Exhibit 10.1

DRILLING CONTRACT

between

VASTAR RESOURCES, INC.

and

R&B FALCON DRILLING CO.

DATED DECEMBER 9, 1998

for

"RBS-8D"
"Deepwater Horizon"

CONTRACT NO. 980249

D-1-87.1

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Vern Buzard

DRILLING CONTRACT

RBS-8D
SEMISUBMERSIBLE DRILLING UNIT

VASTAR RESOURCES, INC.

AND

R&B FALCON DRILLNG CO.

CONTRACT NO. 980249 **DATE: DECEMBER 9, 1998**

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DRILLING CONTRACT

THIS CONTRACT ("CONTRACT") is made and entered into this 9th day of December, 1998, by and between Vastar Resources, Inc., a Delaware Corporation, hereinafter referred to as "COMPANY" and R&B Falcon Drilling Co., ("CONTRACTOR"), and shall be effective upon execution by both COMPANY and CONTRACTOR (the date when so effective, shall be referred to herein as the ("Effective Date"). COMPANY and CONTRACTOR are sometimes herein individually referred to as a "Party" and collectively referred to as the "Parties."

RECITALS

Whereas CONTRACTOR shall cause to be built, a semisubmersible drilling unit, "Drilling Unit". Whereas COMPANY desires to engage the services of CONTRACTOR, its Drilling Unit, and its equipment and all necessary crews for drilling, completing, testing, and remedial operations and support operations on a well or wells in the federal waters of the Gulf of Mexico, hereinafter referred to as "Operations" or "Work".

Whereas this CONTRACT and the attached exhibits establishes the terms and conditions contained in this document entitled "DRILLING CONTRACT" and the attached exhibits:

Exhibit A:	Dayrates
Exhibit B-1:	Drilling Unit Specifications
Exhibit B-2:	Material Equipment List
Exhibit B-3:	Consumable Material and Equipment List
Exhibit C:	Insurance Requirements
Exhibit D:	Safety, Health, and Environmental Management System
Exhibit E:	Termination Payment Schedules
Exhibit F-1:	Rig Manning
Exhibit F-2:	Cost of Additional Personnel
Exhibit G:	Vessel/Equipment Performance/Acceptance Test
Exhibit H:	Project Execution Plan

NOW, THEREFORE, COMPANY and CONTRACTOR, for and in consideration of the mutual covenants and agreements contained herein and good and valuable consideration paid by COMPANY to CONTRACTOR, the receipt and sufficiency of which are acknowledged by CONTRACTOR, the Parties hereby agree as follows:

ARTICLE 1

TERM

1.1 EFFECTIVE DATE AND DURATION

1.1.1 This CONTRACT shall remain in full force and effect for three (3) years (the "Initial Contract Term"). The Initial Contract Term shall begin on the Commencement Date. The term of this CONTRACT from its Effective Date through its Initial Contract Term and all Extension Periods shall be herein referred to as the "Contract Period."

1.1.2 With a three (3) year Initial Contract Term, COMPANY has the option (the "Extension Option") to extend this CONTRACT for five (5) consecutive one (1) year periods (each such extension period shall be herein referred to as an "Extension Period") beginning at the end of the Initial Contract Term. Each Extension Option must be exercised by COMPANY by written notice to CONTRACTOR nine (9) months before the end of the Initial Contract Term or the previous Extension Period, as the case may be. This CONTRACT, as it may have been amended as of the date on which COMPANY exercises any Extension Option, shall be extended for one (1) year with further Extension Options available to COMPANY, as provided herein and the various rates shall be mutually agreed in writing. COMPANY shall also have the option within twenty-four (24) months of the Effective Date to exercise any of the one-year options at the three (3) year rate. In addition, this CONTRACT may be extended for any additional period by any other method or manner as the Parties may mutually agree in writing.

1.1.3 COMPANY has the option from the Effective Date up to and including one (1) year after the Commencement Date, to convert this CONTRACT to a five (5) year term ("5 Year Option"). If the 5-Year Option is exercised within six (6) months from the Effective Date, then the five (5) year rate in Exhibit A shall apply. If the 5 Year Option is exercised from six (6) months of the Effective Date to one (1) year from the Effective Date, then the five (5) year rate in Exhibit A plus five thousand dollars ($5,000.00) shall apply. If the *5* Year Option is exercised from one (1) year after the Effective Date to the Commencement Date, then the five (5) year rate in Exhibit A plus seven thousand five hundred dollars ($7,500.00) shall apply. If the option is exercised from the Commencement Date to the end of the first contract year, the five (5) year rate in Exhibit A plus ten thousand dollars ($10,000.00) shall apply from that date forward and any portion of the first contract year shall become part of the five (5) year commitment.

1.1.4 If COMPANY exercises the 5 Year Option, then COMPANY has the option, (the "Extension Option") under the five (5) year Initial Contract Term to extend this CONTRACT for three (3) consecutive one (1) year periods (each such extension period shall be herein referred to as an "Extension Period") beginning at the end of the Initial Contract Term. Each Extension Option must be exercised by COMPANY by written notice to CONTRACTOR at least nine (9) months before the end of the Initial Contract Term or the previous Extension Period, as the case may be. This CONTRACT, as it may have been amended as of the date on which CONTRACTOR exercises any Extension Option, shall be extended for one (1) year with further Extension Options available to COMPANY as provided herein and the various rates shall be

mutually agreed in writing. In addition, this CONTRACT may be extended for any additional period by any other method or as the Parties may mutually agree in writing.

1.1.5 If the Initial Contract Term or any Extension Period of this CONTRACT expires while COMPANY has work in progress on any well or any other operations conducted with respect to a well with the objective of satisfying the well producibility criteria of 30 C.F.R. **§** 250.11 (1988), then COMPANY shall have the right to have the work in progress on such well or operation completed to COMPANY'S satisfaction under the terms and provisions of this CONTRACT and the term of this CONTRACT shall be deemed to be extended for the period of time required to complete such work.

1.2 COMMENCEMENT DATE

"Commencement Date" means the date and hour that the last of the following conditions has been satisfied: (i) all requirements in Exhibit G and all governmental and regulatory certifications and inspections required of the CONTRACTOR have been obtained, (ii) CONTRACTOR'S full crew is aboard, (iii) the Drilling Unit has cleared customs and other formalities, (iv) the Drilling Unit and CONTRACTOR'S full crew is in all respects ready to commence and sustain continued drilling operations during the Contract Period and (v) the Drilling Unit has arrived at the COMPANY'S first location or an alternative location, if requested by COMPANY. The Parties shall cooperate in the loading of any COMPANY'S drilling equipment and materials to minimize any delay in the Commencement Date. In the event that, despite the Parties' best efforts, the loading of COMPANY'S drilling equipment and materials cause a delay in the Commencement Date the CONTRACTOR shall be paid at the Standby and Moving Rate for any such delay. Notwithstanding the foregoing, however, COMPANY may require or allow the Drilling Unit to commence Work at an earlier date in which case such earlier date shall be the Commencement Date and in such event any of the above requirements for the Commencement Date which have not been satisfied shall be deemed satisfied.

The Parties agree that delivery of the Drilling Unit to the U.S. Gulf of Mexico is desired to occur twenty seven (27) months from the Effective Date, with COMPANY agreeing to take delivery as much as three (3) months sooner ("Delivery Date").

If the Drilling Unit is not delivered to the Gulf of Mexico by thirty (30) months from the Effective Date, then COMPANY shall invoice CONTRACTOR every thirty (30) thirty days after the start of the late delivery charges a sum calculated at a rate of five thousand dollars ($5,000.00) per day during the first six (6) months of the late delivery and then at a rate of ten thousand dollars ($10,000.00) per day for each day until the Drilling Unit is delivered to the Gulf of Mexico with the total amount of such payment not to exceed one million five hundred thousand dollars ($1,500,000.00) for the late delivery of the Drilling Unit.

1.3 COMPLETION OF CONTRACT

1.3.1 Upon completion of this CONTRACT, if CONTRACTOR has no other Work for the Drilling Unit, COMPANY shall provide for tow, if required, of the Drilling Unit to, and securing

in, the anchorage area at Galveston, Texas, or a mutually agreed point of no greater distance from its location of the last Work under this CONTRACT and at applicable dayrates.

1.3.2 Subject to Article 27.4, upon completion of this CONTRACT, if CONTRACTOR has other Work for the Drilling Unit, COMPANY shall have no further responsibility hereunder when all of COMPANY'S equipment has been offloaded, the well secured, and the Drilling Unit is ready to get underway.

ARTICLE 2

DAYRATES

2.1 GENERAL

COMPANY shall pay CONTRACTOR for work performed, services rendered, and materials, equipment, supplies, and personnel furnished by CONTRACTOR at the rates specified in Exhibit A. The period of time for which each rate shall be applicable shall be computed from and to the nearest half (1/2) hour. Subject to Article 2.3, the rates as specified in Exhibit A shall apply during the entire Initial Contract Term. The rates are based on CONTRACTOR'S operations being conducted on a seven (7) day week and a twenty-four (24) hour work day.

2.2 DAYRATES

Each of the dayrate classifications is as follows:

2.2.1 Moving Rate

a) From the moment operations are commenced to release the first mooring line or move the Drilling Unit off location at a drilling location and until the Drilling Unit is properly positioned at COMPANY'S next drilling location, and the Drilling Unit is ready to commence operations.

b) From the moment operations are commenced to release the first mooring line or move the Drilling Unit off location at COMPANY'S final drilling location hereunder until this Contract terminates.

2.2.2 Operating Rate commences at the time of the Commencement Date, time the Drilling Unit is, properly positioned, anchors tested, if any, at drilling draft at the location to be drilled and the Drilling Unit is ready to commence operations and continues until CONTRACTOR has completed operations at the location and the Drilling Unit has been released by COMPANY to move to the next location pursuant to Article 2.2.1(a).

2.2.3 Stand-by Rate with Crews applies while the Drilling Unit is on location with full crews waiting for COMPANY'S orders, and shall be payable during any period of time when CONTRACTOR'S crew is aboard the Drilling Unit and drilling, testing or completion operations hereunder are suspended, as a result of COMPANY'S instructions, COMPANY'S failure to issue

instructions, the mechanical failure of COMPANY'S items, or the failure of COMPANY to timely provide COMPANY'S items or furnish those services set forth in Exhibit B-3.

2.2.4 Stand-by Rate without Crews applies while the Drilling Unit is on location without crews. This rate shall commence seventy-two (72) hours after notification by COMPANY to CONTRACTOR to release crews.

2.2.5(a) Mechanical Downtime applies in the event operations during the term of this CONTRACT are shut down ("Mechanical Downtime") for inspection, repair or replacement of any surface or subsurface equipment including, but not limited to CONTRACTOR'S items described in Exhibit B, including station keeping equipment, mooring equipment, anchors, chains, shackles, pendent lines, buoys, the riser, slip joint, choke and kill lines, flexible hoses, hydraulic hoses, guidelines, subsea BOP, and BOP control system. CONTRACTOR shall be allowed a maximum of twenty-four (24) hours per calendar month Mechanical Downtime with a maximum accumulation of twelve (12) days; thereafter the dayrate reduces to zero (0). Mechanical Downtime shall commence immediately upon suspension of well operations and shall continue until completion of the inspection, repair or replacement of the equipment and operations are at the point in well operations prior to suspension. If COMPANY elects to proceed with an alternative operation, then Mechanical Downtime shall cease at the point in well operations where the alternative operation commences. Article 2.2.5(a) shall not apply to the time required to repair or replace CONTRACTOR'S choke manifolds, blowout preventors, and drill string, if the damage or destruction to the equipment is caused by exposure to unusually corrosive or otherwise destructive elements not normally encountered which are introduced into the drilling fluid from subsurface formations or the use of corrosive additives in the fluid. Article 2.2.5(a) shall not apply to normal maintenance, including, without limitation, cutting and/or slipping the drill line, which time shall be limited to 1 hour plus up to thirty (30) minutes per day (fifteen (15) hours per month maximum) for top drive maintenance. Any mobilization and/or demobilization and associated cost required to repair the Drilling Unit under Article 2.2.5 (a) will be at CONTRACTOR'S expense. CONTRACTOR shall not be entitled to any compensation for Mechanical Downtime allowance not consumed during this CONTRACT.

2.2.5(b) Performance Downtime applies in the event operations during the term of this CONTRACT are shut down ("Performance Downtime") for the following reasons (i) CONTRACTOR, CONTRACTOR'S Personnel (as hereinafter defined), or the Drilling Unit should be incapable, incompetent, negligent, unreliable, or consistently poor in performance of the Work, (ii) the equipment listed in Exhibit B is incapable of being operated at the rated specifications in Exhibit B for sustained operation or (iii) CONTRACTOR fails to fulfill any of its obligations under this Contract. In the event of COMPANY'S dissatisfaction with any items identified in (i), (ii) and (iii), Performance Downtime shall commence when COMPANY provides CONTRACTOR with written notice as to the circumstances of its dissatisfaction and work in progress is suspended and shall continue based on the following remedies. If work in progress is suspended, then Article 2.2.5(a) shall apply. CONTRACTOR shall be allowed five (5) days, from the written notice, to commence good faith efforts to remedy such circumstances. During the remedy period, the Operating Rate shall be reduced to the Standby-rate Without

Crews. In the event such circumstances are not remedied to COMPANY'S satisfaction within thirty (30) days, from the written notice, the Operating Rate shall be reduced to zero (0) dollars.

2.2.6 Hurricane Evacuation Rate applies when all of the crews have been transported to shore. This rate shall include the cost of room and board for all of CONTRACTOR'S personnel including catering personnel and any other of CONTRACTOR'S subcontractor personnel. If COMPANY elects to release CONTRACTOR'S crew, then the Standby Rate Without Crew shall be applicable from the time CONTRACTOR is notified by COMPANY until the CONTRACTOR'S crew returns to the Drilling Unit.

2.2.7 Stack Rate applies when the Drilling Unit has arrived and secured at the nearest safe harbor or stack location in the Gulf of Mexico as designated by CONTRACTOR. The Moving Rate shall apply immediately before the Stack Rate commences. The Stack Rate will continue until the unit is ready to get underway at which time the Moving Rate shall apply, or until the CONTRACT expires pursuant to Article 1.

2.3 ADJUSTMENTS IN DAYRATES

2.3.1 The dayrates set forth in Exhibit A shall remain unadjusted during the Initial Contract Term of this CONTRACT, except for rate changes as described in Article 2.3.2, Article 3, Article 4, Article 5, Article 6, and Article 30.3.

2.3.2 The dayrates set forth in Exhibit A shall be revised to reflect the change in costs from the Effective Date if the costs of any of the items hereafter listed shall vary in an amount equal to or greater than five percent (5%) from the costs thereof not earlier than the Commencement Date and not more frequent than one (1) year after the date of any revision pursuant to this Article 2.3.2.

a. Labor costs, including all benefits, of CONTRACTOR'S personnel listed in Exhibit F;
b. CONTRACTOR'S cost of catering;
c. CONTRACTOR'S cost of spare parts and supplies vary and that the parties shall use the United States Department of Labor's Producer Price Index Commodity Code No. 1191.02 - Oil Field and Gas Field Drilling Machinery - to determine what extent a price variance has occurred in said spare parts and supplies.
d. Cost of insurance not based solely on CONTRACTOR'S loss or claim record.

CONTRACTOR must show documented proof for any dayrate adjustments due to changes in CONTRACTOR'S cost of labor, insurance or catering. CONTRACTOR shall provide COMPANY with the base figures for the items specified in Article 2.3.2a.,b.,c., and d., thirty (30) days after the Effective Date. Base figures from which such revisions (either upward or downward) will be determined for the items in this Article 2.3.2 shall be provided by CONTRACTOR sixty (60) days prior to the estimated Commencement Date. These base figures

shall be agreed upon by both parties and approved in writing by COMPANY prior to the Commencement Date.

2.3.3 If, at the request of COMPANY, it becomes necessary for CONTRACTOR to change the work schedule of its personnel or change the location of its Homeport or area of operations, which impacts the CONTRACTOR'S actual cost, the daily rates set out in Appendix A shall be adjusted accordingly, with appropriate back up data.

2.3.4 CONTRACTOR shall be responsible for costs and expenses incurred by CONTRACTOR in complying with any law, regulation, or ruling of a government, governmental agency, or regulatory authority having jurisdiction over the operations of the Drilling Unit to the extent that the law, regulation, or ruling has changed or been imposed subsequent to the Commencement Date. Where compliance with the changed law, regulation, or ruling results in modifications of the Drilling Unit or the purchase of equipment which change CONTRACTOR'S cost, the dayrates shall be adjusted with the additional direct cost and expenses amortized over the life of the Drilling Unit. The increased dayrates shall become effective upon completion of the modifications, and the Drilling Unit commences operations. CONTRACTOR shall be solely responsible for mobilization and demobilization and associated cost; during such time the dayrate shall be zero (0) dollars.

ARTICLE 3

PERSONNEL AND PAYMENTS

3.1 PERSONNEL CLASSIFICATIONS, NUMBERS AND REPRESENTATION

3.1.1 CONTRACTOR shall furnish, at its sole expense, personnel in the numbers and classifications as set forth in Exhibit F.

3.1.2 During any period of time that CONTRACTOR fails to provide on the Drilling Unit the numbers or classifications of personnel specified in Exhibit F, the rate being paid the CONTRACTOR shall be reduced by the overtime hourly rate for the absent crew member(s) as specified in Exhibit F. This reduced rate shall commence on the second day of the crew shortage.

3.1.3 The number of personnel to be furnished by CONTRACTOR under the terms hereof as specified in Exhibit F may be increased or decreased by mutual consent of COMPANY and CONTRACTOR, in which case the rates set forth in Article 2 shall be increased or decreased by an amount equal to the change in CONTRACTOR'S cost.

3.1.4 CONTRACTOR represents that all of CONTRACTOR'S personnel shall be fully qualified, trained, competent, able bodied and fit for their respective assignments and shall have complied with all necessary laws and regulations in connection therewith. The minimum standard for qualification and training is set forth in Exhibit F. CONTRACTOR shall be able to communicate verbally and in writing by means of a common language at all times.

3.2 OVERTIME COMPENSATION

3.2.1 COMPANY shall pay CONTRACTOR for overtime work of personnel employed by CONTRACTOR who are required to work in excess of their regularly scheduled hours, when requested by COMPANY, at the rates specified in Exhibit F.

3.2.2 In the event the departure of the crews from the drilling site is delayed more than two (2) hours after the normal scheduled departure time due to delays in the transportation schedule which are not caused by the negligence or fault of CONTRACTOR, COMPANY shall pay CONTRACTOR for time in excess of two (2) hours at the hourly overtime rate for each employee as specified in Exhibit F.

3.2.3 In the event that the time of transportation of crews between the Drilling Unit and the shorebase or between the shorebase and Drilling Unit is in excess of two (2) hours for each one-way trip, which are not the result of the negligence or other fault of CONTRACTOR, COMPANY shall pay CONTRACTOR for time in excess of two (2) hours for each trip at the hourly overtime rate for each employee as specified in Exhibit F.

ARTICLE 4

OTHER PAYMENTS

4.1 CHANGE IN HOMEPORT OF OPERATIONS

The Homeport of operations for the Drilling Unit under this CONTRACT is any Gulf of Mexico port between and inclusive of Corpus Christi, TX and Pascagoula, MS.

4.2 EXCESS MEALS AND LODGINGS

COMPANY shall pay CONTRACTOR for the cost of meals and lodging for COMPANY'S personnel and subcontractors (other than CONTRACTOR) that are in excess of ten (10) people per day calculated over a period of one (1) calendar month at CONTRACTOR'S actual cost.

4.3 ANCHOR HANDLING AND TOWING VESSEL CHARGES

COMPANY shall pay all anchor handling and towing vessel charges if required, for movement of the Drilling Unit.

4.4 OTHER CHARGES

COMPANY shall pay CONTRACTOR for other charges as per Article 6, Article 7, and Article 8.

ARTICLE 5

DRILLING UNIT MODIFICATIONS

5.1 PRE-COMMENCEMENT

Any modification to the Drilling Unit before the Commencement Date shall be pursuant to Exhibit H.

5.1.1 POST-COMMENCEMENT DATE

Any modification to the Drilling Unit after the Commencement Date shall be as agreed in a separate written agreement. In the event the Drilling Unit is taken out of service or placed into shelter or harbor for COMPANY requested modifications, the rate that shall be payable per day, or pro rata for any part of a day during which such activity occurs shall be Standby Rate, which shall be payable for the period of time beginning when the Drilling Unit ceases operations to move off the drilling or well location until it moves back to location and commences full operations; provided, however, that if the Drilling Unit has changed locations, CONTRACTOR shall be credited at the Moving Rate for the time that would otherwise have been spent moving to the new location. In such case, the related modification costs and harbor expenses including, but not limited to, customs or other duties or imposts, harbor tugs if required, demurrage, wharfage, harbor and port fees and dues, landing, pilotage, lighterage, stevedoring, customs agent fees, anchor handling, any tow in and out, fuel, and canal charges, if applicable will be paid by COMPANY in a mutually agreed adjustment to the daily rates

ARTICLE 6

OTHER REIMBURSEMENTS

6.1 LICENSES AND PERMITS

CONTRACTOR shall be responsible for all licenses, permits, or other authorization which are required to be obtained by CONTRACTOR subsequent to the Commencement Date. COMPANY agrees to reimburse CONTRACTOR for all cost associated with licenses, permits or other authorization which are required to be obtained by CONTRACTOR should COMPANY designate a location outside the federal waters of the Gulf of Mexico. COMPANY will obtain any required licenses, permits or authorizations which are required to be obtained by COMPANY.

ARTICLE 7

MATERIALS, SUPPLIES, EQUIPMENT, AND SERVICES TO BE FURNISHED BY CONTRACTOR

7.1 MATERIALS, SUPPLIES, EQUIPMENT, & SERVICES

7.1.1 CONTRACTOR shall furnish and maintain at its sole expense all items designated in Exhibit B under the heading FURNISHED BY CONTRACTOR. Any additional items not specifically mentioned elsewhere in this CONTRACT and found necessary to perform work shall be furnished by COMPANY at its sole expense.

