174.1 (UTM 16)	Y:
Latitude/ Longitude	Latitude N 27d 20' 52.260"	Latitude
	Longitude W 89d 48' 58.508"	Longitude

TVD (Feet):	MD (Feet):	Water Depth (Feet): 6213'

Anchor Locations for Drilling Rig or Construction Barge (If anchor radius supplied above, not necessary)

Anchor Name or No.	Area	Block	X Coordinate	Y Coordinate	Length of Anchor Chain on Seafloor
			X =	Y =	
			X =	Y =	
			X =	Y =	
			X =	Y =	
			X =	Y =	
			X =	Y =	
			X =	Y =	
			X =	Y =	

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OCS PLAN INFORMATION FORM (CONTINUED)
Include one copy of this page for each proposed well/structure

Proposed Well/Structure Location

Well or Structure Name/Number (If renaming well or structure, reference previous name): Well SD001 (EP S-6640) (AT 575 #2)	Subsea Completion			
Anchor Radius (if applicable) in feet:	X	Yes		No

	Surface Location	Bottom-Hole Location (For Wells)
Lease No.	OCS 08036	OCS
Area Name	Atwater Valley	
Block No.	575	
Blockline Departures (in feet)	N/S Departure: 4785.23 F_S_ L	N/S Departure: F____ L
	E/W Departure: 4092.26 F_W_ L	E/W Departure: F____ L
Lambert X-Y coordinates	X: 732732.3 (UTM 16)	X:
	Y: 9936465.2 (UTM 16)	Y:
Latitude/ Longitude	Latitude N 27d 21' 16.362"	Latitude
	Longitude W 89d 47' 47.903"	Longitude

TVD (Feet):	MD (Feet):	Water Depth (Feet): 6251'

Anchor Locations for Drilling Rig or Construction Barge (If anchor radius supplied above, not necessary)

Anchor Name or No.	Area	Block	X Coordinate	Y Coordinate	Length of Anchor Chain on Seafloor
			X =	Y =	
			X =	Y =	
			X =	Y =	
			X =	Y =	
			X =	Y =	
			X =	Y =	
			X =	Y =	
			X =	Y =	

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OCS PLAN INFORMATION FORM (CONTINUED)
Include one copy of this page for each proposed well/structure

Proposed Well/Structure Location

Well or Structure Name/Number (If renaming well or structure, reference previous name):	Subsea Completion			
Well SA001 (EP S-6670) (AT 617 #2)				
Anchor Radius (if applicable) in feet:	X	Yes		No

	Surface Location	Bottom-Hole Location (For Wells)
Lease No.	OCS 08037	OCS
Area Name	Atwater Valley	
Block No.	617	
Blockline Departures (in feet)	N/S Departure: 3280 F_N_ L	N/S Departure: F____ L
	E/W Departure: 860 F_E_ L	E/W Departure: [redacted] F____ L
Lambert X-Y coordinates	X: 711940.0 (UTM 16)	X:
	Y: 9928400.0 (UTM 16)	Y:
Latitude/ Longitude	Latitude N 27d 19' 51.890"	Latitude
	Longitude W 89d 51' 36.247"	Longitude
	TVD (Feet):	MD (Feet): / Water Depth (Feet): 6168'

Anchor Locations for Drilling Rig or Construction Barge (If anchor radius supplied above, not necessary)

Anchor Name or No.	Area	Block	X Coordinate	Y Coordinate	Length of Anchor Chain on Seafloor
			X =	Y =	
			X =	Y =	
			X =	Y =	
			X =	Y =	
			X =	Y =	
			X =	Y =	
			X =	Y =	
			X =	Y =	

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OCS PLAN INFORMATION FORM (CONTINUED)
Include one copy of this page for each proposed well/structure

Proposed Well/Structure Location

Well or Structure Name/Number (If renaming well or structure, reference previous name): Well SC003 (EP S-6324) (AT 574 #4)	Subsea Completion			
Anchor Radius (if applicable) in feet:	X	Yes		No

	Surface Location	Bottom-Hole Location (For Wells)
Lease No.	OCS 08035	OCS
Area Name	Atwater Valley	
Block No.	574	
Blockline Departures (in feet)	N/S Departure: 2538.62 F_S_ L	N/S Departure: F____ L
	E/W Departure: 2412.83 F_E_ L	E/W Departure: F____ L
Lambert X-Y coordinates	X: 726227.2 (UTM 16)	X:
	Y: 9934218.6 (UTM 16)	Y:
Latitude/ Longitude	Latitude N 27d 20' 52.682"	Latitude
	Longitude W 89d 48' 59.423"	Longitude

TVD (Feet):	MD (Feet):	Water Depth (Feet): 6213'

Anchor Locations for Drilling Rig or Construction Barge (If anchor radius supplied above, not necessary)