7.1.2 All items of equipment, materials, supplies, services, and service personnel required for operations hereunder that are to be FURNISHED BY CONTRACTOR as specified in Exhibit B may be furnished by COMPANY upon the mutual consent of COMPANY and CONTRACTOR and billed to CONTRACTOR at actual invoice cost less all cash discounts obtained by COMPANY plus a five (5) percent handling charge plus applicable taxes if taxes are applied to the cost reimbursement. A copy of invoice(s) for equipment, materials, supplies, services, and service personnel shall accompany COMPANY'S invoice to CONTRACTOR and must have the signature of CONTRACTOR'S representative for reimbursement to COMPANY.

7.1.3 All items of equipment, materials, supplies, services, and service personnel required for operations hereunder that are to be FURNISHED BY CONTRACTOR AND REIMBURSED BY COMPANY as specified in Exhibit B are to be billed to COMPANY at actual invoice cost less all cash discounts obtained by CONTRACTOR plus a five (5) percent handling charge. A copy of invoice(s) for equipment, materials, supplies, services, and service personnel shall accompany CONTRACTOR'S invoice to COMPANY and must have the signature of COMPANY'S representative's for reimbursement to CONTRACTOR.

7.1.4 Any equipment, materials, or supplies purchased by COMPANY for the account of CONTRACTOR pursuant to Articles 7.1.2 and 7.1.3. above shall thereafter become the property of COMPANY unless agreed to by the Parties.

7.1.5 CONTRACTOR shall provide at CONTRACTOR'S expense a drill pipe and drill collar inspection in accordance with API-IADC Standards prior to the Commencement Date. All of the drill pipe and drill collars shall be new. The costs of subsequent drill pipe and drill collar inspections during the term of this CONTRACT shall be borne by the COMPANY or CONTRACTOR as provided in Exhibit B.

ARTICLE 8

MATERIALS, SUPPLIES, EQUIPMENT, AND SERVICES TO BE FURNISHED BY COMPANY

8.1 MATERIALS, SUPPLIES, EQUIPMENT, & SERVICES

8.1.1 COMPANY shall furnish and maintain at its sole expense all items designated in Exhibit B hereof under the heading "FURNISHED BY VASTAR".

8.1.2 All items of equipment, materials, supplies, services, and service personnel required for operations hereunder that are to be "FURNISHED BY VASTAR" as specified in Exhibit B may be furnished by CONTRACTOR upon the mutual consent of COMPANY and CONTRACTOR and billed to COMPANY at actual invoice cost less all cash discounts obtained by CONTRACTOR plus a five (5) percent handling charge plus applicable tax gross up if taxes are applied to the cost reimbursement. A copy of invoice(s) for equipment, materials, supplies, services, and service personnel shall accompany CONTRACTOR'S invoice to COMPANY and must have COMPANY'S representative's signature for reimbursement to CONTRACTOR.

8.1.3 Any equipment, materials, or supplies purchased by CONTRACTOR for the account of COMPANY pursuant to Article 8.1.2 above shall thereafter become the property of COMPANY.

ARTICLE 9

PAYMENTS

9.1 TIME OF PAYMENT

COMPANY shall make payments under this CONTRACT in U.S. currency in accordance with the terms of Article 2, Article 3, Article 4, Article 5, Article 6, Article 7, and Article 8 of this CONTRACT, on or before the last working day of the month following the receipt of a valid invoice form CONTRACTOR if received within five (5) calendar days after the month being invoiced If COMPANY receives an invoice after five (5) calendar days from the end of the month being invoiced then the payment will be due twenty (20) working days after receipt of the invoice. Thereafter, valid and undisputed amounts remaining due and unpaid shall earn simple interest at the rate of one and one-half percent (1 1/2%) per month. Should COMPANY question any item of an invoice, COMPANY may withhold payment of the amount in question, without interest, until the matter is resolved between the Parties, but COMPANY shall pay promptly the amount not in question. COMPANY shall have the right to set off any undisputed and liquidated amount payable by COMPANY to CONTRACTOR under this CONTRACT or under any instrument executed in connection herewith against any amount payable by CONTRACTOR to COMPANY under this CONTRACT.

9.2 IDENTIFICATION OF CHARGES

All invoices must reference charges by block name and number and well number (e.g., Viosca Knoll Blk. 1001 No. 1). OCS numbers or state numbers are not acceptable references.

9.3 PLACE OF INVOICE PRESENTATION

Invoices, accompanied by copies of the original vouchers or such records, receipts, or other evidence as may be requested by COMPANY to support the invoices rendered, shall be sent to COMPANY'S office in Houston, Texas at the address below on or before the tenth (10th) of each month next succeeding the month during which the Work was performed or the expense incurred. The invoices to COMPANY should be directed as follows:

Vastar Resources, Inc.
P.O. Box 219275
Houston, TX 77218-9275
ATTN: DRILLING INVOICES

9.4 PLACE OF PAYMENT

All payments shall be directed to CONTRACTOR as follows:

Wells Fargo Bank
1000 Louisiana
Houston, TX 77002
Account Number
ABA Number
SWIFT Number

ARTICLE 10

PAYMENT OF CLAIMS

10.1 CLAIMS

CONTRACTOR shall pay all claims for equipment, labor, materials, services, and supplies to be furnished by it hereunder and shall allow no lien or charge resulting from such claims to be fixed upon any well lease or other property of COMPANY. CONTRACTOR shall protect, release, defend, indemnify, and hold harmless COMPANY from and against all such claims and liens. COMPANY may, at its option, pay and discharge any (i) amounts secured by such liens or (ii) overdue charges for CONTRACTOR'S equipment, labor, materials, services, and supplies under this CONTRACT and may thereupon deduct the amount or amounts so paid by COMPANY from any sums due, or which thereafter become due, to CONTRACTOR hereunder.

10.2 NOTICE OF CLAIMS

CONTRACTOR shall promptly give COMPANY notice in writing of any claim made or proceeding commenced against CONTRACTOR for which CONTRACTOR claims to be entitled to indemnification under this CONTRACT. CONTRACTOR shall confer with COMPANY concerning the defense of any such claim proceeding, shall permit COMPANY to be represented by counsel in defense thereof, and shall not effect settlement of, nor compromise, any such claim or proceeding without COMPANY'S written consent.

COMPANY shall promptly give CONTRACTOR notice in writing of any claim made or proceeding commenced against COMPANY for which COMPANY claims to be entitled to indemnification under this CONTRACT. COMPANY shall confer with CONTRACTOR concerning the defense of any such claim proceeding, shall permit COMPANY to be represented by counsel in defense thereof, and shall not effect settlement of, nor compromise, any such claim or proceeding without CONTRACTOR'S written consent.

ARTICLE 11

TAXES AND FEES

11.1 TAXES AND FEES ON DRILLING UNIT, CREW, AND OPERATIONS

CONTRACTOR shall be responsible for, pay, and protect, release, defend, indemnify and hold harmless COMPANY from all taxes, including, income taxes of whatsoever kind, and any addition, penalty, interest, or similar item imposed with respect to such taxes, levies, customs charges, duties, fees, or other charges of whatsoever kind without contribution or indemnity from COMPANY whatsoever which may be levied by any national, territorial possession, state, provincial, local, or municipal government, authority, or other agency having jurisdiction over the Operating Area on, in connection with, or related to the Drilling Unit, its crew, its equipment, and any and all materials, equipment, or operations in performance of this CONTRACT. Notwithstanding any other provision of this CONTRACT, COMPANY shall bear ultimate liability for any end user taxes such as, but not limited to, value added taxes and sales taxes imposed on COMPANY or which CONTRACTOR is required by law to collect. COMPANY and CONTRACTOR will make payments in accordance with the laws and regulations governing these taxes.

11.2 PAYROLL TAXES

CONTRACTOR shall make all necessary reports and pay all taxes, licenses, and fees levied or assessed on CONTRACTOR in connection with or incident to the performance of this CONTRACT by any governmental agency having jurisdiction over the Operating Area for unemployment compensation insurance, old age benefits, social security, or any other taxes upon the wages or salaries paid by CONTRACTOR, its agents, employees, and representatives. CONTRACTOR shall require the same agreement of, and be liable for any breach of the agreement by, any of its subcontractors.

11.3 TAXES PAID BY COMPANY

CONTRACTOR shall reimburse COMPANY on demand for all the taxes or governmental charges, state or federal, outlined in Articles 11.1 and 11.2, which COMPANY may be required or deems necessary to pay on account of CONTRACTOR or its employees or subcontractors. At its election, COMPANY is authorized to deduct all sums so paid for the taxes and governmental charges from any money due CONTRACTOR hereunder and provide official tax receipts within sixty (60) days.

ARTICLE 12

COMPANY'S RIGHT TO QUESTION INVOICES AND AUDIT

12.1 QUESTION INVOICES

Payment of any invoice shall not prejudice the right of COMPANY to question the propriety of any charges therein, provided that COMPANY, within four (4) years after the date of the invoice in question, shall deliver to CONTRACTOR written notice of objections to any item or items, the propriety of which it questions, specifying the reasons for the objections. Should COMPANY so notify CONTRACTOR, adjustments shall be made as the propriety or impropriety of the item may be mutually determined.

12.2 AUDIT

CONTRACTOR shall maintain a complete and correct set of records pertaining to all aspects of this CONTRACT, including the performance hereof by CONTRACTOR. If any payment provided for hereunder is to be made on the basis of CONTRACTOR'S cost, COMPANY shall have the Drilling Unit to inspect and audit any and all records relating to the cost any time during the term of this CONTRACT and up to a period of four (4) years after the recorded date of the record in question, provided that CONTRACTOR shall have the right to exclude any trade secrets, formulas, or processes from the inspection and audit. Should the results of any audit so require, the Parties will make appropriate adjustments or payments.

ARTICLE 13

DEPTH

13.1 DEPTH

The depth of each well to be drilled hereunder will be specified by COMPANY, which COMPANY may amend from time to time. The depth so specified is hereinafter referred to as the "Contract Depth", subject to the right of COMPANY to direct, at any time, a stoppage of Work at a lesser depth.

ARTICLE 14

DRILLING UNIT

14.1 REPRESENTATION OF DRILLING UNIT

The Drilling Unit shall be fully equipped as specified in Exhibit B and shall meet the requirements of Exhibit G, and shall be adequate to drill and complete wells in the Operating Area to the depths as specified in Article 14.2 hereof and in water depths as specified in Article l4.3. CONTRACTOR represents that the Drilling Unit satisfies all requirements of Articles 14.1.1, 14.4 and 14.6, and is capable of operating to its full capacity as rated by the

manufacturer. CONTRACTOR shall maintain the Drilling Unit at optimal operating condition, in accordance with good oilfield practices throughout the duration of the CONTRACT.

14.1.1 CONTRACTOR represents that (i) the Drilling Unit and related equipment shall be in a condition to permit its continuous and efficient operation during the Contract Period, subject to required periods of maintenance, repair, drydocking and inspection by regulatory bodies and classification societies, (ii) it will diligently perform the Work in a good workmanlike manner consistent with applicable industry standards and practices, (iii) it will use sound technical principles where applicable, (iv) it will perform the Work in compliance with this Contract, (v) it will furnish material and equipment in good condition to sufficiently meet the applicable CONTRACT requirements and good oilfield practices and (vi) where mutually agreed, it will furnish used material and equipment, fit for the intended use. CONTRACTOR shall bear any cost incurred in placing the Drilling Unit in a condition to function continuously and efficiently during the entire Contract Period. CONTRACTOR agrees to ensure that the Drilling Unit and all equipment and materials furnished by CONTRACTOR are adequately maintained and in such condition as to permit their continuous and efficient operation. CONTRACTOR shall appropriately protect and secure all COMPANY'S equipment and materials placed in its care. CONTRACTOR also agrees to carry out visual inspection on, and make available to COMPANY to test any of CONTRACTOR'S equipment in the manner prescribed by COMPANY.

Notwithstanding the foregoing, CONTRACTOR shall carry out, at CONTRACTOR'S expense, a full and detailed inspection of its drill pipe, drill collars, bottom hole assemblies and other down-hole and surface drilling equipment in accordance with Exhibit B prior to commencing the Work. COMPANY reserves the right to ensure that such inspection is carried out satisfactorily and, accordingly, shall have access to all related inspection reports. CONTRACTOR shall give COMPANY three weeks notice of inspection in order that COMPANY may have a third person witness the inspections to ensure they are carried out in accordance with Exhibit G.

14.1.2 COMPANY shall have the right before the Commencement Date to inspect and reject for sound reasons any part of the Drilling Unit not meeting the requirements of this Contract; provided, however, such right shall not in any way relieve CONTRACTOR of its own obligations, including, without limitation, the obligation to inspect and maintain the Drilling Unit and related equipment in efficient operating condition. COMPANY shall have access and the right to review all commissioning, testing, and acceptance documents pertaining to the Drilling Unit. Unless waived by COMPANY, the Commencement Date shall not occur prior to the date on which CONTRACTOR has satisfactorily remedied any defect.

14.2 MAXIMUM DRILLING DEPTH RATING

CONTRACTOR represents that the Drilling Unit is mechanically capable of drilling wells to the depth specified in Exhibit B-1.

14.3 MAXIMUM WATER DEPTH RATING

CONTRACTOR represents that the Drilling Unit is mechanically capable of drilling wells in water depths and during environmental conditions, as specified in Exhibit B-I.

14.4 TECHNOLOGY

CONTRACTOR and COMPANY agree to explore the latest technologies, including riserless drilling, in an effort to incorporate same into the construction and operation of the Drilling Unit. CONTRACTOR shall make such technology available to COMPANY as soon as CONTRACTOR has the right to install and use such technology on its commercial drilling units, subject to any existing third party contracts as of the Commencement Date. Such installation shall be done pursuant to Article 5.

14.5 APPLICABLE LAWS

Subject to Article 2.3.4, CONTRACTOR represents that during the Contract Period, the Drilling Unit is outfitted, conformed, and equipped to meet all applicable laws, rules, requirements, and regulations promulgated by the U.S. Coast Guard, the U.S. Environmental Protection Agency, the United States of America Department of the Interior as well as any other agency, bureau, or department of the U.S. federal, territorial possession, state, municipal, or local governments, any political subdivisions thereof, having jurisdiction over the operations in U. S. federal waters.

14.6 SAFETY OF PORT

COMPANY does not and shall not be deemed to warrant the safety of any port, place, berth, dock, anchorage, location, or submarine line and shall be under no liability in respect thereof, except as specifically provided for under Article 31.

14.7 OPERATING AREA

The Drilling Unit shall be capable of operating year around in the federal waters of the U. S. Gulf of Mexico. Additionally, the Drilling Unit will be designed to allow for operations in other areas of U. S. federal waters, offshore West Africa and the United Kingdom and other areas of the world, all subject to modifications and outfitting required by the controlling jurisdictions of each different operating area and to the operating limits set forth in Exhibit “G”.

ARTICLE 15

PERFORMANCE OF DRILLING OPERATIONS

15.1 OPERATIONS OF DRILLING UNIT

CONTRACTOR shall be solely responsible for the operation of the Drilling Unit, including, without limitation, supervising moving operations, and the positioning of the Drilling Unit on drilling locations as required by COMPANY, as well as such operations on board the Drilling Unit as may be necessary or desirable for the safety of the Drilling Unit.

15.2 PREVENTION OF FIRE AND BLOWOUTS

CONTRACTOR shall maintain well control equipment in accordance with good oilfield practices at all times and shall use all reasonable means to control and prevent fire and blowouts and to protect the hole and all other property of the COMPANY. CONTRACTOR shall use the blowout prevention equipment specified in Exhibit B hereof on all strings of casing unless otherwise directed by COMPANY. CONTRACTOR shall pressure test the blowout prevention

devices as often as instructed by COMPANY, usually once every seven (7) days, and shall function test the blowout prevention devices by opening and closing to assure operating condition at each trip for a bit change. CONTRACTOR shall record the results of all the tests on the Daily Drilling Report Form defined in Section 19.1 hereof. CONTRACTOR shall use kelly sub protectors and drill pipe protectors. In any event, CONTRACTOR, at a minimum, shall use, test, and maintain blowout prevention equipment in accordance with all applicable governmental rules, regulations, and orders then in effect.

15.3 DEVIATION OF THE HOLE

CONTRACTOR shall use precaution in accordance with good oilfield practices in the Area of Operations, to drill a hole which will not deviate excessively from the limits specified by COMPANY. CONTRACTOR shall run angle and directional measuring devices acceptable to, and at the intervals directed by COMPANY. CONTRACTOR shall record the results of the deviation survey on the Daily Drilling Report Form.

15.4 DRILL PIPE MEASUREMENT

CONTRACTOR shall measure the total length of drill pipe in service with a steel tape before setting casing or liner, before logging, after reaching final depth, and whenever requested by COMPANY and shall promptly enter all the measurements on the Daily Drilling Report Form.

15.5 CASING PROGRAM

The casing program shall be as specified by COMPANY.

15.6 MUD PROGRAM

CONTRACTOR shall use all reasonable care to make and maintain drilling mud having weight, viscosity, water loss, and other characteristics to satisfy the requirements as specified by COMPANY. CONTRACTOR shall exercise due diligence to prevent the well from blowing out, and to enable the efficient drilling, logging, and testing of all formations without caving or formation contamination. While drilling, CONTRACTOR shall test drilling mud for weight, viscosity, water loss, and other necessary characteristics as instructed by COMPANY and shall record the results of the tests and the material volume usage on the Daily Drilling Report Form.

15.7 COMPLETION OR ABANDONMENT OF WELLS

CONTRACTOR shall perform all work necessary to tube, equip, and complete or abandon each well in the manner specified by COMPANY.

15.8 SAMPLES

CONTRACTOR shall save and preserve for COMPANY samples of formations penetrated, and properly prepare and label COMPANY’S containers. COMPANY shall designate the sampling frequency.

15.9 CORING

CONTRACTOR shall core at the depths which COMPANY shall specify and shall deliver all cores in COMPANY’S containers, properly labeled, to COMPANY and shall not allow any third

person access to the cores or to the samples referred to in Article 15.8, or to any core or sample data, without COMPANY'S consent.

15.10 FORMATION TESTS

If during the course of drilling CONTRACTOR encounters evidence of oil or gas, or other hydrocarbon substances, then CONTRACTOR shall immediately notify COMPANY, and should COMPANY desire a test to determine the productivity of any formation so encountered then, CONTRACTOR shall make such a test if it is feasible under existing conditions.

15.11 ANCHOR HANDLING AND TOWING

COMPANY shall supply any required anchor handling and towing vessels to move the Drilling Unit between locations.

ARTICLE 16

INSPECTION OF MATERIALS

16.1 INSPECTION BY CONTRACTOR

CONTRACTOR shall carefully perform a visual inspection of all materials and appliances furnished by COMPANY when delivered into CONTRACTOR'S possession and shall notify COMPANY'S representative of any apparent defects so that COMPANY may replace the defective materials or appliances. Upon the termination of this CONTRACT, CONTRACTOR shall return to COMPANY all materials and appliances received by CONTRACTOR from COMPANY or purchased by CONTRACTOR for COMPANY'S account then in CONTRACTOR'S possession.

16.2 INSPECTION BY COMPANY

Excluding the Drilling Unit and its major equipment, COMPANY shall have the right to inspect and reject, for any valid cause, any items furnished by CONTRACTOR in Exhibit B-3. CONTRACTOR at its sole cost, risk and expense shall replace and/or repair the rejected items, or replace them with items free of defects.

ARTICLE 17

SAFETY

17.1 GENERAL

CONTRACTOR shall have the primary responsibility for the safety of all its operations, shall take all measures necessary or proper to protect the personnel and facilities and, in addition, shall observe all safety rules and regulations of any governmental agency having jurisdiction over operations conducted hereunder. CONTRACTOR shall place the highest priority on safety while performing the work. CONTRACTOR shall also observe all of COMPANY'S safety rules and guidelines as set forth in "Safety and Health Manual" of Vastar Resources, Inc., and the requirements contained in Exhibit D. The CONTRACTOR may also have its own safety manual

and when CONTRACTOR'S and COMPANY'S safety manuals conflict, CONTRACTOR'S safety manual shall control.

17.2 UNDER TOW

At all times during movement of the Drilling Unit between locations, CONTRACTOR shall have full responsibility for control of the Drilling Unit and shall have final authority regarding the safety and operation of the Drilling Unit, associated equipment, and personnel on board.

17.3 SAFETY EQUIPMENT

CONTRACTOR shall furnish any needed personal protection equipment that CONTRACTOR'S personnel may require in order to safely perform CONTRACTOR'S obligations under this CONTRACT.

17.4 EMERGENCY EVACUATION PLAN

The CONTRACTOR shall furnish COMPANY with information regarding the Emergency Evacuation Plan ("EEP") for the CONTRACTOR'S Drilling Unit. The information supplied shall include station bills, a list of fire fighting equipment, list of emergency crafts onboard, and all other information required to describe the EEP in order to meet federal regulations in 46 C.F.R. 109 for MODU's. The COMPANY shall submit as part of the COMPANY'S EEP, information and/or data as required by 33 C.F.R. 146.2 10.

ARTICLE 18

PERFORMANCE OF THE WORK

18.1 INDEPENDENT CONTRACTOR RELATIONSHIP

In performing the work set forth in this CONTRACT, CONTRACTOR shall act at all times as an independent contractor. Unless otherwise mutually agreed, CONTRACTOR shall not make any commitment or incur any charges or expense in the name of COMPANY. CONTRACTOR expressly agrees, acknowledges and stipulates that neither this CONTRACT nor the performance of CONTRACTOR'S obligations or duties hereunder shall ever result in CONTRACTOR, or anyone employed by CONTRACTOR, being i) an employee, agent, servant, or representative of COMPANY, or ii) entitled to any benefits from COMPANY, including without limitation, pension, profit sharing or accident, health, medical, life or disability insurance benefits or coverage, to which employees of COMPANY may be entitled. The sole and only compensation to which CONTRACTOR shall be entitled to under this CONTRACT are the payments provided for herein. COMPANY shall have no direction or control of CONTRACTOR or its employees and agents except in the results to be obtained. The actual performance and superintendence of all work hereunder shall be by CONTRACTOR, but the work shall meet the approval of COMPANY and be subject to the general right of inspection herein provided in order for COMPANY to secure the satisfactory completion of the work.

18.2 COMPANY'S REPRESENTATIVE

COMPANY shall be entitled to designate a representative(s), who shall at all times have complete access to the Drilling Unit for the purpose of observing or inspecting operations

performed by CONTRACTOR in order to determine whether, in COMPANY'S sole opinion, CONTRACTOR has complied with the terms and conditions of this CONTRACT. The representative(s) shall be empowered to act for COMPANY in all matters relating to CONTRACTOR'S daily performance of the work. CONTRACTOR shall cooperate at all times with and render reasonable assistance to the representative(s) of COMPANY or representative(s) of any of COMPANY'S other contractor(s).

18.3 DISCIPLINE

CONTRACTOR shall maintain at all times strict discipline and good order among its employees. Should COMPANY determine, for just cause, that the conduct of any of CONTRACTOR'S personnel is detrimental to COMPANY'S interest, COMPANY shall notify CONTRACTOR in writing of the reasons for requesting removal of such personnel and CONTRACTOR shall replace the personnel at CONTRACTOR'S expense.

18.4 TAKEOVER BY COMPANY

In the event that CONTRACTOR shall fail to take proper steps to supply properly skilled workmen or tools, machinery or appliances for the performance of the work on any well hereunder, or shall otherwise neglect or willfully discontinue or delay commencement of the work to be performed on any such well, for a period of five (5) consecutive days after notice by COMPANY, then COMPANY shall have the right, by giving CONTRACTOR notice of its intention to do so, to take possession of the well, and the supervision and control of the drilling equipment and tools, machinery and appliances of CONTRACTOR and drill the well to completion or otherwise complete the work on said well. CONTRACTOR shall continue to have custody of and be solely responsible for its Drilling Unit and the locating and maintaining of it, and COMPANY or its representatives shall have supervision and control of such facilities only to the extent of the drilling or other operations involved. Following any such taking of possession by COMPANY, whether COMPANY is successful or unsuccessful in completing the well, or restoring same to production, the actual incremental cost directly related to the assumed operations to COMPANY (with no allowance to CONTRACTOR, other than dayrate, for the use of its drilling equipment and tools, machinery and appliances), shall be deducted from the applicable dayrate during such period and the balance, if any, paid to CONTRACTOR. COMPANY shall be liable for the return of such drilling equipment and tools, machinery and appliances to CONTRACTOR in as good condition as when received, natural wear and weathering, accidental loss or breakage excepted.

COMPANY SHALL INDEMNIFY, DEFEND AND HOLD CONTRACTOR HARMLESS FROM AND AGAINST ANY AND ALL LOSS, COST, CLAIM OR CAUSE OF ACTION ARISING DIRECTLY OR INDIRECTLY FROM COMPANY'S SUPERVISION OF CONTRACTOR'S DRILLING EQUIPMENT AND TOOLS DURING THAT PERIOD OF TIME IN WHICH COMPANY HAS TAKEN OVER SUPERVISION AND CONTROL OF CONTRACTOR'S DRILLING EQUIPMENT AND TOOLS. THE LIABILITY PROVISIONS HEREOF AND CONTRACTOR'S INDEMNITY OBLIGATIONS HEREUNDER SHALL REMAIN IN FULL FORCE AND EFFECT AS TO ANY AND ALL DAMAGE, LOSS, COST, CLAIM OR CAUSE OF ACTION

ARISING DIRECTLY OR INDIRECTLY PRIOR TO COMPANY'S TAKEOVER OF CONTRACTOR'S DRILLING EQUIPMENT AND TOOLS OR AFTER SUCH DRILLING EQUIPMENT AND TOOLS ARE RETURNED TO THE POSSESSION OF CONTRACTOR. During such a takeover, COMPANY shall obtain insurance coverage with the same coverages as the insurance required to be carried by CONTRACTOR, naming CONTRACTOR and endorsed to waive subrogation.

18.5 CHANGE OF SUPERVISORY PERSONNEL

CONTRACTOR shall notify OPERATOR of any proposed change in supervisory personnel prior to the proposed change.

ARTICLE 19

RECORDS TO BE FURNISHED BY CONTRACTOR

19.1 DAILY DRILLING REPORTS

CONTRACTOR shall keep and furnish to COMPANY one (1) copy of the Daily Drilling Report Form showing the depth of the hole, formation penetrated, and any other data required by COMPANY or governmental authority. CONTRACTOR shall supply the report on the standard API-IADC Report Form. When CONTRACTOR prepares such form, it shall be referred to as the "Daily Drilling Report Form".

19.2 ACCIDENT REPORTS

CONTRACTOR shall report to COMPANY, as soon as possible, all accidents or occurrences resulting in injuries to CONTRACTOR'S employees or to any third parties, as well as any damage to property of third persons, arising out of or during the course of operations of CONTRACTOR or its subcontractors. CONTRACTOR shall furnish COMPANY with a copy of all reports made by CONTRACTOR to its insurer or to others as requested by COMPANY of the accidents and occurrences.

19.3 DELIVERY TICKETS

CONTRACTOR shall furnish to COMPANY delivery tickets covering any materials or supplies furnished to CONTRACTOR by vendors for which COMPANY is obligated to reimburse CONTRACTOR. These shall be turned in to COMPANY'S representative as received with the Daily Drilling Report Form. The quantity, description, and condition of materials and supplies so furnished shall be verified and checked by CONTRACTOR. The delivery tickets shall be properly certified as to receipt by CONTRACTOR and must have COMPANY'S representative's signature for reimbursement to CONTRACTOR.

19.4 LOGS

CONTRACTOR shall diligently maintain navigational logs, equipment maintenance, and testing logs, and such other logs and documentation designated by COMPANY. Any maintained log or documentation shall not create any additional burden on CONTRACTOR that is not already required elsewhere in this CONTRACT. CONTRACTOR shall provide a copy of any log upon COMPANY'S request.

ARTICLE 20

INSURANCE

20.1 INSURANCE

Without limiting the indemnity obligation or liabilities of CONTRACTOR or its insurer, at all times during the term of this CONTRACT, CONTRACTOR shall maintain insurance covering the operations to be performed under this CONTRACT as set forth in Exhibit C.

ARTICLE 21

INDEMNITY FOR PERSONAL INJURY OR DEATH

21.1 CONTRACTOR'S PERSONNEL

CONTRACTOR SHALL PROTECT, RELEASE, DEFEND, INDEMNIFY AND HOLD HARMLESS COMPANY FROM AND AGAINST ALL CLAIMS, DEMANDS AND CAUSES OF ACTION ASSERTED BY CONTRACTOR, CONTRACTOR'S SUBSIDIARIES AND AFFILIATED COMPANIES, CONTRACTORS OF ANY SUCH PARTIES, AND THEIR RESPECTIVE OFFICERS, DIRECTORS, AGENTS, INVITEES, EMPLOYEES AND ANY OF THEIR RELATIVES FOR PERSONAL INJURY (INCLUDING BODILY INJURY), ILLNESS, OR DEATH, THAT ARISE OUT OF OR ARE RELATED TO WORK PERFORMED HEREUNDER.

21.2 COMPANY'S PERSONNEL

COMPANY SHALL PROTECT, RELEASE, DEFEND, INDEMNIFY AND HOLD HARMLESS CONTRACTOR FROM AND AGAINST ALL CLAIMS, DEMANDS AND CAUSES OF ACTION ASSERTED BY COMPANY, COMPANY'S SUBSIDIARIES, CO-OWNERS AND JOINT VENTURERS (IF ANY), CONTRACTORS OF ANY SUCH PARTIES (EXCEPT CONTRACTOR, AS SET FORTH IN ARTICLE 21.1 HEREOF), AND THEIR RESPECTIVE OFFICERS, DIRECTORS, AGENTS, INVITEES, EMPLOYEES AND ANY OF THEIR RELATIVES FOR PERSONAL INJURY (INCLUDING BODILY INJURY), ILLNESS, OR DEATH, THAT ARISE OUT OF OR ARE RELATED TO WORK PERFORMED HEREUNDER.

ARTICLE 22

RESPONSIBILITY FOR LOSS OF OR DAMAGE TO THE EQUIPMENT

22.1 CONTRACTOR'S DRILLING UNIT

EXCEPT AS SPECIFICALLY PROVIDED FOR IN ARTICLE 22.3, CONTRACTOR SHALL ASSUME ALL RISK OF LOSS OF OR DAMAGE TO AND SHALL PROTECT,

RELEASE, DEFEND, INDEMNIFY AND HOLD HARMLESS COMPANY FROM AND AGAINST ANY AND ALL CLAIMS FOR LOSS OF OR DAMAGE TO (INCLUDING SALVAGE OR REMOVAL COSTS) ITS DRILLING UNIT AND EQUIPMENT.

FOR PURPOSES OF THIS ARTICLE 22, ALL EQUIPMENT BELONGING TO CONTRACTOR'S PARENT, SUBSIDIARIES, AFFILIATES, SUBCONTRACTORS, PARTNERS, JOINT VENTURERS, EMPLOYEES, OR AGENTS SHALL BE CONSIDERED TO BE CONTRACTOR'S EQUIPMENT.

22.2 USE OF CONTRACTOR'S EQUIPMENT

COMPANY shall have unrestricted right to use all of CONTRACTOR'S equipment provided under this CONTRACT during such times as COMPANY or both COMPANY and CONTRACTOR are engaged in bringing a well being drilled under this CONTRACT under control, provided however, that such use, in CONTRACTOR'S sole opinion, does not endanger CONTRACTOR'S personnel or the Drilling Unit.

22.3 CONTRACTOR'S IN HOLE-EQUIPMENT

COMPANY SHALL ASSUME ALL RISK OF LOSS OF OR DAMAGE TO CONTRACTOR'S IN-HOLE, SUBSEA AND MOORING EQUIPMENT WHEN THE EQUIPMENT IS IN THE HOLE OR IN USE BELOW THE SURFACE OF THE WATER TO THE EXTENT CONTRACTOR'S INSURANCE DOES NOT COMPENSATE CONTRACTOR, REGARDLESS OF WHEN OR HOW THE DESTRUCTION OR DAMAGE OCCURS, UNLESS SAID LOSS OF OR DAMAGE IS A RESULT OF CONTRACTOR'S SOLE NEGLIGENCE, GROSS NEGLIGENCE OR WILLFUL MISCONDUCT, IN WHICH CASE CONTRACTOR IS SOLELY RESPONSIBLE FOR ALL LOSS OF OR DAMAGE. FOR PURPOSES OF THIS SECTION 22.3, ALL EQUIPMENT BELONGING TO CONTRACTOR'S SUBCONTRACTORS, PARTNERS, JOINT VENTURERS, EMPLOYEES, OR AGENTS SHALL BE CONSIDERED TO BE CONTRACTOR'S EQUIPMENT. COMPANY'S RESPONSIBILITY FOR LOSS OF CONTRACTOR'S INHOLE, SUBSEA AND MOORING EQUIPMENT IS LIMITED TO CONTRACTOR'S CIF REPLACEMENT COST LESS DEPRECIATION AT THE RATE OF THREE-FOURTHS OF ONE PERCENT (0.75%) PER MONTH OF USE UNDER THIS CONTRACT.

COMPANY SHALL ASSUME THE RISK OF LOSS FOR AND PROTECT, RELEASE, DEFEND, INDEMNIFY AND HOLD HARMLESS CONTRACTOR FOR DAMAGE TO OR DESTRUCTION OF CONTRACTOR'S CHOKE MANIFOLDS, BLOWOUT PREVENTORS, AND DRILL STRING CAUSED BY EXPOSURE TO UNUSUALLY CORROSIVE OR OTHERWISE DESTRUCTIVE ELEMENTS NOT NORMALLY ENCOUNTERED WHICH ARE INTRODUCED INTO THE DRILLING FLUID FROM SUBSURFACE FORMATIONS OR THE USE OF CORROSIVE ADDITIVES IN THE FLUID, UNLESS SAID LOSS OF OR DAMAGE IS A RESULT OF CONTRACTOR'S NEGLIGENCE, GROSS NEGLIGENCE OR WILLFUL MISCONDUCT IN WHICH CASE CONTRACTOR IS SOLELY RESPONSIBLE FOR ALL LOSS OR DAMAGE.

22.4 COMPANY'S EQUIPMENT

COMPANY SHALL ASSUME THE RISK OF LOSS FOR AND PROTECT, RELEASE, DEFEND, INDEMNIFY, AND HOLD HARMLESS CONTRACTOR FROM AND AGAINST ANY AND ALL CLAIMS FOR LOSS OF OR DAMAGE TO COMPANY'S EQUIPMENT AND PROPERTY. FOR THE PURPOSE OF THIS ARTICLE 22 ONLY, ALL EQUIPMENT AND PROPERTY BELONGING TO COMPANY'S PARENT, SUBSIDIARIES, AFFILIATES, CONTRACTORS (OTHER THAN CONTRACTOR) SUBCONTRACTORS, PARTNERS, JOINT VENTURERS, EMPLOYEES, OR AGENTS SHALL BE CONSIDERED TO BE COMPANY'S EQUIPMENT.

22.5 RESPONSIBILITY DURING MOBILIZATION FROM KOREA

CONTRACTOR SHALL ASSUME FULL RESPONSIBILITY FOR AND SHALL PROTECT, RELEASE, DEFEND, INDEMNIFY, AND HOLD HARMLESS COMPANY AND ITS' JOINT OWNERS HARMLESS FROM AND AGAINST ANY LOSS, CLAIM, DAMAGE, FINE, PENALTY, DEMAND OR LIABILITY, FOR POLLUTION OR PROPERTY DAMAGE, WITHOUT MONETARY LIMITATIONS, MADE BY ANY ENTITY OR PERSON WHILE THE DRILLING UNIT IS MOBILIZING FROM KOREA TO THE GULF OF MEXICO PRIOR TO THE COMMENCMENT DATE.

ARTICLE 23

LOSS OF HOLE OR RESERVOIR

23.1 LOSS OR DAMAGE TO THE HOLE

SHOULD THE HOLE BE LOST OR DAMAGED, THE LOSS OR DAMAGE WILL BE BORNE BY COMPANY AND COMPANY SHALL PROTECT, RELEASE, DEFEND, INDEMNIFY, AND HOLD HARMLESS CONTRACTOR FROM AND AGAINST ALL CLAIMS FOR LOSS OF OR DAMAGE TO THE HOLE. NOTWITHSTANDING THE PREVIOUS SENTENCE, IF THE HOLE IS LOST OR DAMAGED DUE TO CONTRACTOR'S NEGLIGENCE, GROSS NEGLIGENCE, WILLFUL MISCONDUCT OR ITS AGENTS', OR SUBCONTRACTORS OR THEIR FAILURE TO COMPLY WITH COMPANY'S INSTRUCTIONS, THEN AS CONTRACTOR'S SOLE LIABILITY, CONTRACTOR SHALL BE OBLIGATED AT COMPANY'S ELECTION TO REDRILL THE HOLE TO THE POINT AT WHICH THE HOLE WAS LOST AT EIGHTY PERCENT (80%) OF THE OPERATING RATE BUT OTHERWISE SUBJECT TO THIS DRILLING CONTRACT.

23.2 COST OF CONTROL OF BLOWOUT OR CRATER

IN THE EVENT ANY WELL BEING DRILLED HEREUNDER SHALL BLOWOUT, CRATER OR CONTROL BE LOST FROM ANY CAUSE, COMPANY SHALL BEAR THE ENTIRE COST AND EXPENSE OF KILLING THE WELL OR OF OTHERWISE BRINGING THE WELL UNDER CONTROL AND SHALL PROTECT, RELEASE, DEFEND, INDEMNIFY, AND HOLD HARMLESS CONTRACTOR FROM AND

AGAINST ALL CLAIMS, SUITS, DEMANDS, AND CAUSES OF ACTION FOR COSTS ACTUALLY INCURRED IN CONTROLLING THE WELL.

23.3 UNDERGROUND DAMAGE

COMPANY SHALL PROTECT, RELEASE, DEFEND, INDEMNIFY, AND HOLD HARMLESS CONTRACTOR FOR ANY AND ALL CLAIMS ON ACCOUNT OF (I) INJURY TO, DESTRUCTION OF, LOSS, OR IMPAIRMENT OF ANY PROPERTY RIGHT IN OR TO OIL, GAS, OR OTHER MINERAL SUBSTANCES OR WATER, IF AT THE TIME OF THE ACT OR OMISSION CAUSING THE INJURY, DESTRUCTION, LOSS, OR IMPAIRMENT, THE SUBSTANCE HAD NOT BEEN REDUCED TO PHYSICAL POSSESSION ABOVE THE SURFACE OF THE EARTH, OR (II) ANY LOSS OR DAMAGE TO ANY FORMATION, STRATA, OR RESERVOIR BENEATH THE SURFACE OF THE EARTH.

ARTICLE 24

POLLUTION

24.1 CONTRACTOR RESPONSIBILITY

CONTRACTOR SHALL ASSUME FULL RESPONSIBILITY FOR AND SHALL PROTECT, RELEASE, DEFEND, INDEMNIFY, AND HOLD COMPANY AND ITS JOINT OWNERS HARMLESS FROM AND AGAINST ANY LOSS, DAMAGE, EXPENSE, CLAIM, FINE, PENALTY, DEMAND, OR LIABILITY FOR POLLUTION OR CONTAMINATION, INCLUDING CONTROL AND REMOVAL THEREOF, ORIGINATING ON OR ABOVE THE SURFACE OF THE LAND OR WATER, FROM SPILLS, LEAKS, OR DISCHARGES OF FUELS, LUBRICANTS, MOTOR OILS, PIPE DOPE, PAINTS, SOLVENTS, BALLAST, AIR EMISSIONS, BILGE SLUDGE, GARBAGE, OR ANY OTHER LIQUID OR SOLID WHATSOEVER IN POSSESSION AND CONTROL OF CONTRACTOR AND WITHOUT REGARD TO NEGLIGENCE OF ANY PARTY OR PARTIES AND SPECIFICALLY WITHOUT REGARD TO WHETHER THE SPILL, LEAK, OR DISCHARGE IS CAUSED IN WHOLE OR IN PART BY THE NEGLIGENCE OR OTHER FAULT OF COMPANY, ITS CONTRACTORS, (OTHER THAN CONTRACTOR) PARTNERS, JOINT VENTURERS, EMPLOYEES, OR AGENTS. IN ADDITION TO THE ABOVE, CONTRACTOR TO A LIMIT OF FIFTEEN MILLION DOLLARES (US$ 15,000,000.00) PER OCCURANCE, SHALL RELEASE INDEMNIFY AND DEFEND COMPANY FOR CLAIMS FOR LOSS OR DAMAGE TO THIRD PARTIES ARISING FROM POLLUTION IN ANY WAY CAUSED BY THE DRILLING UNIT WHILE IT IS OFF THE DRILLING LOCATION, WHILE UNDERWAY OR DURING DRIVE OFF OR DRIFT OFF FROM THE DRILLING LOCATION.

24.2 COMPANY RESPONSIBILITY

COMPANY SHALL ASSUME FULL RESPONSIBILITY FOR AND SHALL PROTECT, RELEASE, DEFEND, INDEMNIFY, AND HOLD CONTRACTOR HARMLESS FROM AND AGAINST ANY LOSS, DAMAGE, EXPENSE, CLAIM, FINE, PENALTY,

DEMAND, OR LIABILITY FOR POLLUTION OR CONTAMINATION, INCLUDING CONTROL AND REMOVAL THEREOF, ARISING OUT OF OR CONNECTED WITH OPERATIONS UNDER THIS CONTRACT HEREUNDER AND NOT ASSUMED BY CONTRACTOR IN ARTICLE 24.1 ABOVE, WITHOUT REGARD FOR NEGLIGENCE OF ANY PARTY OR PARTIES AND SPECIFICALLY WITHOUT REGARD FOR WHETHER THE POLLUTION OR CONTAMINATION IS CAUSED IN WHOLE OR IN PART BY THE NEGLIGENCE OR FAULT OF CONTRACTOR.

24.3 CLEAN UP OPERATIONS

Initiation of clean up operations by either Party shall not be an admission or assumption of liability by such initiating Party or Parties.

ARTICLE 25

INDEMNITY OBLIGATION

25.1 INDEMNITY OBLIGATION

EXCEPT TO THE EXTENT ANY SUCH OBLIGATION IS SPECIFICALLY LIMITED TO CERTAIN CAUSES ELSEWHERE IN THIS CONTRACT, THE PARTIES INTEND AND AGREE THAT THE PHRASE "SHALL PROTECT, RELEASE, DEFEND, INDEMNIFY AND HOLD HARMLESS" MEANS THAT THE INDEMNIFYING PARTY SHALL PROTECT, RELEASE, DEFEND, INDEMNIFY, AND HOLD HARMLESS THE INDEMNIFIED PARTY OR PARTIES FROM AND AGAINST ANY AND ALL CLAIMS, DEMANDS, CAUSES OF ACTION, DAMAGES, COSTS, EXPENSES (INCLUDING REASONABLE ATTORNEYS FEES), JUDGMENTS AND AWARDS OF ANY KIND OR CHARACTER, WITHOUT LIMIT AND WITHOUT REGARD TO THE CAUSE OR CAUSES THEREOF, INCLUDING PREEXISTING CONDITIONS, WHETHER SUCH CONDITIONS BE PATENT OR LATENT, THE UNSEAWORTHINESS OF ANY VESSEL OR VESSELS (INCLUDING THE DRILLING UNIT), BREACH OF REPRESENTATION OR WARRANTY, EXPRESSED OR IMPLIED, BREACH OF CONTRACT, STRICT LIABILITY, TORT, OR THE NEGLIGENCE OF ANY PERSON OR PERSONS, INCLUDING THAT OF THE INDEMNIFIED PARTY, WHETHER SUCH NEGLIGENCE BE SOLE, JOINT OR CONCURRENT, ACTIVE, PASSIVE OR GROSS OR ANY OTHER THEORY OF LEGAL LIABILITY AND WITHOUT REGARD TO WHETHER THE CLAIM AGAINST THE INDEMNITEE IS THE RESULT OF AN INDEMNIFICATION AGREEMENT WITH A THIRD PARTY.