Anchor Name or No.	Area	Block	X Coordinate	Y Coordinate	Length of Anchor Chain on Seafloor
			X =	Y =	
			X =	Y =	
			X =	Y =	
			X =	Y =	
			X =	Y =	
			X =	Y =	
			X =	Y =	
			X =	Y =	

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OCS PLAN INFORMATION FORM (CONTINUED)
Include one copy of this page for each proposed well/structure

Proposed Well/Structure Location			
Well or Structure Name/Number (If renaming well or structure, reference previous name): Well SD002 (EP S-6640) (AT 575 #3)			Subsea Completion
Anchor Radius (if applicable) in feet:			X Yes ☐ No

	Surface Location	**Bottom-Hole Location (For Wells)**
Lease No.	OCS 08036	OCS
Area Name	Atwater Valley	
Block No.	575	
Blockline Departures (in feet)	N/S Departure: 4820 F_S_ L	N/S Departure: F____ L
	E/W Departure: 4006 F_W_ L	E/W Departure: F____ L
Lambert X-Y coordinates	X: 732646.0 (UTM 16)	X:
	Y: 9936500.0 (UTM 16)	Y:
Latitude/ Longitude	Latitude N 27d 21' 16.687"	Latitude
	Longitude W 89d 47' 48.868	Longitude
	TVD (Feet):	MD (Feet): Water Depth (Feet): 6251

Anchor Locations for Drilling Rig or Construction Barge (If anchor radius supplied above, not necessary)

Anchor Name or No.	Area	Block	X Coordinate	Y Coordinate	Length of Anchor Chain on Seafloor
			X =	Y =	
			X =	Y =	
			X =	Y =	
			X =	Y =	
			X =	Y =	
			X =	Y =	
			X =	Y =	
			X =	Y =	

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OCS PLAN INFORMATION FORM (CONTINUED)
Include one copy of this page for each proposed well/structure

Proposed Well/Structure Location

Well or Structure Name/Number (If renaming well or structure, reference previous name):	Subsea Completion			
Well SD001ST01 (EP S-6640) (AT 575 #2 ST1)				
Anchor Radius (if applicable) in feet:	X	Yes		No

	Surface Location	Bottom-Hole Location (For Wells)
Lease No.	OCS 08036	OCS
Area Name	Atwater Valley	
Block No.	575	
Blockline Departures (in feet)	N/S Departure: 4785.23 F_S_ L	N/S Departure: F____ L
	E/W Departure: 4092.26 F_W_ L	E/W Departure: F____ L
Lambert X-Y coordinates	X: 732732.26 (UTM 16)	X:
	Y: 9936465.23 (UTM 16)	Y:
Latitude/ Longitude	Latitude N 21d 21' 16.362"	Latitude
	Longitude W 89d 47' 47.903"	Longitude

TVD (Feet):	MD (Feet):	Water Depth (Feet): 6251

Anchor Locations for Drilling Rig or Construction Barge (If anchor radius supplied above, not necessary)

Anchor Name or No.	Area	Block	X Coordinate	Y Coordinate	Length of Anchor Chain on Seafloor
			X =	Y =	
			X =	Y =	
			X =	Y =	
			X =	Y =	
			X =	Y =	
			X =	Y =	
			X =	Y =	
			X =	Y =	

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OCS PLAN INFORMATION FORM (CONTINUED)
Include one copy of this page for each proposed well/structure

Proposed Well/Structure Location

Well or Structure Name/Number (If renaming well or structure, reference previous name): Well SB001ST01 (EP N-4982) (AT 574 #5)	Subsea Completion			
Anchor Radius (if applicable) in feet:	X	Yes		No

	Surface Location	Bottom-Hole Location (For Wells)
Lease No.	OCS 08038	OCS
Area Name	Atwater Valley	
Block No.	618	
Blockline Departures (in feet)	N/S Departure: 1483.01 F_N_ L	N/S Departure: F____ L
	E/W Departure: 5547.53 F_E_ L	E/W Departure: F____ L
Lambert X-Y coordinates	X: 723092.5 (UTM 16)	X:
	Y: 9930197.0 (UTM 16)	Y:
Latitude/ Longitude	Latitude N 27d 20' 12.187"	Latitude
	Longitude W 89d 49' 33.147"	Longitude
	TVD (Feet):	MD (Feet): / Water Depth (Feet): 6261'

Anchor Locations for Drilling Rig or Construction Barge (If anchor radius supplied above, not necessary)

Anchor Name or No.	Area	Block	X Coordinate	Y Coordinate	Length of Anchor Chain on Seafloor
			X =	Y =	
			X =	Y =	
			X =	Y =	
			X =	Y =	
			X =	Y =	
			X =	Y =	
			X =	Y =	
			X =	Y =	

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