25.2 BENEFIT OF INDEMNITIES

TO THE EXTENT A PARTY IS ENTITLED TO INDEMNIFICATION IN ARTICLES 21, 22, 23, AND 24, SUCH PARTY'S PARENT, SUBSIDIARIES, AFFILIATES, CO-OWNERS AND JOINT VENTURERS (IF ANY), AND THEIR RESPECTIVE OFFICERS, DIRECTORS, AGENTS AND EMPLOYEES, THE DRILLING UNIT AND ITS LEGAL AND BENEFICAL OWNERS, IN REM OR IN PERSONAM SHALL ALSO BE ENTITLED TO SUCH INDEMNIFICATION AND DEFENSE THEREUNDER. ANY

SUCH PERSON SO ENTITLED TO INDEMNIFICATION AND DEFENSE UNDER THIS ARTICLE 25.2 ARE HEREINAFTER REFERRED TO AS AN "EXTENDED BENEFICIARY OF INDEMNIFICATIONS.

25.3 Third Party Beneficiaries

Except as otherwise specifically agreed nothing in this Contract shall be construed or applied so as to permit any person or entity not a direct signatory party hereto (except for a successor or permitted assignee of such direct signatory party) to enforce or seek damages against either signatory party hereto for any breach of this Contract. The definition of CONTRACTOR and COMPANY herein shall not be construed to enable or entitle any person or entity other than the signatory parties hereto or a successor or permitted assignee of such a signatory party to directly sue or seek relief against the other signatory party hereto except to the extent that any Extended Beneficiary of Indemnification (as defined in Article 25.2) shall be expressly permitted to enforce such rights of indemnification against the indemnitor. Except for any EXTENDED BENEFICIARY OF INDEMNIFICATION, no persons or entities are intended to be or become third party beneficiaries of this contract.

ARTICLE 26

LAWS, RULES, AND REGULATIONS

26.1 LAWS, RULES AND REGULATIONS

CONTRACTOR and COMPANY shall comply with all governmental laws, rules, and regulations or orders which are now or hereafter shall become applicable to its operations covered by this CONTRACT or arising out of the performance of such operations.

26.2 EQUAL OPPORTUNITY CLAUSE

To the extent applicable and in connection with the performance of work under this CONTRACT, CONTRACTOR agrees to comply with the following Equal Employment Opportunity and/or Affirmative Action requirements and all other similar requirements as the same are enacted or become applicable to the CONTRACT: Section 202 of Executive Order 11246, as amended by Executive Order 11375, relating to equal employment opportunities, the implementing rules and regulations of the Secretary of Labor and all contract clauses and requirements which are applicable and set forth therein are incorporated herein by specific reference. In particular, CONTRACTOR hereby certifies that it does not maintain segregated facilities. In making this certification, CONTRACTOR incorporates each and all of the provisions of the approved form of certification contained in 41 C.F.R. Section 60-1.8(b) the same as if such provisions were fully set forth herein and signed by CONTRACTOR. Sections 503 and 504 of the Rehabilitation Act of 1973 and Title IV of the Vietnam Era Veterans Readjustment Assistance Act of 1974 relating to employment and advancement of employment of qualified handicapped individuals, disabled veterans and veterans of the Vietnam Era, the implementing rules and regulations of the Secretary of Labor and all contract clauses and requirements which are applicable and set forth therein are incorporated herein by specific reference pursuant to 41 C.F.R. Section 60-741.22 and 41 C.F.R. Section 60-250.22.

26.3 CERTIFICATE OF FINANCIAL RESPONSIBILITY

COMPANY, in cooperation with the CONTRACTOR, shall obtain, at COMPANY'S expense, and maintain evidence of a Certificate of Financial Responsibility from the U.S. Coast Guard covering the Drilling Unit as required by 33 C.F.R. Part 135 and the Outer Continental Shelf Lands Act of 1978. COMPANY will file for the certificate before the well is spud and will coordinate the filing with COMPANY. A copy of filed certificate shall be furnished to CONTRACTOR prior to spud and CONTRACTOR must maintain a copy on the Drilling Unit.

ARTICLE 27

TERMINATION

27.1 TERMINATION BY COMPANY

27.1.1 COMPANY shall have the option to terminate this CONTRACT subject only to (i) payment of amounts earned by CONTRACTOR before termination, and demobilization of the Drilling Unit pursuant to Article 1.3 and (ii) payment of the Lump Sum set forth in Exhibit E. Terminating pursuant to Article 27.1.1 does not limit any other right of termination which COMPANY may have. The termination shall not affect any right or obligation which accrued prior to the termination.

27.1.2 In the event the shipyard where the Drilling Unit is being constructed fails or is unable to deliver the Drilling Unit within the time limits and operational specifications of its contract with CONTRACTOR such that CONTRACTOR has the ability to terminate the construction contract, CONTRACTOR shall so advise COMPANY in writing.

If COMPANY desires to accept the Drilling Unit with later delivery or reduced operational specifications, then COMPANY shall so notify CONTRACTOR within a reasonable time following COMPANY'S receipt of notice under this Article, and upon timely receipt of notice by CONTRACTOR, CONTRACTOR shall not terminate the construction contract and this CONTRACT shall be suitably amended to reflect the later delivery and the reduced operational specifications in Exhibit G, with all other terms and conditions remaining in full force and effect. If such later delivery or reduced operational specifications result in a claim by CONTRACTOR against the Drilling Unit constructor, any net savings to CONTRACTOR as a result of such claim shall be credited to COMPANY against CONTRACTOR'S invoices or remitted to COMPANY as COMPANY shall direct.

If COMPANY does not desire to accept the Drilling Unit with such later delivery or reduced operational specifications, then COMPANY shall so notify CONTRACTOR within a reasonable time following COMPANY'S receipt of notice under this Article, and upon timely receipt of such notice by CONTRACTOR, this CONTRACT shall terminate and COMPANY shall have no obligations under Exhibit E.

27.2 TERMINATION BY CONTRACTOR

CONTRACTOR may cancel this CONTRACT for non-payment of its invoices for services under this CONTRACT, except for portions of the invoices which COMPANY may dispute in good faith. However, CONTRACTOR may cancel under this Article no sooner than one hundred and twenty (120) days after payment was due and only after giving ninety (90) days notice thereof, during which period COMPANY shall have the opportunity to correct the breach.

27.3 LOSS OF DRILLING UNIT

In the event of actual or constructive total loss of the Drilling Unit (as determined by CONTRACTOR'S underwriters), termination shall be immediate with neither CONTRACTOR nor CONTRACTOR'S underwriters having any recourse against COMPANY, or obligations pursuant to Exhibit E, except for CONTRACTOR'S claim to amounts CONTRACTOR earned up to the date of such loss. Contractor shall be responsible for any removal or salvage costs.

27.4 PROVISION AFTER EXPIRATION OF CONTRACT

Notwithstanding the termination of this CONTRACT, COMPANY and CONTRACTOR shall continue to be bound by the provisions of this CONTRACT that reasonably require some action or forbearance after the expiration of the term of this CONTRACT.

ARTICLE 28

FORCE MAJEURE

28.1 FORCE MAJEURE

The term Force Majeure as used in this Article 28 shall mean acts of God, adverse sea or weather conditions beyond the design operating perimeters of the Drilling Unit including wind, sea and current, earthquakes, flood, war, civil disturbances, strikes, lockouts or other industrial disturbances by persons other than employees of CONTRACTOR, governmentally imposed rules, regulations or moratoriums or any other cause whatsoever, whether similar or dissimilar to the causes herein enumerated, not within the reasonable control of either Party which, through the exercise of due diligence said party is unable to foresee or overcome. In no event shall the term Force Majeure include normal, reasonably foreseeable, or reasonably avoidable operational delays or strikes, lockouts or other industrial disturbances by employees of CONTRACTOR. In the event that either Party hereto is rendered unable, wholly or in part, by Force Majeure to carry out its obligations under this CONTRACT, it is agreed that such Party shall give notice and details of the Force Majeure in writing to the other Party as promptly as possible after its occurrence. In such cases, the obligations of the Party giving the notice shall be suspended during the continuance of any inability so caused, except that COMPANY shall be obligated to pay to CONTRACTOR the applicable Dayrates. Should a condition of Force Majeure continue for more than thirty (30) consecutive days, this CONTRACT may be immediately terminated at the option of COMPANY by delivering written notice thereof to CONTRACTOR.

Except for its obligation to make payments of monies hereunder, neither Party to this CONTRACT shall be considered in default in performance of such obligations hereunder to the

extent that the performance of such obligations, or any of them is delayed or prevented by Force Majeure.

ARTICLE 29

CONFIDENTIAL INFORMATION, LICENSE AND PATENT INDEMNITY

29.1 CONFIDENTIAL INFORMATION

29.1.1 CONTRACTOR agrees to hold in confidence, and not disclose to any third party or use for any purpose other than performance of the work, all or any part of the well information (including the location and type of operations performed), logs, cores, core data, cuttings, maps, data, plans, reports, manuscripts, procedures, schedules, drawings, specifications, results, models, computer programs, or any product which is: a) received or ascertained by CONTRACTOR directly or indirectly from COMPANY, its licensors or other contractors; or b) otherwise acquired by CONTRACTOR, its employees, representatives, or subcontractors in connection with, as a result of, or incident to performance of the work ("INFORMATION"). CONTRACTOR shall secure prior written agreements from its subcontractors, and suppliers who will be engaged in the performance of the Work, or may be exposed to INFORMATION ensuring their compliance with the provisions of Article 29. Nothing herein contained should preclude CONTRACTOR from providing INFORMATION required by any governmental authority.

29.1.2 CONTRACTOR shall not use COMPANY'S name or COMPANY'S affiliate's name in any promotional materials, or make any publicity release regarding the Work or INFORMATION hereunder except as may be required by law, regulation or rule of any governmental entity or stock exchange without first obtaining the written approval of COMPANY.

29.1.3 CONTRACTOR agrees to comply with all the laws and regulations governing the export of INFORMATION from the United States.

29.1.4 Any other warranty, representation, limitation, or indemnification provision of this CONTRACT shall not affect the obligations of Article 29.

29.1.5 All INFORMATION, whether completed or not, shall be the property of COMPANY for its copying, use, modification, distribution, or disclosure without accounting, in whatever way COMPANY may determine, notwithstanding copyright or other restrictive legends placed thereon by CONTRACTOR, its employees, its subcontractors, or its suppliers. All INFORMATION shall be turned over to COMPANY promptly at COMPANY'S request or at the termination of operations.

29.2.2 CONTRACTOR agrees to grant, and hereby grants to COMPANY an irrevocable, paid up, nonexclusive worldwide license to make, use, sell, copy, modify, disclose, distribute, and license under any and all patent, copyright, trade secret and other proprietary rights owned or controlled by CONTRACTOR, its parent or subsidiaries, to the extent needed for making, using,

selling, or licensing equipment, materials, or other goods according to INFORMATION supplied by CONTRACTOR or to produce, copy, distribute, and use copyrighted materials based on using such INFORMATION.

29.3 PATENT INDEMNITIES

29.3.1 CONTRACTOR SHALL PROTECT, DEFEND, INDEMNIFY AND HOLD HARMLESS COMPANY AGAINST LOSS OR DAMAGE ARISING OUT OF ANY CLAIM OR SUIT FOR MISAPPROPRIATION OF TRADE SECRET OR FOR PATENT, COPYRIGHT OR OTHER PROPRIETARY RIGHT INFRINGEMENT ARISING OUT OF INCIDENT TO OR IN CONNECTION WITH (A) PERFORMANCE OF THE WORK BY CONTRACTOR, OR (B) COMPANY'S POSSESSION, USE OR SALE OF GOODS, EQUIPMENT OR MATERIALS FURNISHED BY CONTRACTOR, OR (C) COMPANY'S PRODUCTION OF COPYRIGHTED WORKS INCORPORATING OR PREPARED ACCORDING TO DOCUMENTS OR OTHER TANGIBLE MATERIALS FURNISHED BY CONTRACTOR, AND COMPANY'S POSSESSION, MODIFICATION, USE, SALE, DISTRIBUTION, COPYING OR LICENSING OF SUCH DOCUMENTS, MATERIALS OR WORKS. COMPANY shall promptly notify CONTRACTOR of any such claim or suit and afford CONTRACTOR an opportunity at CONTRACTOR'S expense to undertake the defense of any such suit, provided that COMPANY, at its election, may join in such defense at its expense. If CONTRACTOR refuses or fails to defend such suit, CONTRACTOR shall reimburse COMPANY in full for COMPANY'S costs and expenses in the defense of such suit including attorneys' fees. CONTRACTOR shall pay promptly any judgments or decrees which may be entered against COMPANY in such suit, and in the event of the grant of injunctive relief, CONTRACTOR shall provide non-violating INFORMATION, equipment, and/or material equal in value and efficiency and failing so to do, shall pay COMPANY all damages suffered by reason of such failure.

29.3.2 COMPANY SHALL PROTECT, DEFEND, INDEMNIFY AND HOLD HARMLESS CONTRACTOR AGAINST LOSS OR DAMAGE ARISING OUT OF ANY CLAIM OR SUIT FOR MISAPPROPRIATION OF TRADE SECRET OR FOR PATENT, COPYRIGHT OR OTHER PROPRIETARY RIGHT INFRINGEMENT ARISING OUT OF INCIDENT TO OR IN CONNECTION WITH (A) CONTRACTOR"S POSSESSION, USE OF EQUIPMENT OR MATERIALS FURNISHED BY COMPANY IN ACCORDANCE WITH EXHIBIT B-3, OR (B) CONTRACTOR'S PRODUCTION OF COPYRIGHTED WORKS INCORPORATING OR PREPARED ACCORDING TO DOCUMENTS OR OTHER TANGIBLE MATERIALS FURNISHED BY COMPANY, AND CONTRACTOR'S POSSESSION, MODIFICATION, USE, SALE, DISTRIBUTION, COPYING OR LICENSING OF SUCH DOCUMENTS, MATERIALS OR WORKS. CONTRACTOR shall promptly notify COMPANY of any such claim or suit and afford COMPANY an opportunity at COMPANY'S expense to undertake the defense of any such suit, provided that CONTRACTOR, at its election, may join in such defense at its expense. If COMPANY refuses or fails to defend such suit, COMPANY shall reimburse CONTRACTOR in full for CONTRACTOR"S costs and expenses in the defense of such suit including attorneys' fees. COMPANY shall pay promptly any judgments or decrees entered against CONTRACTOR in such suit.

ARTICLE 30

ASSIGNMENT OF CONTRACT

30.1 ASSIGNMENT BY CONTRACTOR

CONTRACTOR shall not sublease or assign this CONTRACT, other than to its parent company or an affiliate or subsidiary thereof, without first obtaining the written consent of COMPANY. Such consent shall not be unreasonably withheld. COMPANY may require CONTRACTOR or its parent, subsidiaries or affiliates to issue a performance guarantee in a mutually agreeable form.

30.2 ASSIGNMENT BY COMPANY

30.2.1 COMPANY shall have the right to assign this CONTRACT to Atlantic Richfield Company, its divisions, subsidiaries (whether wholly or partially owned by Atlantic Richfield Company) and affiliates. CONTRACTOR shall look exclusively to the assignee of COMPANY for any matter during the period of assignment in the event of any such assignment by COMPANY. The time the Drilling Unit is operating for the assignee shall count towards the Contract Period.

30.2.2 Subject to Article 30.2.1, COMPANY shall have the right to assign its rights and obligations hereunder, in whole or in part, to third persons for wells within the Gulf of Mexico, with written consent of CONTRACTOR, and such consent shall not be unreasonably withheld. In the event of any such assignment under this Article 30.2.2 to a third party with CONTRACTOR'S written consent, COMPANY shall thereafter have no liability for any matter or operations hereunder and shall have no further responsibility to CONTRACTOR or other person hereunder during the time the right is assigned. CONTRACTOR shall look exclusively to the assignee of COMPANY for any matter during the period of assignment in the event of any such assignment by COMPANY. The time the Drilling Unit is operating for the assignee shall count toward the Contract Period.

30.2.3 COMPANY shall have the right to assign its rights and obligations hereunder, in whole or in part, to third parties for wells within the Gulf of Mexico, without the consent of CONTRACTOR. In the event of any such assignment under this Article 30.2.3, COMPANY shall provide written notice to CONTRACTOR prior to the use of the Drilling Unit on behalf of the assignee. In the event of such an assignment, COMPANY shall remain fully liable and responsible to CONTRACTOR for complete performance of all terms, conditions, and obligations imposed by this CONTRACT. The time the Drilling Unit is operating for the assignee shall count toward the Contract Period.

30.3 ASSIGNMENT OUTSIDE OF OPERATING AREA

In the event any assignment being contemplated under the provisions of this Article 30 is to involve operations outside of the Operating Area (as defined in Article 14.6), the dayrates provided for herein shall be adjusted to reflect any documented increases or decreases in CONTRACTOR'S cost of operations, including but not limited to taxes and fees in Article 11.

ARTICLE 31

INGRESS AND EGRESS OF LOCATION

31.1 INGRESS AND EGRESS OF LOCATION

31.1.1 COMPANY shall provide CONTRACTOR with rights of ingress and egress to the well location and provide any related drilling permits or licenses for the performance by CONTRACTOR of all Work.

31.1.2 COMPANY makes no warranty or representation, express or implied, and hereby disclaims all such warranties or representations as to any conditions with respect to any port, place, dock, anchorage, access route, location, or submarine line relating to the Work, except at the well location.

ARTICLE 32

COMPANY'S POLICIES

32.1 UNAUTHORIZED PERSONS ON JOB SITES

Only (i) CONTRACTOR'S authorized employees or subcontractors, (ii) other authorized employees and persons, including invitees, authorized by COMPANY, or (iii) representatives of governmental agencies will be permitted to enter any job site where Work is to be performed under this CONTRACT. CONTRACTOR is obligated to take such steps as are reasonably necessary to prevent unauthorized persons from entering a job site.

32.2 DRUGS, FIREARMS, AND SEARCHES

CONTRACTOR shall abide by and help enforce COMPANY'S policy regarding drugs, firearms, and alcohol. The policy is as follows: The use, possession, or transportation of firearms, alcoholic beverages, illegal drugs, narcotics, or other controlled or dangerous substances, and unauthorized drugs for which a person does not have a current prescription, while on COMPANY'S Premises is prohibited. The term "COMPANY'S Premises" is used in its broadest sense to include all work locations, buildings, structures, installations, Drilling Unit, and all other facilities, both onshore and offshore, including the point of embarkation and debarkation for all boats, planes, and helicopters owned or controlled by COMPANY or one of its affiliated companies or otherwise being utilized for COMPANY'S business for transportation of persons to and from these facilities.

To ensure compliance with this policy, COMPANY may require CONTRACTOR, upon written request, to conduct unannounced periodic inspections of all individuals and their personal effects while on COMPANY'S Premises. Violation of this policy or refusal to submit to an inspection by COMPANY'S or CONTRACTOR'S personnel could result in disciplinary action up to and including discharge will be cause for immediate removal of the individual from COMPANY'S Premises.

ARTICLE 33

NOTICES

33.1 NOTICES

Any notice provided or permitted to be given under this CONTRACT shall be in writing, and may be served by personal delivery or by depositing same in the mail, addressed to the Party to be notified, postage prepaid, and registered or certified with a return receipt requested. Notice deposited in the mail in the manner described above shall be deemed to have been given and received on the date of the delivery as shown on the return receipt. Notice served in any other manner shall be deemed to have been given and received only if and when actually received by the addressee (except that notice given by telecopier shall be deemed given and received upon receipt only if received during normal business hours and if received other than during normal business hours shall be deemed received as of the opening of business on the next Business Day (for purposes of this CONTRACT, the term "Business Day") shall mean any day except a Saturday, Sunday or other day on which commercial banks in Houston, Texas are required or authorized by law to be closed). For purposes of notice, the addresses of the Parties shall be as follows:

33.2 FOR COMPANY

Vastar Resources, Inc.
15375 Memorial Drive
Houston, TX 77079
ATTN: Don Weisinger
FAX: (281) 584-6810 or 6670
TELEPHONE: (281) 584-6021

33.3 FOR CONTRACTOR

R&B Falcon Drilling Co.
901 Threadneedle
Houston, TX 77079-2911
ATTN: President
FAX: (281)496-4363
TELPHONE: (281)496-5000

33.4 ORAL NOTICES

Notices may be given orally only with respect to minor questions involved in the immediate drilling of any well concerned.

ARTICLE 34

CONSEQUENTIAL DAMAGES

34.1 CONSEQUENTIAL DAMAGES

Neither Party shall be liable to the other for incidental special, indirect, statutory, exemplary, punitive, or consequential damages suffered by such party resulting from or arising out of this CONTRACT, including, without limitation, loss of profits, or business interruptions however they may be caused.

ARTICLE 35

WAIVERS AND ENTIRE CONTRACT

35.1 WAIVERS

None of the terms and conditions of this CONTRACT shall be deemed waived by either Party unless the waiver is executed in writing and then only by the duly authorized agents or representative of that Party. The failure of either Party to execute any right of termination shall not act as a waiver of any right of that Party provided hereunder. No waiver of the provisions of this CONTRACT shall be deemed or shall constitute a waiver of any other provisions hereof (whether or not similar), nor shall such waiver constitute a continuing waiver unless otherwise expressly provided.

35.2 ENTIRE CONTRACT

This CONTRACT, including all exhibits attached hereto and made a part hereof by this reference, constitute the entire agreement between the Parties with respect to the subject matter hereof and thereof and supersede all prior agreements, understandings, negotiations, discussions and commitments, whether oral or written with respect to same. The right of either Party to require strict adherence to the terms hereof and performance hereunder will not be affected by any previous waiver of course of dealing. Neither this CONTRACT nor any supplement, amendment, alteration, modification, or waiver will be binding on a Party unless signed by duly authorized agents or representatives of CONTRACTOR and COMPANY, or in the case of termination, by the duly authorized agents or representatives of the Party seeking termination. In the event of conflict between the terms and conditions of the text of this CONTRACT and those in any of the Exhibits, the terms and conditions of the text of this CONTRACT shall prevail.

35.3 GOVERNING LAW

This CONTRACT shall be construed and the relations between the parties determined in accordance with the General Maritime Law of the United States of America, not including, however, any of its conflicts of law rules which would direct or refer to the laws of another jurisdiction.

35.4 ARBITRATION

Any controversy or claim arising out of or relating to this CONTRACT, or the breach thereof, which cannot be resolved satisfactorily between the parties, shall be settled by arbitration in Houston, Texas, in accordance with the rules of the American Arbitration Association Commercial Disputes. If no agreement can be reached by the Parties on discovery disputes, then the Federal Rules of Civil Procedure shall govern and judgement upon the award rendered by the arbitrator(s) may be entered in any court of competent jurisdiction.

IN WITNESS WHEREOF, the parties hereto have executed this CONTRACT on the 9th day of December, 1998.

R&B Falcon Drilling Co.	**Vastar Resources, Inc.**
BY: /s/ Paul B. Loyd, Jr. Paul B. Loyd, Jr.	By /s/ Charles D. Davidson Charles D. Davidson
TITLE: Attorney-in-Fact (Chairman R&B Falcon Corporation)	TITLE: President and CEO

EXHIBIT A

DAYRATES

	RATES PER 24 HOUR DAY	
	Three (3) Year Option	**Five (5) Year Option**
Operating Rate	$199,950.00 per day	$189,200.00 per day
Moving Rate	$199,950.00 per day	$189,200.00 per day
Standby Rate With Crews	$199,950.00 per day	$189,200.00 per day
Standby Rate Without Crews	$199,950.00 per day less documented cost savings	$189,200.00 per day less documented cost savings
Stack Rate With Crews	$199,950.00 per day less documented cost savings	$189,200.00 per day less documented cost savings
Stack Rate Without Crews	$199,950.00 per day less documented cost savings	$189,200.00 per day less documented cost savings
Equipment Repair Rate	$ -0- per day	$ -0- per day
Hurricane Evacuation Rate	Standby Rates without crews plus documented expenses of evacuated crew	Standby Rates without crews plus documented expenses of evacuated crew

EXHIBIT B-1

Drilling Unit Specifications

GENERAL DESCRIPTION, DIMENSIONS & CRITERIA

General Description

The RBS8D is a 5th generation, harsh environment, dynamically positioned semi-submersible, suitable for worldwide operations in up to 10,000' water depth.

The vessel has twin "dog-bone"-shaped lower hulls, four (4) columns, canted in the transverse plane, each with a Column Outer Belt (COB) at the drilling draft, two (2) transverse horizontal, four (4) diagonal horizontal braces, and a watertight rectangular box-type upper hull.

Designed for harsh environments, the vessel features variable deck & column loads (per 1.2.4 of this document), very low motions, and high specification drilling systems, with machinery spaces and two-level quarters for 130 personnel.

Eight 5.5 MW azimuth thrusters plus six 7 MW engines provide reliable and redundant DPS-3 station keeping ability.

Principal Dimensions

	Metric Units	U.S. Units
Overall Structure		
Length (overall)	120.7 m	396.00 ft.
Breadth (overall)	78.0 m	255.91 ft.
Upper Hull		
Length	81.5 m	267.40 ft.
Breadth	61.0 m	200.13 ft.
Depth	8.5 m	27.89 ft.
Main Deck		
Length	84.1 m	275.93 ft.
Breadth	61.0 m	200.13 ft.
Pontoons (two each)		
Length	114.0 m	373.96 ft.
Breadth (amidship)	13.4 m	43.96 ft.
Breadth (ends)	16.5 m	54.13 ft.
Depth	9.10 m	29.86 ft.
Corner Radius	3.00 m	9.84 ft.
Transverse Distance (c. to c.)	61.5 m	201.77 ft.

Columns (four each)		
Horizontal Section (Lx B)		
	17.0 m x l6.5 m (@ WL)	55.8 ft. x 54.l ft.
	14.0 m x 16.5 m (bottom)	45.93 ft. x 54.13 ft.
Corner Radius	3.00 m	9.84 ft.
Vertical Height	23.9 m	78.41 ft.
Longitudinal Distance (c. to c.)	60.0 m	196.85 ft.
Transverse Distance (c. to c.) at Top	46.00 m	150.92 ft.
at Bottom	61.5 m	201.77 ft.
Transverse Braces (two each)		
Length	45.0 m	147.64 ft.
Breadth	6.0 m	19.68 ft.
Depth	3.00 m	9.84 ft.
Corner Radius	0.60 m	1.97 ft.
Longitudinal Distance (c. to c.)	68.0 m	223.10 ft.
Centerline Elevation	1.5 m	4.92 ft.
Diagonal Braces (four each)		
Diameter	3.0 m	9.84 ft.
Centerline Elevation	1.5 m	4.92 ft.
Elevations		
Drill Floor	46.0 m	150.92 ft.
Main Deck (at sides)	41.5 m	136.15 ft.
Second Deck	38.0 m	124.67 ft.
Third Deck (Inner bottom Top)	34.5 m	113.19 ft.
Upper Hull Bottom	33.0 m	108.27 ft.
Lower Hull Top	9.1 m	29.86 ft.
Draft		
Operating Condition (G.O.M.)	23.00 m	75.46 ft.
Severe Storm Condition (G.O.M.)	16.50 m	54.13 ft.
Transit Condition	8.80 m	28.87 ft.

Storage Capacities
(subject to adjustments)

	Metric Units	U.S. Units
Pipe Racks	871 m^2	9,376 ft^2
Riser (90' joints)	3,048.5 m	10,000 ft
Total Open Deck	2,005 m^2	21,578 ft^2
Bulk Cement	232 m^3	8,205 ft^3
Bulk Barite	387 m^3	13,675 ft^3
Cement Day Tank	62 m^3	2,200 ft^3
Barite Day Tank	68 m^3	2,400 ft^3
Total Bulk Storage	750 m^3	26,480 ft^3
Sack Storage	10,000 Sx	10,000 Sx
Drilling Mud Deck	750 m^3	4,434 bbl.
Drilling Mud (Column)	908 m^3	5,710 bbl.
Base Oil	480 m^3	3,019 bbl
Column Brine Storage	480 m^3	3,019 bbl.
Pontoon Brine Storage *)	3,975 m^3	25,000 bbl.
DW-Col.	1,736 m^3	10,918 bbl.
DW-pontoons	1424 m^3	8,956 bbl.
Fuel Oil	3,468 m^3	21,811 bbl
Potable Water	644 m^3	4,050 bbl
Helicopter Fuel	TBD	TBD
Refrigeration Storage	45 m^2	484 $ft.^2$
Dry Storage	60 m^2	646 $ft.^2$
SWB — pontoons *)	16,308 m^3	102,565 bbl
Quarters	130 Persons	130 Persons
Heliport	S-61, Super Puma	S-61, Super Puma

(*) Note: Pontoon Brine Storage and SWB are interchangeable

GULF OF MEXICO

METOCEAN DESIGN CRITERIA *)

Condition	OPERATION (DP Mode)	SURVIVAL (transit / future moored)	
	Drilling	Moored	Vessel
Item	10 Year Eddy + 10 year Tropical Storm	20Year Tropical + 10 Year Eddy (API Criteria)	100 Year Tropical Storm (ABS/API)
Wind (1 hour)	26.1 m/s (50.8 kn)	30.5 rn/s (59.2 kn)	44.9 m/s (87.2 kn)
Wind (1 min.)	30.9 m/s (60 kn)	36.0 m/s (70 kn)	53.1 m/s (103 kn)
Wind (3 sec.)	35.8 m/s (69.5 kn)	41.7 m/s (81.0 kn)	61.7 m/s (120 kn)
Wave Hgt. Significant	7.9 m (26.0 ft)	9.4 m (31.0 ft)	12.5 m (41.0 ft)
Peak Period	(PMS)	12.0 sec.	15.0 sec.
Wave Height Maximum	14.7 m (48.2 ft)	17.5 m (57.3 ft)	22.0 m (72.2 ft)
Current:			
Surface	1.8 m/s, (3.5 kn)	1.8 m/s, (3.5 kn)	1.0 m/s (1.9 kn)
100 ft.	1.7 m/s, (3.4 kn)	1.7 m/s, (3.4 kn)	
200 ft.	1.2 m/s (2.4 kn)	1.2 m/s (2.4 kn)	
400 ft.	1.0 M/s (2.0 kn)	1.0 m/s (2.0 kn)	
1000 ft.	0.5 m/s (1.0 kn)	0.5 m/s (1.0 kn)	
2000 ft.	0.3 m/s (0.5 kn)	0.3 m/s (0.5 kn)	
Seafloor	0.1 m/s, (0.1 kn)	0.1 m/s, (0.1 kn)	

*) Metocean Design Criteria in the DP mode relate to drilling conditions with all engines (6 x 7.0 MW power) on line and any one thruster down.

1.2.4 Variable Drilling Loads (VDL)

DP Mode — No Mooring

Item	Division	Operation Condition	KG (m) (Operating)	Survival Condition	Transit Condition	Remark
		MT	(m)	MT	MT	
Light Ship		**22,325**	**26.15**	**22,325**	**22,325**	
VDL (Variable Dlg. Loads)	**Upper Hull & Abv.**	**5,596**	**37.40**	**5,596**		**(note 1)**
	Columns	**2,057**	**22.85**	**2,057**		
VDL Total	**(Dk. + Col.)**	**7,653**	**33.49**	**7,653**	**7,450**	
Pontoon Loads: Drill Water, Potable Water, Water, Fuel Oil, Lube Oil, and Ballast Water		**17,530**	**5.57**	**10,722**	**2,984**	
Displacement (MT)		**47,509**	**19.68**	**40,700**	**32,759**	

Future Mooring + Thruster Assist

Item	Division	Operation Condition	KG (m) (Operating)	Survival Condition	Transit Condition	Remark
		MT	(m)	MT	MT	
Light Ship		**22,325**	**26.15**	**22,325**	**22,325**	
Mooring Load		**2,135**	**22.00**	**2,135**	**1,784**	
VDL (Variable Dlg. Loads)	**Upper Hull & Abv.**	**5,596**	**37.40**	**5,596**		**(note 1)**
	Columns	**2,057**	**22.85**	**2,057**		
VDL Total	**(Dk. + Col.)**	**7,653**	**33.49**	**7,653**	**5,696**	**(note 2)**
Pontoon Loads: Drill Water, Potable Water, Water, Fuel Oil, Lube Oil, and Ballast Water		**15,395**	**5.55**	**8,587**	**2,984**	
Displacement (MT)		**47,509**	**20.49**	**40,700**	**32,759**	

Notes:

1) Variable Drilling Load computation is based on a derrick height of 170 ft. Derrick extension beyond 170 ft will impact max. VDL.
2) Mooring equipment weight of 1,784 MT is included in transit VDL + pontoon load; alternatively, field transit may be conducted at column draft.

Classification Society

American Bureau of Shipping

✠A1 “Column Stabilized Drilling Unit”, ✠CDS, (P), DPS-3

Rules and Regulations

- SOLAS, 74 Convention, 78 Protocol with Amendments through 1997
  1988 Amendments to the 1974 SOLAS Convention concerning Radio Communications for the Global Maritime Distress and Safety System (GMDSS)
- API /AISC
- OCIMF
- US Coast Guard Requirements
- MARPOL 73 COW, Regulation 13F, etc., (Annexes I, IV, & V) (Oil) IOPP, with the Protocol 1978, and amendments to Annex I and Annex V of 1992.
  (refer to section 053 Damage stability)

- IMO Resolutions A.468(XII), “Code on Noise Levels Onboard Ships”, 1981, and USCG NVIC 12-82 as well
- IMO Resolution A.574(XIV), “Recommendations on General Requirements for Electric Navigational Aids”
  - IMO MSC/circ. 403, “Draft Guidelines on Navigation Bridge Visibility except field of vision (blind sector).
  - IMO MODU Code, 1989 with amendments of 1991 (ABS Statement-of-Fact).
  - 1966 Loadline Conference and all amendments and IMO Resolutions A.513 (XIII) and A.514 (XIII)
  - International Convention on Tonnage Measurement of Ships, 1969, as amended by IMO Resolution A.493 (XII) and Resolution A.494 (XII).
  - 1972 International Prevention of Collision at sea Convention, including amendments of 1981, 1987, and 1989
  - 1988 Amendments to the 1974 SOLAS Convention concerning Radio Communications for the Global Maritime Distress and Safety System (GMDSS)
- International Electro Technical Commission (IEC) Publication No. 60092 for electrical installation of ships.
- International Electro Technical Commission (IEC) Publication No. 61892 for Mobile and Fixed Offshore Units - electrical installations,
  - U.S.C.G. Regulations for Marine Sanitation Devices (CFR title 33-Part 159)

Registration

The Vessel shall be registered under USA Flag.

The estimated Light Ship weight is 22,325 metric tons, the estimated Light Ship VCG is 26.15m above baseline. The approximate breakdown is as follows:

Item	M. Tonnes	L. Tons
HSW	13,603	13,390
BFE	3,433	3,379
OFE	4,619	4,547
<SUBTOTAL>	<21,655>	<21,316>
OTHERS	220	218
MARGIN	450	443
TOTAL	**22,325**	**21,977**

EXHIBIT B-2
MATERIAL EQUIPMENT LIST

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SECTIONS

A. UNIT SPECIFICATIONS

GENERAL

Unit Name	:	RBS8-D
Rig Type	:	SEMISUBMERSIBLE
Unit/design/shape		IHI - RBF Exploration
Unit flag	:	UNITED STATES
Unit classification	:	ABS
IMO Certification (yes/no)	:	YES
Which code version	:	1989 as ammended 1991
Year of construction	:	2,000
Construction yard	:	HYUNDAI
Type of Positioning system (anchor/dp/c	:	DPS-3

A.1 MAIN DIMENSIONS/TECHNICAL

DESCRIPTION

Weight (light ship)	lt:	21,977
Overall width	ft:	255.9
Overall length	ft:	396
Main deck width	ft:	200.1
Main deck length	ft:	275.9
Main deck depth	ft:	27.9
Number of main columns/diameter	No x ft:	4 x 55.8 x 54.1 (WL) 45.9 x 54.1 (Bottom)
Number of small columns/diameter	No x ft	0
Drilling draft/related displacement	ft - lt:	75.5 / 46,767
Transit draft/related displacement	ft - lt:	28.9 / 32,247
Survival draft/related displacement	ft - lt:	54 / 40,064
Moon pool dimensions	ft x ft:	21 X 93
Maximum opening through spider deck	ft - lt:	N/A
Pontoon length	ft - lt:	374
Pontoon breadth (ends / middle)		54.1 / 44.0
Pontoon height	ft - lt:	29.9
Accommodation for maximum no. of persons	:	130

A.2 STORAGE CAPACITIES

Fuel	bbls:	21,811
Drilling water	bbls:	19,874
Potable water	bbl:	4050
Active liquid mud (see F.2)	bbl:	4434 (100%)
Mud processing tank (see F.2)	bbl:	450 (100%)
Reserve liquid mud (see F.2)	bbl:	5710 (100%)
Bulk bentonite/barite (see F.3)	cu ft:	13,675 (100%)
Bulk cement (see F.3)	cu ft:	11000 (100%)
Sack storage	No. or ft2:	10000 sxs
Pipe racks area	ft2:	9,376
Load bearing capacity	lb/ft2:	500
Riser racks area	ft:	10,000
Load bearing capacity	lb/ft2:	300
Miscellaneous storage area	ft2:	See Drawing
Brine storage (Column)	bbls:	3019 (100%)

Brine storage (Pontoon)	bbls:	25,000 (100%)
Base oil mud storage	bbls:	3019 (100%)
Ballast system	bbls:	102,565

A.3 PROPULSION/THRUSTERS

Thrusters\Type (azimuth/in line)	:	AZIMUTH - FULL 360
Quantity	:	8
Location (aft, opposite corners, 4 corners	:	FOUR CORNERS
Driven by electric motor (yes/no)	:	YES - VARIABLE SPEED DRIVE
Make/type	:	Kamewa
Power output (HP ea)	:	6633
Propeller type (fixed/variable pitch)	:	FIXED
Nozzled (yes/no)	:	YES
Thruster power (HP total)	:	53064

DP SYSTEM :

Class III Dynamic Positioning System in accordance with ABS DPS-3 requirements and recommendations. System to consist of a main triple redundant dynamic positioning system and shall accept inputs from the team selected and proven state of the art Acoustic Positioning System, two differential GPS (DGPS) based on correction signal inputs from different sources, (3) three gyrocompass, (3) three vertical reference units with redundant feeds to the DP system, and three wind sensors, as well as operator input and input from the ERA (Electrical Riser Angle) system. The system shall be powered from a redundant UPS. A single dynamic positioning system of similar design as the main DP system, will accept inputs from the APS, the two DGPS's, the ERA system, one gyrocompass, one vertical reference unit, and one wind sensor. The system contains the Power Management System and is interfaced with the Integrated Alarm and Control System. The system shall be powered from a dedicated UPS.

Position reference : HYDRO ACOUSTIC & GLOBAL POSITIONING

Integrated Alarm And Control System:

The IACS will operate as the Sys.Control and Data acquisition sys. for the MODU. The IACS will perform several different functions including: Power Management Sys., Machinery Monitoring and Control, Manual Thruster Control and Autopilot, Dynamic Positioning Control, Ballast / Bunker Monitoring and Control, Bulk Storage Sys. Monitoring and Control.

A.4 OPERATIONAL CAPABILITIES

Maximum designed water depth capability	ft:	10000
Outfitted max. water depth capability	ft:	8000
Normal min. water depth cpability	ft:	250
Drilling depth capability (rated)	ft:	30000
Transit speed towed (historical avg)	knots:	4.5

Transit speed self propelled (historical avg)	knots:	7.5

A.5 VARIABLE LOADING (VL)

Transit VL	mt	See B-1
Drilling VL	mt	See B-1
Survival VL	mt	See B-1

A.6 ENVIRONMENTAL LIMITS

Drilling (including station keeping)		See Exhibit B-1
Air gap	ft:	32.8
Sign. Wave Height	ft:	26
Max. wave height	ft:	48.2
Spec. peak period	sec:	PMS
Max. wind velocity	knots:	60 (1 min.)
Max. current velocity	knots:	See B-1
Max. heave	ft:	N/A
Max. pitch	degrees:	N/A
Max. roll	degrees:	N/A
Survival (excluding station keeping)		
Air gap	ft:	54.2
Sig. Wave height	ft:	41
Max. wave height	ft:	72.2
Spec. peak period	sec:	15
Max. wind velocity	knots:	103 (1 min.)
Max. current velocity	knots:	1.9
Max. heave	ft:	N/A
Max. pitch	degrees:	N/A
Max. roll	degrees:	N/A
Transit (field move)		
Air gap	ft:	79.4
Max. wave height	ft:	30-40
Max. wave period	sec:	8-12
Max. wind velocity	knots:	60-70
Max. current velocity	knots:	2-3
Max. heave	ft:	N/A
Max. pitch	degrees:	N/A
Max. roll	degrees:	N/A

A.7 MOORING SYSTEM

MOD'S REQ'D FOR THE FUTURE INSTALLATION OF OPERATOR FURNISHED CHAIN WINDLASSES WILL BE PERFORMED DURING THE CONSTRUCTION PHASE AT THE SHIPYARD INCLUDING FOUNDATIONS / PRIMARY PIPING & WIRING.

A.7.1 ANCHOR WINCHES

Quantity	no.:	N/A
Make		
Type (electric/hydraulic/diesel)	:	
Rated pull	mt	
Speed low gear	ft/m:	

Test load	:	
Control locations (local/remote/both)	:	
Emergency release (type/location)	:	

A.7.2	**FAIRLEADS**		Foundations to be installed in shipyard
Quantity		no:	
Make		:	
Free rotating range		degrees:	

A.7.3	**ANCHORS**	Company Supplied
A.7.3.1	**ANCHORS - Primary**	Company Supplied
A.7.3.2	**ANCHORS - Spare**	Company Supplied
A.7.4	**ANCHOR LINES**	Company Supplied to be installed at later date
A.7.5	**ANCHOR LINE RUNNING / RETRIE'**	N/A
A.7.5.1	**PENNANT LINES**	N/A
A.7.5.2	**ANCHOR BUOYS**	N/A
A.7.5.3	**CHASER**	N/A

A.7.6	**TOWING GEAR**		
Towing bridle size		inches:	Installation of a tow bridle will be evaluated by the team.
Hook-up system		:	
Rating		lt:	
Power required for infield tow		bollard pull lt:	N/A
Power required for ocean tow		bollard pull lt:	N/A
Spare bridle		yes/no:	yes
A.7.7	**SUPPLY VESSEL MOORING LINES**	:	
Quantity		no.:	4
System		mt:	TO BE EVALUATED BY TEAM
Rating		lt:	TBA

A.8	**MARINE LOADING HOSES**		
Location of loading manifolds (port/stbd		:	BOTH
A.8.1	**POTABLE WATER HOSE**		
Quantity		no.:	2 x 150'
Size		inch:	3
Make/Type		:	TBA
Color coding		yes/no:	YES
Make/Type/Connection			TBA
A.8.2	**DRILLING WATER HOSE**		
Quantity		no.:	2 x 150'
Size		inch:	4
Make/Type		:	TBA
Color coding		yes/no:	YES
Make/Type connection		:	TBA
A.8.3	**GAS OIL HOSE**		
Quantity		no.:	2 x 150'
Size		inch:	4

Make/Type	:	TBA
Color coding	yes/no:	yes
Make/Type connection	:	TBA
PRESSURE RATING	p.s.i	150 wp

A.8.4 MUD CHEMICAL HOSE

Quantity	no.:	2 x 150’
Size	inch:	5
Make/Type	:	TBA
Color coding	yes/no:	YES
Make/Type connection	:	TBA

A.8.5 CEMENT HOSE

Quantity	no.:	2 x 150’
Size	inch:	5
Make/ Type	:	TBA
Color coding	yes/no:	YES
Make/Type connection	:	TBA

A.8.6 BASE OIL HOSE

Quantity	no.:	2 x 150’
Size	inch:	4
Make/Type	:	TBA
Color coding	yes/no:	YES
Make/Type connection	:	TBA
Pressure Rating		150 psi wp

A.8.7 BRINE HOSE

Quantity	no.:	2 x 150’
Size	inch:	4
Make/Type	:	TBA
Color coding	yes/no:	YES
Make/Type connection	:	TBA

A. 9 CRANES, HOISTS, AND MATERIALS HANDLING

A. 9.1 CRANES, REVOLVING, MAIN

Quantity	no.:	2
Specification (API, etc.)		ABS /US-DEN
Make	:	LIEBHERR
Type	:	PEDESTAL
Location (stbd, port, aft, frwd)	:	PORT & STBD
Maximum rated capacity (main hook)	mt	100
Maximum rated capacity (whip hook)	mt	15
Boom length	ft:	150
Line length (no Boom	ft:	1893
Main Hoist	ft:	1920
Whip line	ft:	475

Maximum capacity and hoisting speeds

			Radius	Metric
Main Hoist	Platform Lift	4 lines	Meters	Tons
			6.6	92

			10	92
			11	92
			15	84.7
			20	71.8
			25	62.8
			30	55.6
			35	47.2
			40	39.7
			45	33.8
			48	31.1
				No Load
			Radius	Metric
Main Hoist	Seastate Lift	4 lines	Meters	Tons
			6.6	51.5
			10	46
			11	44.8
			15	40.7
			20	36.8
			25	33.5
			30	30.6
			35	26.4
			40	22.4
			45	19.4
			48	18
				No load
			Radius	Metric
Main Hoist	Platform Lift	2 lines	Meters	Tons
			6.6	50
			10	50
			11	50
			15	50
			20	50
			25	50
			30	50
			35	47.2
			40	39.7
			45	33.8
			48	31.1
				No load
			Radius	Metric
Main Hoist	Seastate Lift	2 lines	Meters	Tons
			6.6	31.9
			10	31.9
			11	31.9
			15	31.9
			20	31.9
			25	31.9
			30	30.6

		35	26.4
		40	22.4
		45	19.4
		48	18
			No Load
		Radius Meters	Metric Tons
Whip Line	Platform Lift	51	15
	Seastate lift	51	10
			No Load

Hook load indicator automatically corrected for boom angle	yes/no:	YES
Alarm (audible, visual, both)	:	BOTH
Automatic brake	yes/no:	YES
Safety latch on hooks	yes/no:	YES
Crown saver (limit switch)	yes/no:	YES
Boom illumination	yes/no:	YES
Baskets for personnel transfer	no.:	2

A. 9.2 CRANES, REVOLVING, SECONDARY

Quantity	no.:	1
Specification (API, etc.)	:	API
Make	:	OUT REACH
Type	:	KNUCKLEBOOM
Location (stbd, port, aft, frwd)	:	FORWARD
Maximum rated capacity (main hook)	lt:	3.57
Maximum rated capacity (whip hook)	lt:	N/A
Boom length	ft:	68
Line length (nominal)	ft:	N/A

A. 9.3 FORKLIFTS

Quantity	no.:	1
Make/Type	:	TBA
Rated capacity	lt:	TBA
Explosion proof	yes/no:	YES

A. 9.4 MONORAIL OVERHEAD CRANES

Quantity	no.:	1
Make	:	MARITIME HYDRAULICS
Type	:	GANTRY TYPE
Rated capacity	mt	36
Location	:	AFT RISER DECK

A. 9.5 BOP HANDLING SYSTEM

Make/Type	HYDRALIFT BRIDGE CRANE
Rated capacity (5 Ram Stack =551,300 lbs (250mt)) 310 T	

BOP CARRIER

Make/Type	Hydralift “C” Cart complete with false rotary deck.
Rated Capacity	310 Tons

A. 9.6 AIR HOISTS/DERRICK WINCHES

A. 9.6.1 RIG FLOOR WINCHES (Non man-riding)

Quantity	no.:	4
Make	:	INGERSAL RAND
Type	:	HYDRAULIC
Rated capacity	st:	5.5
Wire diameter	inch:	0.75
Automatic brakes	yes/no:	YES
Overload protection	yes/no:	NO
Automatic spooling	yes/no:	YES

A. 9.6.2 MONKEY BOARD WORK WINCH

Quantity	no.:	1
Make	:	IR
Type	:	
Rated capacity	st:	0.25
Wire diameter	yes/no:	3/8”
Automatic brakes	yes/no:	YES
Overload protection	yes/no:	NO

A. 9.6.3 RIG FLOOR “MAN-RIDING” WINCH

Quantity	no.:	2
Make	:	Ingersoll Rand
Type	:	Hydraulic
Rated capacity	st:	0.25
Wire diameter/non-twist wire	inch:	3/8”
Automatic brakes	yes/no:	Yes
Overload protection	yes/no:	No
Automatic spooling	yes/no:	Yes
Certified for man-riding	yes/no:	Yes

A. 9.6.4 UTILITY WINCH (i.e. Deck Winch) **N/A**

A. 9.6.5 CELLAR DECK WINCH

Quantity	no.:	4
Make	:	Ingersoll Rand
Type	:	Air
Rated capacity	st:	5.5
Wire diameter	inch:	.75
Automatic brakes	yes/no:	No
Overload protection	yes/no:	No
Automatic spooling	yes/no:	Yes
Man -riding	:	2

A.10 HELICOPTER LANDING DECK

Location		PORT/FWD. MAIN DECK
Dimensions	ft. x ft.:	72.8 X 72.8
Perimeter safety net	yes/no:	YES
Load capacity	lt:	9.15

Designed for helicopter type	:	SIKORSKY S-61
Tie down points	yes/no:	YES
Covered by foam fire system (See L.36)	yes/no:	YES

A.10.1 HELICOPTER REFUELING SYSTEM

Fuel storage capacity	U.S. gals:	1440
Jettisonable	yes/no:	NO
Fuel transport containers	qty:	2
Volume (ea)	:	720
Covered by foam fire system (See L.3.5)	yes/no:	YES

A.11 AUXILIARY EQUIPMENT

A.11.1 WATER DISTILLATION

Quantity	no.:	4
Make/Type		Alfa Laval or equivalent
Capacity (each/total)	cu. ft./day:	26 Metric Ton each (Depending on engine utilization)

A.11.2 BROILERS **N/A**

A.11.3 AIR CONDITIONING

Quantity	no.:	5
Make/Type	:	
Capacity (total system)	tons:	

A.11.4 ELECTRIC WELDING SETS

Quantity	no.:	3
Current capacity	amp:	400
Make/Type	:	Lincoln S-7046 SAE 400

A.11.5 HIGH PRESSURE CLEANER

Quantity	no.:	1
Make/Type	:	Weatherford
Electric/pneumatic	:	Electric
Max delivered pressure	psi:	2700
Ring Main	yes/no	Yes
Outlets	Number	6

B. GENERAL RIG SPECIFICATIONS

B.1 DERRICK AND SUBSTRUCTURE

B.1.1. DERRICK/MAST

Make/Type	:	DRECO
Rated for wind speed:		
With full set back	knots:	100
With no set back	knots:	100
Height	ft:	210 estimated. Final height to be evaluated by Dreco.
Dimensions of base	ft x ft:	48X48
Dimensions of crown	ft x ft:	18x18
Gross nominal capacity	st.:	1250
Maximum Number of lines	no.:	14

Ladders with safety cages and rests	yes/no:	yes
Platform for crown sheave access	yes/no:	yes
Counter balance, system for rig tongs and pipe spinning tong	yes/no:	yes
Lighting system explosion proof	yes/no:	yes

(adjustable fingers on the right hand side can have any one of the casing below racked back at any one time, but not all)

Unit is capable of field transiting with 238 stands of drillpipe without exceeding rated design loads of derrick.

Make/Type	:	Varco
Racking platform total capacity with 5-1	ft:	31,000 (nominal)
Fixed Fingers (on left side of derrick) - u	ft:	20000 (nominal)
Adjustable fingers (on right side) - 7” Ca	ft:	11000 (nominal)
or		
Adjustable fingers (on right side) - 9-5/8	ft:	11000 (nominal)
or		
Adjustable fingers (on right side) - 13-3/	ft:	9500 (nominal)
Racking platform capacity of 8” - 9” DC	no.:	8

Auxiliary Derrick (Moonpool)

Make / Type	Dreco
Capacity	300 Tons

B.1.3 AUTOMATIC PIPE RACKER

Make/Type	:	2 - Varco PRS-6 Pipe Rackers Pipe racker on forward side to be capable of handling 20”, 16”, 13-3/8”, 11-3/4”, 9-7/8”, 7-5/8”, and 7” casing

B.1.4 CASING STABBING BOARD

Make/Type	:	Dreco / Hyd.
Adjustable from/to height above R/table	ft/ft:	Adjustable Casing Stabbing Basket - 45’ reach

Auxiliary Pipe Handler (Moonpool)

Make / Type	National

B.1.5 SUBSTRUCTURE

Make/Type	:	H.H.I
Height	ft :	14.75’
Width	ft:	80
Length	ft:	71
Setback capacity	st:	1000
Hookload	st	1000
Simultaneous setback-hookload capacity	st:	2000
Tensioner capacity	st	1750
Clear height below R/table beams (from	ft:	29.5

B.1.6 WEATHER PROOFING

Rig floor windbreaks height	ft:	10
Derrickman windbreaks height	ft:	15

B.1.7 DERRICK TV CAMERA SYSTEM

Camera located at	:	Monkey Board/ Crown
Make/Type	:	Color
Zoom/Pan/Tilt-function	yes/no:	yes
Monitor located at	:	Driller's House

B.2 DRAWWORKS AND ASSOCIATED EQUIPMENT

B.2.1 DRAWWORKS

Make/Type	:	Dreco/Hitec
Drum type	:	Lebus Grooving, 2" drill line
Spinning cathead type	:	Refer D 2.1.7
Breakout cathead type	:	N/A
Crown block safety device	:	YES
Make	:	
Model	:	
Rated input power continuous	hp:	6900
Rated input power maximum	hp:	8400
Drum Diameter	inches:	73.5
Maximum line pull 14 lines	st:	1000
Maximum line pull 12 Lines		
Maximum line pull 10 lines	st:	600
Maximum line pull 8 lines	st:	
Independent fresh water cooling system for drawworks	yes/no:	yes

B.2.2 DRAWWORKS POWER

Number of electric motors	no.:	8
Make	:	General Electric
Model	:	GEB 22A1
Output power continuous	hp:	1150
Output power intermittent (max.)	hp:	1400

B.2.3 AUXILIARY BRAKE

Make	:	Hitec
Model	:	Regenerative AC braking,
Independent back-up system type	:	Failsafe disc brakes

B.2.4 SANDLINE **NA**

B.2.5 AUTOMATIC DRILLER

Make/Type	:	Hitec

AUXILIARY DRAWWORKS (Moonpool)

Make / Type	National / AC
Lift Capacity	300 Tons
Input HP	1,000

B.3 DERRICK HOISTING EQUIPMENT

B.3.1 CROWN BLOCK

Make/Type	:	Dreco
Rated capacity	st:	1000
No. of sheaves	no.:	7
Sheave diameter	inches:	72
Sheave grooved for line size	inches:	2

AUXILIARY CROWN BLOCK (Moonpool)

Make / Type		Dreco
Rated Capacity		300 Tons

B.3.2 TRAVELING BLOCK

Make/Type	:	Dreco
Rated capacity	st:	1000
No. of sheaves	no.:	7
Sheave diameter	inches:	72
Sheave grooved for line size	inch:	2

AUXILIARY TRAVELING BLOCK

Make / Type		Dreco
Rated Capacity		300 Tons

B.3.3 HOOK

		N/A
Make/Type	:	
Rated capacity	st:	
Complete with spring assembly/hook loc	yes/no:	

B.3.4 SWIVEL

Make/Type	:	None
Rated capacity	st:	
Test/working pressure	psi/psi:	
Gooseneck and washpipe minimum ID >	yes/no:	
Left hand pin connection size	inches:	
Access fitting for wireline entry on top o	yes/no:	

B.3.5 DRILLING LINE

Diameter	inch:	2”
Type	:	6 x 26 EIPS, IWRC
Length (original)	ft:	12500
Support frame for drum/cover	yes/no:	yes
Drilling line drum power driven	yes/no:	yes
Spare reel drilling line	yes/no:	no
Location (rig, shore, etc.)	:	

B.3.6 ANCHOR DEAD LINE

Make/Type	:	Dreco
Weight sensor	yes/no:	yes

B.3.7 DRILL STRING MOTION COMPENSATOR

Make/Type	:	Hitec ASA Active Heave Comp.
Stroke	ft:	14.5

Capacity - compensated	st:	500
Capacity - locked	st:	1000

B.3.8 BLOCK GUIDANCE SYSTEM

Make/Type	:	DRECO

B.3.9 RETRACTION SYSTEM FOR TRAVELING BLOCK

Make/Type	:	Varco/Retrac. Dolly

B.4 ROTATING SYSTEM

B.4.1 ROTARY TABLE

Make/Type	:	Varco
Maximum opening	inches:	60
Rated capacity	st:	1000
Static load capacity	st:	1000
Rotating load capacity	st @ rpm:	TBA
Two speed gearbox	yes/no:	No
Max RPM @t Max Torque	RPM/ Ft lbs	17/48000
Emergency chain drive	yes/no:	no
Driven by an independent electric motor	yes/no:	No
Electric motor type/make	:	Hydraulic x 4
Maximum continuous torque	ft/lbs:	48000
Drip pan/mud collection system	yes/no:	yes

B 4.2 ROTARY TABLE ADAPTER BUSHING

Size	“	60 1/2 x 49 1/2
Quanity	:	1
Size	“	49 1/2 x 37 1/2
Quanty	:	

B.4.3 MASTER BUSHING

Make/Type	:	Varco MPCH
Size	inch:	37-1/2
Inset Bushings	#’s	3,2,1

B.4.4 KELLY BUSHING

B.4.5 TOP DRIVE

Make	:	National or Varco
Type (electric/hydraulic)	:	Electric
Rated capacity	st:	1000 or 750 (if 750 parking system to be supplied)
Test/working pressure	psi/psi:	11250 / 7500
Remote operated kelly cock	yes/no:	YES
If driven by electric motor		
Make/Type	:	GE GEB-20AC
Output power	hp:	1150
Output torque	ft lbs:	Per Manufacturers rating
Max Torque @ Max RPM	Ft lb/s RPM	Per Manufacturers rating
Two speed gearbox	yes/no:	No
Maximum rotary speed	rpm:	270
Cooling system type	:	AIR

B.4.6 TOP DRIVE MAKEOUT/BREAKOUT SYSTEM

Make	:	National or Varco
Model	:	
Type	:	HYDRAULIC
Max. breakout torque that can be applied	ft/lbs:	100000

B.4.7 RAISED BACKUP SYSTEM

Make	:	Varco
Model	:	RBS 4
Torque rating	:	100,000 Ft Lb
Vertical Travel	:	10 Ft
Pipe range	:	4 3/4” to 8 1/4”

C. POWER SUPPLY SYSTEMS

C.1 RIG POWER PLANT

C.1.1 DIESEL ENGINES

Quantity	no.:	6
Make/Type	:	18V32
Maximum continuous power	hp:	7290
At rotation speed of	rpm:	720
Equipped with spark arrestors	yes/no:	YES
Mufflers installed	yes/no:	YES
Total fuel consumption, drilling (average	bbl/day:	Av 375. Estimate only, based on GOM weather and will vary depending on operations

C.1.2 DC - GENERATOR Type: N/A

C.1.3 AC-GENERATOR

Quantity	no.:	6
Make/Type	:	TBA
Continuous power	kw:	7000
At rotation speed of	rpm:	720
Output volts	volts:	42,000 kw
Quantity	no.:	
Make/Type	:	
Continuous power	kw:	
At rotation speed of	rpm:	
Output volts	volts:	

C.1.4 VARIABLE FREQUENCY DRIVES

Number of Inverters	no.:	19 INVERTERS
Make/Type	:	TBA
Maximum continuous power (total)	kw:	15130 KW
Output volts	volts:	0-600AC

C.1.5 TRANSFORMER SYSTEM

Quantity	no.:	8 THRUSTER TRANSFORMERS
Make/Type	:	TBA
Continuous power (each)	KVA:	5000 KVA

Output volts	volts:	2300
Frequency	Hz:	60
Quantity	no.:	6 DRILLING TRANSFORMERS
Make/Type	:	TBA
Continuous power (each)	KVA:	2500
Output volts	volts:	600
Frequency	Hz:	60

C.1.6 EMERGENCY SHUTDOWN

Emer. shutdown switches for complete power sys. (AC and DC), located at the following points	:	CENTRAL CONTROL ROOM RIG FLOOR ENGINE CONTROL ROOM

C.1.7 AUXILIARY POWER SUPPLY

Power supply for a mud logging unit	yes/no:	YES
Power supply available:		
Output volts	volts:	480
Frequency	Hz:	60
Current	amps:	100
Phase	single/three	THREE

C.1.8 COMPRESSED AIR SYSTEMS

Air Compressors - High Pressure:		
Quantity	no:	2
Make	:	Hamworthy
Model	:	w1234
Rated capacity	cu ft/hr:	65 cfm
Working press	psi:	5000
Prime mover (electric/diesel)	hp:	Electrical
Continuous power	hp:	60
Air dryers		
Quantity	no.:	2
Make/Type	:	Hamworthy Regenerative Tower (Dual)
Rated Capacity	cu ft/min:	
Air Compressors - Medium Pressure (rig air):		
Quantity	no:	3
Make	:	Gardner Denver
Model	:	EGQSP Rotary Screw
Rated capacity	cu ft/hr:	750 SCFM
Working press	psi:	125 psi
Prime mover (electric/diesel)	hp:	Electric
Continuous power	hp:	200
Air dryers		
Quantity	no.:	3
Make/Type	:	Dessicant Domnick Hunter / DX110 Heatless
Rated Capacity	cu ft/min:	1080 scfm
Air Compressors - Low Pressure (bulk air):		None - Reducing Stations
Quantity	no:	2
Make	:	Kimray
Model	:	Reducing Valve / Back Pressure Valve ABY / AAU 3”
Rated capacity	cu ft/hr:	10,600 Each
Working press	psi:	60

C.2 EMERGENCY GENERATOR - Emergency Generator not required due to power system design

C.2.1 ENGINE

AUXILIARY POWER PLANT

C.2.1 ENGINE		Data, for Anchored ver.may change for RBS8-D
Quantity	no.:	1
Make/Type	:	CATERPILLAR 3508B
Maximum output	kw:	500
At rotation speed	rpm:	1200
Starting methods (automatic, manual, air	:	AUTOMATIC
Max. angle of operation	degrees:	22.5 PER ABS

C.2.2 AC-GENERATOR		
Quantity	no.:	1
Make/Type	:	CATERPILLAR SR4
Maximum output	kw:	500
At rotation speed	rpm:	1200
Output volts	volts:	480
Capable of back-feeding to main bus	yes/no:	YES - TO 480V BUS

C.3 PRIMARY ELECTRIC MOTORS

C.3.1 PROPULSION MOTORS	Type:	See Thruster Motors

C.3.2 THRUSTER MOTORS		
Quantity	no.:	8
Type (AC/DC)	:	TBA
Power of each	MW	5.5
Total power	MW	

D. DRILLSTRING EQUIPMENT

D.1 TUBULARS

D.1.1 KELLIES

D.1.2 TOP DRIVE SAVER SUBS		
Quantity	no.:	2
Connection type	:	HT 55
API classification	:	8 C
Protector	yes/no:	No
Quantity	no.:	2
Connection type	:	4 1/2 IF
API classification	:	8 C
Protector	yes/no:	No

D.1.3 DRILL PIPE

Drill pipe OD	inch:	5.5
Grade	:	S135
Total length	ft:	22000
Range	:	3
Weight	lbs/ft:	21.9 Nonimal
Tensile yield strength Premium	lbs:	621000
Internally plastic coated	yes/no:	Yes,TK-34
Tool joint OD/ID	inch/inch:	71 /4” x 4” provisional
Make up torque	Ftt/lbs	46300
Tool joint pin length	inch:	10
Tapered shoulder tool joints	degree:	18
Connection type	:	HT 55
Type of hardfacing	:	Armacor M
API classification	:	PREMIUM
Thread protectors	yes/no:	Yes
Drill pipe OD	inch:	5
Grade	:	S-135
Total length	ft:	8000
Range	:	3
Weight	lbs/ft:	19.5 Nominal
Tensile yield strength Premium	lbs	560000
Internally plastic coated	yes/no:	Yes TK-34
Tool joint OD/ID	inch/inch:	6 5/8” x 3 1 1/6”
make up Torque	Ft/lbs	32900
Tool joint pin length	inch:	9”
Tapered shoulder tool joints	degree:	18
Connection type	:	4 1/2 “IF
Type of hardfacing	:	Armacor M
API classification	:	PREMIUM
Thread protectors	yes/no:	Yes
Drill pipe OD	inch:	5.5
Grade	:	S-135
Total length	ft:	8000
Range	:	3
Weight	lbs/ft:	38
Tensile yield s Premium	lbs	1170600
Internally plastic coated	yes/no:	Yes
Tool Joint OD/ID	inch/inch:	7 1/8 x 3 3/4 Provisional
Tool joint pin length	inch:	10
Tapered shoulder tool joints	degree:	18
Connection type	:	HT 55
Type of hardfacing	:	Armacor M
API classification	:	Premium
Thread protectors	yes/no:	Yes

D.1.4 DRILL PIPE PUP JOINTS (Integral)

O.D		5.5”
Grade/Yield	:	4145 H Equiv. To 120K

Tool joint OD/ID	inch/inch:	7 1/4 x 3 3/4 ”
Weight	LB/FT	40
Connection type		HT-55
Stress relief pin groove	:	No
Boreback on box	:	No
Internally plastic coated	yes/no:	No
Thread protectors	yes/no:	Yes,
Length	ft:	10
Quantity	no:	1
Length	ft:	15
Quantity	no:	2
Length	ft:	20
Quantity		1
O.D	:	5”
Grade/ Yield	:	4145 H equiv to 120 K
Tool joint OD/ID	inch/inch:	6 5/8” x 2 3/4 ”
Grade	:	4145 H Equiv. To 120K
Weight	LB/FT	TBA
Connection type		4 1/2” IF
Stress relief pin groove	:	Yes
Boreback on box	:	Yes
Internally plastic coated	yes/no:	No
Thread protectors	yes/no:	Yes
Length	ft:	10
Quantity	no:	1
Length	ft:	15
Quantity	no:	2
Length	ft:	20
Quantity		1
Thread protectors	yes/no:	yes

D.1.5 DRILL PIPE PUP JOINT: Size: N/A

D 1.6 HEAVY WEIGHT DRILL PIPE (Integral)

Quantity	no.:	30
Nominal size OD	inch:	5”
Weight	lbs/ft:	49.1 Nonimal
Range	:	2
Tool joint OD	inch:	6 5/8”
Tool joint ID	inch:	3 1/16”
Pin Stress relief groove	yes/no	yes
Box , Bore back	yes/no	yes
Type of hardfacing	:	Pinnchrome (team to review)
Internally plastic coated	yes/no:	No
Connection type	:	4 1/2 IF
Thread protectors	yes/no:	Yes, Bale type
Quantity	no.:	30
Nominal size OD	inch:	5 1/2”
Weight	lbs/ft:	58” Nonimal
Range	:	2

Tool joint OD	inch:	7 1/4”
Tool joint ID	inch:	3 3/4”
Pin Stress relief groove	yes/no	No
Box , Bore back	yes/no	No
Type of hardfacing	:	Pinnchrome (Team to review)
Internally plastic coated	yes/no:	No
Connection type	:	HT 55
Thread protectors	yes/no:	yes, Bale type

D.1.7 DRILL COLLARS

Quantity	no.:	15
OD body	inches:	9.5
ID body	inches:	3”
Nominal Length of each joint	ft:	31.5 Nominal
Drill collar body (slick/spiral)	:	SPIRAL
Recess for “zip” elevator	yes/no:	yes
Recess for slips	yes/no:	yes
Stress relief pin groove	yes/no:	YES
Boreback on box	yes/no:	YES
B.S.R		2.72
Connection type	:	7 5/8”reg
Thread protectors	yes/no:	yes, Bale type
Quantity	no.:	15
OD body	inches:	8 1/4”
ID body	inches:	2 13/16”
Nominal Length of each joint	ft:	31.5 Ft Nomimal
Drill collar body (slick/spiral)	:	SPIRAL
Recess for “zip” elevator	yes/no:	yes
Recess for slips	yes/no:	yes
Stress relief pin groove	yes/no:	YES
Boreback on box	yes/no:	YES
B.S.R.		2.93
Connection type	yes/no:	6 5/8” reg
Thread protectors	yes/no:	yes, Bale type
Quantity	no.:	30
OD body	inches:	6 1/2
ID body	inches:	2 1/2”
Nominal Length of each joint	ft:	31.5 Ft Nominal
Drill collar body (slick/spiral)	:	SPIRAL
Recess for “zip” elevator	yes/no:	YES
Recess for slips	yes/no:	YES
Stress relief pin groove	yes/no:	YES
Boreback on box	yes/no:	YES
B.S.R		2.73
Connection type	yes/no:	4 ” IF
Thread protectors	yes/no:	yes, Bale type

D.1.8 SHORT DRILL COLLARS	Company Supplied
D.1.9 NON-MAGNETIC DRILL COLLARS	Company Supplied
D.1.10 CORE BARRELS	Company Supplied

D.1.11 STABILIZERS		Company Supplied
D.1.12 ROLLER REAMERS		Company Supplied
D.1.13 SHOCK ABSORBERS (Damping Sub)		Company Supplied
D.1.14 DRILLING JARS		Company Supplied

D.1.15 INSIDE BOP VALVE

Quantity	no.:	2
Make	:	SMF (provisional)
OD	inch:	TBA
Connection type	:	HT 55
Working pressure rating	psi:	15000
Quantity	no.:	2
Make	:	SMF (provisional)
OD	inch:	6 5/8”
Connection Type		4 1/2 IF
Working Pressure	psi	15000

D.1.16 FULL OPENING SAFETY VALVE

Quanty		2
Make	:	SMF (provisional)
O.D/ I.D	no.:	TBA (Team to review & advise)
Connection type	:	HT 55
Working Pressure		15000
Quanty		2
Make	:	SMF (provisional)
O.D/ I.D	no.:	6 5/8” / 2 13/16”
Connection type	:	4 1/2 IF
Working Pressure		15000

D.1.17 CIRCULATION HEAD N/A

D.1.18 TOP DRIVE VALVES

Upper		
Quantity	no.:	2
Make/Type	:	Varco
Working pressure	psi:	15000
Max. OD body	inch:	TBA
Min. ID body	inch:	TBA
Connection type	:	7 5/8 Reg
Lower		
Quantity	no.:	2
Make/Type	:	Varco
Working pressure	psi:	15000
Max. OD body	inch:	TBA
Min. ID body	inch:	TBA
Connection type	:	7 5/8 Reg

D.1.19 CIRCULATION SUBS	Company Supplied
D.1.20 CUP TYPE TESTERS	Company Supplied
D.1.21 PLUG TYPE TESTERS	Company Supplied
D.1.22 DROP-IN VALVES	Company Supplied

D.1.23 NEAR-BIT SUBS (Box-Box)

Quantity	no.:	2
OD size	inch:	9 1/2”
ID size	inch:	3”
Top connection	inch:	7 5/8 Reg
Boreback	Yes/No	Yes
BSR	:	2.25. - 3
Bottom connection	inch:	7 5/8 REG
Boreback	Yes/No	No
Bored for float valve	yes/no:	yes
Float size	inch:	5F-6R
Quantity	no.:	2
OD size	inch:	9 1/2”
ID size	inch:	2 13/16”
Top connection	inch:	7 5/8 REG
Boreback	Yes/No	Yes
BSR	:	2.25 - 3
Bottom connection	inch:	6 5/8 REG
Boreback	Yes/No	No
Bored for float valve	yes/no:	YES
Float size	inch:	5F-6R
Quantity	no.:	2
OD size	inch:	8 1/4”
ID size	inch:	2 13/16”
Top connection	inch:	6 5/8 Reg
Boreback	Yes/No	Yes
BSR	:	2.25 - 3
Bottom connection	inch:	6 5/8 Reg
Boreback	Yes/No	No
Bored for float valve	yes/no:	YES
Float size	inch:	5F-6R
Quantity	no.:	2
OD	inch:	6 1 /2
ID	inch:	2 1/2”
Top connection	inch:	4 1/2 XH
Boreback	Yes/No	Yes
BSR	:	2.25 - 3
Bottom connection	inch:	4 1/2 Reg
Boreback	Yes/No	No
Bored for float valve	yes/no:	YES
Float size	inch:	4 R

D.1.24 CROSSOVER SUBS

Quantity	no.:	2
OD size	inch:	8 1/4” x 9 1/2”
Top connection size	inch:	6 5/8 REG
Type (pin/box)	:	BOX
I.D	:	2 13/16”
B.S.R	:	2.25 - 3
Boreback	Yes/No	Yes
Bottom connection size	inch:	7 5/8 REG
Type (pin/box)	:	PIN

I.D	:	3”
B.S.R	:	2.25 - 3
Relief Groove	Yes/No	Yes
Quantity	no.:	2
OD size	inch:	7 1/4” x 8 1/4”
Top connection size	inch:	HT 55
Type (pin/box)	:	BOX
ID	inch:	3”
B.S.R	:	2.25 - 3
Boreback	Yes/No	No
Bottom connection size	inch:	6 5/8 Reg
Type (pin/box)	:	PIN
I.D	:	3”
B.S.R	:	2.25 - 3
Relief Groove	Yes/No	Yes
Quantity	no.:	2
OD	inch:	7 1/4” x 6 1/2”
Top connection size	inch:	HT 55
Type (pin/box)	:	BOX
ID	inch:	2 1/2”
B.S.R	:	2.25 - 3
Boreback	Yes/No	No
Bottom connection size	inch:	4 1/2 XH (NC 46)
Type (pin/box)	:	PIN
I.D	:	2 1/2”
B.S.R	:	2.25 - 3
Relief Groove	Yes/No	Yes
Quantity	no.:	2
OD size	inch:	6 1/2” x 8 1/2”
Top connection size	inch:	4 IF (NC 46)
Type (pin/box)	:	BOX
ID	inch:	2 1/2”
B.S.R	:	2.25 - 3
Boreback	Yes/No	Yes
Bottom connection	inch:	6 5/8 Reg
Type (pin/box)	:	PIN
ID	inch:	2 1/2”
B.S.R	:	2.25 - 3
Relief Groove	Yes/No	Yes
Quantity	no.:	2
OD size	inch:	7 1/4 x 6 5/8
Top connection size	inch:	HT55
Type (pin/box)	:	Box
ID size	inch:	2 13/16”
B.S.R	:	2.25 - 3
Boreback	Yes/No	No
Bottom connection size	inch:	4 1/2 IF (NC 50)
Type (pin/box)	:	Pin
ID size	inch:	2 13/16”
B.S.R	:	2.25 - 3
Relief Groove:	Yes/No	Yes
Quantity	no.:	2

OD size	inch:	6 5/8 x 6 5/8
Top connection size	inch:	4 1/2 IF (NC 50)
Type (pin/box)	:	Box
ID size	inch:	2 1/2”
B.S.R	:	2.25 - 3
Boreback	Yes/No	Yes
Bottom connection size	inch:	4 IF (NC 46)
Type (pin/box)	:	Pin
ID size	inch:	2 1/2”
B.S.R	:	2.25 - 3
Relief Groove	Yes/No	Yes
Quantity	no.:	2
OD size	inch:	6 5/8 x 8 1/4
Top connection size	inch:	4 1/2 IF
Type (pin/box)	:	Box
ID size	inch:	2 13/16”
B.S.R	:	2.25 - 3
Boreback	Yes/No	YES
Bottom connection size	inch:	6 5/8 Reg
Type (pin/box)	:	Pin
ID size	inch:	2 13/16”
B.S.R	:	2.25 - 3
Relief Groove	Yes/No	Yes

D 1.25 STABBING SUBS - Approximately 9” long

Quantity	no.:	1
OD size	inch:	9.5
ID size	inch:	3
Top connection size	inch:	HT 55
Type (pin/box)	:	Box
Bottom connection size	inch:	7 5/8 Reg
Type (pin/box)	:	PIN
Quantity	no.:	1
OD size	inch:	9.5
Top connection size	inch:	4 1/2 IF
Type (pin/box)	:	Box
ID size	inch:	3
Bottom connection size	inch:	7 5/8 Reg
Type (pin/box)	:	PIN
Quantity	no.:	1
OD size	inch:	8.25
ID size	inch:	2 13 /16
Top connection size	inch:	HT 55
Type (pin/box)	:	BOX
Bottom connection size	inch:	6 5/8 REG
Type (pin/box)	:	PIN
Quantity	no.:	1
OD size	inch:	6.5
ID size	inch:	2.8125
Top connection size	inch:	HT 55
Type (pin/box)	:	BOX
Bottom connection size	inch:	4 IF

Type (pin/box)	:	PIN

D.1.26 PUMP IN / TESTING SUBS

Quantity	Pin/Box	1
Connection		HT 55 Box
Union type		2” 1502 Female
Quantity		1
Connection	Pin/Box	HT 55 Pin
Union Type		2” 1502 Female
Quantity		1
Connection	Pin/Box	4 1/2 IF Box
Union type		2” 1502 Female
Quantity		1
Connection	Pin/Box	4 1/2 IF Pin
Union type		2” 1502 Female
Quantity		1
Connection	Pin/Box	7 5/8 Reg Pin
Union Type		2” 1502 Female

D 1.27. SIDE ENTRY SUBS

Quantity		1
Top Connection	Box/Pin	HT 55 Box
Lower connection		HT 55 Pin
Outlet size and type		2” 1502 Female
Quantity		1
Top Connection	Box/Pin	4 1/2 IF Box
Lower connection		4 1/2 IF Pin
Outlet size and type		2” 1502 Female

D.1.28 DRILLING BUMPER SUBS	Company Supplied
D.1.29 HOLE OPENERS	Company Supplied
D.1.30 UNDERREAMERS	Company Supplied

D.2 HANDLING TOOLS

D.2.1 DRILL PIPE ELEVATORS

Quantity	:	2
Make	:	Varco
Model	st:	BX 475
Drill Collars inserts 150 Ton		6 1/2” , 8 1/4” , 9 1/2”
Casing inserts 350 Ton	“	Company Supplied
Drill pipe Inserts 500 Ton		5 , 5 1/2”
Elevators 750 Ton		5”, 5-1/2”
BOP handling elevators	st:	1000 Refer E 6.10

D.2.2 DRILL COLLAR ELEVATORS

Size	inch:	N/A
Quantity	no.:	
Make	:	
Model	:	
Rated capacity	st:	

Size	inch:	N/A
Quantity	no.:	
Make	:	
Model	:	
Rated capacity	st:	
Size	inch:	N/A
Quantity	no.:	
Make	:	
Model	:	
Rated capacity	st:	
Size	inch:	N/A
Quantity	no.:	
Make	:	
Model	:	
Rated capacity	st:	

D.2.3 TUBING ELEVATORS Type: Company Supplied

D.2.4 DRILL PIPE HAND SLIPS

Size	inch	5 1/2 ”
Quantity	no.:	1
Make/Type	:	VARCO / SDXL
Size	inch	5
Quantity	no.:	1
Make/Type	:	VARCO / SDXL

D.2.5 POWER SLIPS

Make/Type		Varco PS 30
Quantity		1
Slip assembly 20” to 18 5/8”		1
Slip Assmebly 16 ” to 6 5/8		1
Slip Assembly 2 3/8 to 10 3/4”		1
Insert carriers Drillpipe	:	5 ”, 5 1/2” ,
Insert Carriers Drill collars		6 1/2, 8 1/4,9 1/2
Insert carriers Casing		Company supplied
Die sets for 13 3/8” 9 5/8 & 7” carriers		Company supplied

MOUSEHOLE SLIPS Varco 18” Power Slips.

D.2.6 DRILL COLLAR SLIPS

Size	inch:	9.5
Quantity	no.:	1
Make/Type	:	VARCO / DCS-L
Size	inch:	8.25
Quantity	no.:	1
Make/Type	:	VARCO / DCS-L
Size	inch:	6.1/2
Quantity	no.:	1
Make/Type	:	VARCO / DCS-R

D.2.7 DRILL COLLAR SAFETY CLAMPS

Quantity	no.:	1

Model		MP-L
Range	:	19 3/8” to 4 1/2 “

D.2.8 TUBING SLIPS	:	Company Supplied
D.2.9 TUBING SPIDER	:	Company Supplied
D.2.10 DRILL COLLAR LIFTSUBS	:	As needed
D.2.11 DC LIFTING PLUGS	:	n/a

D.2.12 BIT BREAKER

Quantity	no.:	1
For bit size	inch:	26
Quantity	no.:	1
For bit size	inch:	17.1/2”
Quantity	no.:	1
For bit size	inch:	14 3/4”
Quantity	no.:	1
For bit size	inch:	12. 1/4
Quantity	no.:	1
For bit size	inch:	8.1/2

D.2.13. GAUGE RINGS

Sizes 26, 17 1/2, 14 3/4, 12 1/4, 8 1/2

D.2.14 ELEVATOR LINKS

Quantity of sets	no.:	1
Make/Type	:	VARCO
Size	inch:	3.5
Length	ft:	11
Rated capacity	st:	500
Quantity of sets	no.:	1
Make/Type	:	VARCO
Size	inch:	4 3/4”
Length	ft:	22
Rated capacity	st:	750
Quantity of sets	no.:	1
Make/Type	:	VARCO
Size	inch:	4 3/4”
Length	ft:	22
Rated capacity	st:	1000

D.2.15 DRILL PIPE SPINNER Type: Varco SSW-40

D.2.16 MUD SAVER BUCKET

Make	:	Dreco
Size	inch:	9 3/4 to 3 1/2”
Operation	:	Remote from DWS

D.2.17 EZY TORGUE

Make/Type	:	Varco
Maximum linepull	lb:	31000
Quantity		2

D.2.18 ROTARY RIG TONGS

Quantity	no.:	2
Make/Type	:	Varco HT 100
Size range (max OD/min OD)	inch/inch:	17 to 4
Torque rating	ft lbs:	Max 100,000, reduces depending on size
Quantity	no.:	2
Make/Type	:	Varco HT 50
Size range (max OD/min OD)	:	17 1/4 to 20”
Torque rating	Ft/lb:	50000

D.2.19 TUBING TONGS (MANUAL)
D.2.20 TUBING TONGS (POWER)

D.2.21 IRON ROUGHNECK

Make/Type	:	VARCO / AR3200
Size range (max OD/min OD) Drill Coll inch/inch:		4 “ to - 9 1/2”
Size range (max OD/min OD) Drillpipe		3 1/2” to 6 5/8

D.3 FISHING EQUIPMENT

D.3.1 OVERSHOTS

Quantity	no.:	1
Make/Type	:	F.S
Top sub connection type	:	6 5/8 Reg
Overshot OD	inch:	11 3/4”
Max catch size	inch:	9 1/2”
To catch size Spiral grapple	inch:	9.1/2
		9 3/8,8 1/2,8 3/8,8 1/4,8 1/8,7 1/4,7 1/8,7, 6 7/8, 6 5/8,6
To catch size Basket grapple	inch:	1/2, 6 3/8, 5 1/2, 5
Control rings		For above grapples
Extension sub length	ft:	2.5
Lipped guide (oversize, regular)	“:	113/4,15, 21
Quantity	no.:	1
Make/Type	:	TBA S.H Series 150
Top sub connection type	:	4 IF
Overshot OD	inch:	8.3/8
Max catch size	inch:	7 1/4”
To catch size Spiral grapple	inch:	7 1/4, 7 1/8, 7, 6 7/8,
To catch size Basket grapple	inch:	6 5/8, 6 1/2, 6 3/8, 5 1/2, 5
Control rings		For above grapples
Extension sub length	ft:	2.5
Lipped guide (oversize, regular)	:	8 3/8, 11,

D.3.2 HYDRAULIC FISHING JAR Company Supplied
D.3.3 JAR INTENSIFIER Company Supplied
D.3.4 SURFACE JAR Company Supplied

D.3.5 FISHING BUMPERSUBS

Quantity	no.:	1
Make/Type	:	TBA
OD body	inch:	8
Min.ID	inch:	3.5

Stroke	inch:	20
Connection type	:	6 5/8 Reg
Quantity	no.:	1
Make/Type	:	TBA
OD body	inch:	6.25
Min. ID	inch:	2.25
Stroke	inch:	20
Connection type	:	4 IF

D.3.6 SAFETY JOINTS Company Supplied
D.3.7 JUNK BASKETS (REVERSE CIRC.) Company Supplied
D.3.8 JUNK SUBS Company Supplied

Quantity	no.:	1
Make/Type	:	TBA
For hole size	inch:	17.5
Boot OD	inch:	12.875
Connection type	:	7 5/8 Reg
Quantity	no.:	1
Make/Type	:	TBA
For hole size	inch:	12.25
Boot OD	inch:	9.625
Connection type	:	6 5/8 Reg
Quantity	no.:	1
Make/Type	:	TBA
For hole size	inch:	8.5
Boot OD	inch:	6.625
Connection type	:	4 1/2 Reg

D.3.9 FLAT BOTTOM JUNK MILL Company Supplied

D.3.10 MAGNET FISHING TOOL

Quantity	no.:	1
Make/Type	:	TBA/ Flush guide
OD body	inch:	16
Hole size	inch:	17.5
Connection type	:	6 5/8 reg

D.3.11 TAPER TAPS Company Supplied
D.3.12 DIE COLLARS Company Supplied

E. WELL CONTROL/SUBSEA EQUIPMENT

E.1 LOWER RISER DIVERTER ASSY **N/A**

E.2 PRIMARY BOP STACK (from bottom to top)

Stack complete with:

• guide frame	yes/no:	YES
• pick up attachment	yes/no:	YES
• transport base	yes/no:	YES
Size (bore)	inch:	18.75
Working pressure	psi:	15000
H2S service	yes/no:	YES

E.2.1 ALTERNATE HYDRAULIC CONNECT N/A

E.2.2 HYDRAULIC WELLHEAD CONNECTOR

Size	inch:	18-3/4”
Make/Type	:	Vetco SD H-4
Working pressure	psi:	15000
Hot tap for underwater intervention ROV	yes/no:	YES
Spare connector same type	yes/no:	NO
Hydrate seal	yes/no:	Yes (1 oring & 1 Lip seal Option as STD.)
Glycol Injection (ROV)	yes/no:	yes (4 x 1” Npt @ 90 deg increments
Pilot Operated check Valve, close function	Yes/No:	Yes

E.2.3 RAM TYPE PREVENTERS

Preventers:		
Quantity	no.:	5
Bore size	inch:	18.3/4”
Working Pressure	psi:	15000
Make	:	CAMERON or equivalent
Model	:	TYPE T1
Type (single/double)	:	Double x2 , Single x 1
Stack Configuration	:	Al, A2, CL, SSCSR BSR,VBR,VBR,LFPR,CH
Ram locks	yes/no:	YES
Preventer connection type - top	:	CX18 (BX-164 Option Available)
Preventer connection type - bottom	:	CX18 (BX-164 Option Available)
Side oultlets	yes/no:	YES
Size	inch:	3.1/16
Connection type	:	No. 6 CAMERON CLAMP AX GROOVE
Super/Shear rams:		Less than or equal to 13-5/8”
Quantity	no.:	1 set
Blind/Shear rams:		
Quantity	no.:	1 set
Variable rams:		
Quantity	no.:	1 set
Size range (max/min)	inch/inch:	Customer to advise
Quantity	no.:	1 set
Size range (max/min)	inch-inch:	Customer to advise
Pipe rams:		
Quantity	no.:	1 set
Size	inch:	Customer to advse

E.2.4 STACK CONFIGURATION (Blind/Shear/Pipe/Variable)

Upper Shear ra Cavity 5		SSCSR (Less than or equal to 13-5/8”)
Lower shear ra Cavity 4	:	BSR
Middle Upper Cavity 3	:	VBR
Middle Lower Cavity 2	:	VBR
Lower rams Cavity 1	:	LFPR
Position of side outlets - kill		
Upper	:	Below BSR (Cavity #4)
Lower	:	Below LFPR (Cavity #1)

Position of side outlets - choke		
LMRP		Below upper Annular (Al)
Stack		Below Top VBR (Cavity #3)
Stack	:	Below Bottom VBR (Cavity #2)

E.2.5 ANNULAR TYPE PREVENTER ON STACK

Size	inch:	n/a
Working pressure	psi:	n/a
Make/Type	:	n/a

E.2.6 MANDREL

Make/Type	:	Cameron 18-3/4 10 HC
Size	inch:	18.75

E.2.7 FAIL-SAFE HYDRAULIC VALVES
(Kill and Choke)

Quantity on each side outlet	no.:	2
Size (ID)	inch:	42430
Make/Type	:	Cameron MCS
Working pressure	psi:	15000
Solid block	yes/no:	YES

E.2.8 SUBSEA ACCUMULATORS
(See also E.7.1 - Surface Accummulator Unit)

Quantity	no.:	17 (team to evaluate)
Useful capacity per accumulator (w/o prUS gallons	:	13.1
Bottle working pressure	psi:	5000 (team to evaluate)

E.2.9 HYDRAULIC CONTROL POD/RECEPTACLES

Quantity	no.:	2
Redundancy	%:	100
Color Coded	yes/no:	YES
Remote regulation of operating pressure for functions requiring lower operating press	yes/no:	YES
Spare control pod	yes/no:	NO
Deadman system	yes/no:	YES
Pressure & tempreture Sensor's LMRP	yes/no:	YES

E.3 PRIMARY LOWER MARINE RISER PACKAGE
(From Bottom To Top)

E.3.1 HYDRAULIC CONNECTOR

Make/Type	:	Cameron 18-3/4-10 HC or equivalent
Size	inch:	18.75
Working pressure	psi:	10000
Hot tap for underwater intervention	yes/no:	YES
Spare connector same type	yes/no:	NO

E.3.2 ANNULAR TYPE PREVENTER (LMRP)

Size	inch:	18-3/4"
Qty.	no:	2
Working pressure	psi:	10000
Make/Type (2*70.5=141" Total Heigl	:	CAMERON TYPE DL

E.3.3 FLEX JOINT

Make/Type	:	Oil States 18-3/4”
Size	inch:	21
Max deflection	degrees:	20 (10 from vertical)

E.3.4 RISER ADAPTER

Make/Type	:	Vetco HMF-class H
Size	inch:	21

E.3.5 CONNECTION LINES TO RISER

Type (rigid loops, coflexip, etc.)	Make:	COFLEXIP
	Size:	3-1/16
	WP:	15,000 psi
	Collapse Psi	12,7l0psi

E.3.6 RISER CENTRALIZER Hydralift

E.4 ANNULAR GAS HANDLER

Make / Type	Supplied by Company at later date. Hard piping and control functions to be supplied by Contractor
Rating	1,500 psi
Number Outlets	2
Number Valves	4

E.5 SECONDARY LOWER MARINE RISER P N/A

E.6 PRIMARY MARINE RISER SYSTEM

E.6.1 MARINE RISER JOINTS To be designed for 10,000’ wd

Make/Model	:	Vetco or equivalent (HMF-class H)
OD	inch	To be determined by final riser analysis
ID	inch	To be determined by final riser analysis
Wall thickness	inch:	To be determined by final riser analysis
Average length of each joint	ft:	90
Weight of one complete joint (in air)	Ibs:	62,311 for 5k buoancy, 54,424 for 3k buoancy, 31,620 for 3/4” Slick, 36,900 1” slick
Quantity	no.:	Sufficient for 8,000 ft. water depth
Pipe material	grade:	API 5L Grade X80 Mod.
Minimum yield strength	psi:	80KSI
Type riser connectors	:	HMF- class H
Dogs	no.:	To be determined by final riser analysis
Pup joints:		
Quantity	no.:	1
Length	ft:	45.0’
Quantity	no.:	1
Length	ft:	37.5’
Quantity	no.:	1
Length	ft:	30.0’
Quantity	no.:	1
Length	ft:	22.5’

Quantity	no.:	1
Length	ft:	15’

E.6.2 TELESCOPIC JOINT

Make/Type	:	Vetco
Size (ID)	inch:	19.25
Stroke	ft:	65
Double Seals	yes/no:	YES
Working pressure	psi	500
Spare telescoping joint	yes/no:	no
Location	:	N/A
Rotating support ring for riser tensioners	type:	Vetco SDC
Connection points	no.:	6

E.6.3 KILL/CHOKE LINES

Quantity	no.:	2
Outside diameter	inch:	6.5
Inside diameter	inch:	4.5
Working pressure	psi:	15000
LMRP Isolation valves	YES/NO	YES. Fail Close

E.6.4 BOOSTER LINES (If Fitted)

Quantity	no.:	1
Outside diameter	inch:	4.5
Inside diameter	inch:	3.83
Working pressure	psi:	6000
LMRP Isolation valve	YES/NO	YES

E.6.5 HYDRAULIC SUPPLY LINES

Quantity	no.:	1
Outside Diameter	inch:	3.5
Inside Diameter	inch:	2.62
Working pressure	psi:	5000

E.6.6 UPPER BALL (FLEX) JOINT

Make/Type	:	Oilstates Diverter 3
Size	inch:	21-1/4
Maximum deflection	deg.:	30 (15 from vertical)
Spare upper ball (flex) joint	yes/no.:	NO

E.6.7 BUOYANCY MODULES (If Fitted)

Make	:	To be determined by riser analysis
Quantity of buoyed riser joints	no.:	To be determined by riser analysis
OD of buoyed riser joints	inch:	To be determined by riser analysis
Length of each module	ft:	To be determined by riser analysis
Volume of each module	ft3:	To be determined by riser analysis
Buoyancy in seawater	st/ft3:	To be determined by riser analysis
Rated water depth	ft:	To be determined by riser analysis
Make	:	To be determined by riser analysis
Quantity of buoyed riser joints	no.:	To be determined by riser analysis
OD of buoyed riser joints	inch:	To be determined by riser analysis

Length of each module	ft:	To be determined by riser analysis
Volume of each module	ft3:	To be determined by riser analysis
Buoyancy in seawater	st/ft3:	To be determined by riser analysis
Rated water depth	ft:	To be determined by riser analysis

E.6.8 MARINE RISER SPIDER

Make/Type	:	VETCO / HYDRAULIC

E.6.9 Marine Riser Gimbal

Make/Type	:	VETCO

E.6.10 RISER HANDLING TOOLS

Tool, riser lifting	no.:	3
1000 ton Solid Body Elevators	no :	1 set (team to evaluate)
Type	:	HMF- Class h
Torque Wrenches	:	2 - dual speed

E.6.11 RISER TEST TOOLS

Quantity	no.:	2
Type	:	HMF- Class H Hydraulic Test Tool

E.6.12 INSTRUMENTED RISER JT : N/A

E.7 SECONDARY MARINE RISER : N/A

E.8 DIVERTER BOP
(For installation in fixed bell nipple)

Make/Type	:	Hydril 60
Max Bore Size	inch:	21-1/4
Working pressure	psi:	500
Number of diverter outlets	no.:	2
Outlet OD	inch:	14
Insert packer size ID	inch:	N/A CSO
Element type.	:	Nitrile rubber
Running from diverter to	:	Overboard , port/ starb./ Poorboy MGS

E.8.1 DIVERTER FLOWLINE

Quantity	no.:	1
I.D of flowline	inch:	16” Nominal
Valve types	:	Diverter Sleeve
Size	inch:	16
Working pressure	psi:	500
Control valve type (air/hydraulic/etc.)	:	HYDRAULIC
Remote controlled from	location:	DRILLERS WORKSTATION

E.8.2 DIVERTER CONTROL PANELS

Driller’s panel

Make	:	CAMERON OR EQUIVALENT
Model	:	MULTIPLEX
Location	:	DRILLERS WORKSTATION
Locking/unclocking control	yes/no:	YES

Remote panel		
Make		: CAMERON
Model		: MULTIPLEX
Location		: CONTROL ROOM
Locking/unclocking control	yes/no	: YES

E.9 SUBSEA SUPPORT SYSTEM

E.9.1 RISER TENSIONERS		Ability To Skid Tensioners From Well Centerline
Quantity	no.:	6
Make/Type	:	HYDRALIFT - INLINE
Capacity each tensioner	st:	800 kips
Maximum stroke	ft:	50
Wireline size	inch:	N/A (9” ROD)
Line travel	ft:	N/A (9” ROD)
Independent air compressors	yes/no:	YES
Independent air drying unit	yes/no:	YES
Riser Recoil System	yes/no:	yes

E.9.2 GUIDELINE SYSTEM	N/A
E.9.3 REMOTE GUIDELINE REPL. TOOL	N/A
E.9.4 REMOTE GUIDELINE CUTTING TOOL	N/A
E.9.5 POD LINE TENSIONERS	TURN DOWN SHEAVE’S COMPLETE WITH STORM LOOP WITHIN MOONPOOL INCLUDED WITHIN DESIGN LAYOUT

E.9.6 TENSIONER/COMPENSATOR AIR PRESSURE VESSELS

Quantity	no.:	30
Total capacity	ft3:	2747
Rated working pressure	psi:	3000
Pressure relief valve installed	yes/no:	YES

E.10 BOP CONTROL SYSTEM

Cameron or equivalent Mux system including: 2 each remote control panels, one located in driller’s house and one in the control room, both panels incorporate full function and monitoring system for BOP’s and diverter system. 1 each pod test stand and Mux system analyzer consisting of test stand and portable computer test set. 2 each Mux cable reels complete with 11,000’ of Multiplex cable, one reel blue and one reel yellow for functioning yellow and blue pods plus one spare. 2 each stack mounted pods, complete with subsea electronics

E.10.1 SURFACE ACCUMULATOR UNIT

(See also E.2.8 & E.4.8 - Subsea Accumulators)

Make	:	CAMERON or equivalent
Model/Type	:	MUX
Location	:	ACCUMULATOR ROOM
Soluble oil reservoir capacity	US gallons:	300
Oil/water mix.capacity	US gals/min:	838
Glycol reservoir capacity	US gallons:	1000

No. of bottles installed	no.:	38 team to evaluate bottles required for 10,000’
Useful cap. per accum. (w/o pre-charge)US gallons	:	40
Bottle working pressure	psi:	5000
Control manifold model	:	MULTIPLEX
Regulator type	:	PRESSURE SWITCH / RELIEF VALVES
Total useful accumulator volume (surface and stack)		
Equals all preventer opening and closing	yes/no:	YES
Plus percent additional volume	%:	50

E.10.2 ACCUMULATOR HYDRAULIC PUMPS

Electric Driven		
Quantity	no.:	2
Power source	:	From BUS A
Make	:	US Motors
Model	:	
Each driven by motor of power	hp:	100
Flow rate of each pump	US gals/min:	26
At minimum operating pressure	psi:	5000
Secondary		
Quantity	no.:	1
Power source	:	From BUS B
Make	:	US Motors
Model	:	
Each driven by motor of power	hp:	100
Flow rate of each pump	US gals/min:	26
At minimum operating pressure	psi:	5000

E.10.3 DRILLER’S CONTROL PANEL

Graphic control panel at driller’s position showing subsea functions with controls for the following functions of the BOP stack Location.		Driller Work Station.
Boost Line Control Valve	yes/no:	YES
Marine riser connector	yes/no:	YES
All annular type BOP’s	yes/no:	YES
All ram type BOP’s	yes/no:	YES
Lock for ram type BOPs	yes/no:	YES
Wellhead and LMRP connector	yes/no:	YES
Inner and outer kill and choke line valve:	yes/no:	YES
Low acc. pressure warning	yes/no:	YES
Low reservoir level warning	yes/no:	YES
Low rig air pressure warning	yes/no:	YES
Pressure regulator for annular	yes/no:	YES
Flowmeter	yes/no:	YES
Quantity of pressure gauges	no.:	7+
Emergency push button for automatic riser disconnection	:	YES
Other control functions	yes/no:	YES
Control panel make	:	CAMERON
Control panel model	:	MULTIPLEX

E.10.4 REMOTE CONTROL PANELS

Ability to operate main closing unit valv	yes/no:	NO
Quantity	no.:	2
Make/Model	:	CAMERON / MULTIPLEX
Locations	:	DRILLERS WORK STATION & CONTROL ROOM
Operating System Routing (Direct/via Primary Control Panel)	:	DIRECT DUAL BUS

E.11 SUBSEA CONTROL SYSTEM

E.11.1 HOSE REELS

Quantity	no.:	2 Bop Control (MUX)
Location	:	MOONPOOL
Make/Type	:	CAMERON
Maximum storage length each	ft:	11000
Drive motor type	:	AIR
Quantity	no.:	1 HOTLINE
Location	:	MOONPOOL
Make/Type	:	SYNFLEX (KEVLAR)
Maximum storage length each	ft:	11,000
Drive motor type	:	AIR

E.11.2 POD HOSE

E.11.3 POD HOSE MANIFOLD

Make/Model	:	NONE
Surface test stump	yes/no:	YES

E.11.4 SURFACE TEST POD yes/no: N/A

E.12 ACOUSTIC EMER. BOP CONTROL SYS : N/A

E.13 SUBSEA AUXILARY EQUIPMENT

E.13.1 HOLE POSITION INDICATOR

Make/Type	:	Simrad
Quantity of monitors	no.:	2 (Blue pod / Yellow pod)
Monitor location	:	Drillers Work station
Monitor location	:	Control Room
Recorder	yes/no:	no

E.13.2 RISER ANGLE INDICATOR

Make/Type	:	To be incorporated into Mux system
Quantity of monitors	no.:	2 (Blue pod / Yellow pod)
Monitor location	:	Drillers Work station
Monitor location	:	Control Room
Recorder	yes/no:	no
Location		Flex joint neck

E.13.3 SLOPE INDICATORS

Make	:	RECAN

Quantity	no.:	3
Provision for installation on BOP	yes/no:	YES
Pin Connector	yes/no:	NO
Other	:	LOWER STACK, LMRP & RISER

E.13.5 ROV System — Power and foundations supplied

E.14 CHOKE MANIFOLD — Per Drawing # D-233669

E.14.1 CHOKE MANIFOLD (For Instrumentation, see H.3)

Make	:	CONTROL FLOW
Minimum ID	inch:	3-1/16
Maximum WP	psi:	15000
H2S service	yes/no:	YES
Quantity of fixed chokes	no.:	n/a
Make	:	n/a
Model	:	n/a
Size (ID)	inch:	n/a
Quantity of adjustable chokes	no.:	n/a
Make	:	n/a
Model	:	n/a
Size (ID)	inch:	n/a
Quantity of power chokes	no.:	3 (team to evaluate)
Make	:	CONTROL FLOW
Model	:	15000
Size (ID)	inch:	2 Team to evaluate
Power choke remote control panel	yes/no:	YES
Make	:	Houston Digital
Model	:	CPU 27” MONITOR AND MANUAL HYD. BACK-UP.
Location	:	DRILLERS WORKSTATION / CHOKE MANIFOLD
Glycol injection	yes/no:	NO

E.14.2 FLEXIBLE CHOKE AND KILL LINES (Connecting Riser to Drilling Unit)

Quantity	no.:	2
Make/Type	:	Coflexip
ID	inch:	3 (team to review)
Working pressure/test pressure	psi/psi:	15000 / 22500
Quantity	no.:	n/a
Make/Type	:	n/a
ID	inch:	n/a
Working pressure/test pressure	psi/psi:	n/a

E.15 BOP TESTING EQUIPMENT

E.15.1 HYDRAULIC BOP TEST PUMP

Make	:	SHAFFER
Model/Type	:	ELECTRO HYDRAULIC VARIABLE SPEED 5 GPM
Pressure rating	psi:	22500

Chart recorder	yes/no:	0-5000 0-30000

E.15.2 BOP TEST STUMP

Quantity	no.:	1
Test pressure	psi:	15000
Type	:	VETCO / CAMERON
Size	:	18.75
Connected to deck (welded/bolted)	:	BOLTED

E.16 WELLHEAD RUNNING/RETRIEVING/TESTING TOOLS (RT/RRT/TT)

E.16.1 RT's FOR CASING INSTALLATION		Company Supplied
E.16.2 RRT's FOR CASING INSTALLATION		Company Supplied
E.16.3 MISCELLANEOUS TOOLS		Company Supplied
E.16.4 DP HANG-OFF SUBS		Company Supplied
E.16.5 MINI HOSE BUNDLE FOR HYD. R. TOOLS		Company Supplied
E.16.6 EMERGENCY BOP RECOVER	yes/no:	yes
Make/type	:	CAMERON

F.1 HIGH PRESSURE MUD SYSTEM

System working pressure	psi:	7500
System test pressure	psi:	11250
Built to which design standard	:	ANSI, API

F.1.1 MUD PUMPS

Quantity	no.:	4
Make	:	National
Model	:	14P-220
Type (Triplex/Duplex)	:	Triplex
Liner sizes available	inch:	5" - 9"
Mud pump drive motors	no.:	2
Motor type	:	AC
Continuous power rating per motor	hp:	1150
Fluid end	type:	Two piece
Maximum working pressure	psi:	7500
Test pressure	psi:	11250
Pump stroke counter	type:	Hitec
Supercharging pump	type:	Halco
Driven by motor of power	bp:	100
Discharge/Suction line ID	inch/inch	5" / 10"
M.P. Pulsation Dampener	type:	White Rock
Soft Pump	:	I system
Reset Relief Valve	type:	TBA
Working flowrate per pump at 90% of max spm		
Maximum SPM	:	105 SPM @ 100%

F.1.2 TRANSFER PUMPS/MIXING PUMPS (centrifugal)

Treatment pumps (Desilter/Desander)

Quantity		4
Make		Halco
Model		2500
Drive motor type		Electric
Power output		100 hp
Impeller		14”
Impeller speed		1200 rpm
Packing type		Mechanical seal
Mixing Pumps		
Quantity	no.:	2
Make	:	Halco
Model	:	2500
Drive motor type	:	Electric /Belt
Power output	hp:	100
Impeller	:	14”
Impeller speed	RPM:	1200
Packing type	;	Mechanical seal
Shearing Pumps		
Quantity	no.:	2
Make	:	Halco
Model	:	T 6550
Drive motor type	:	Electric /Belt
Power output	hp:	100
Impeller	:	Shearing type
Impeller speed	RPM:	1800
Packing type	;	Mechanical seal
Charging Pumps		
Quantity	no.:	4
Make	:	Halco
Model	:	2500
Drive motor type	:	Electric /Belt
Power output	hp:	100
Impeller	:	14”
Impeller speed	RPM:	1200
Packing type	;	Mechanical seal
Column Transfer		
Quantity	no.:	4
Make	:	Halco
Model	:	2500
Drive motor type	:	Electric /Belt
Power output	hp:	125
Impeller	:	12
Impeller speed	RPM:	1800
Packing type	;	Mechanical seal

F.1.3 BOOSTER PUMP

Quantity	no.:	Rig Mud pump
Make/Type	:	
Pumping capacity (each)	US gals/min:	

Drive motor type	:	
Power output	hp:	

F.1.4 STANDPIPE MANIFOLD

Quantity of standpipes	no.:	2 @ 7500 psi wp
Standpipes ID	inch:	5
H-Type standpipe manifold	yes/no:	yes
Kill line outlet	yes/no:	yes
Fill-up/bleed-off line outlet	yes/no:	yes
Outlets (total)	no.:	4
ID	inch:	5 & 3
Type connections	:	Weco
Dimensions OD x ID	inch x inch:	6 x 5
Design standard	:	ANSI, API

F.1.5 ROTARY HOSES

Quantity	no.:	2 @ 7500 psi wp
Make/Type	:	Beattie
ID x length	inch x ft:	4 x 88
Snubbing lines	yes/no:	yes

F.1.6 CEMENTING HOSE

Type (i.e. Coflexip)	:	Beattie
Length	ft:	85
ID	inch:	3
Working pressure	psi:	15000

F.1.7 CHIKSAN STEEL HOSES

Integral non-screwed	yes/no:	yes
Make/type	:	TBA / 1502
ID Nonimal	inch:	2”
Section length	ft:	
Quantity	no.:	
Section length	ft:	
Quantity	no.:	
Sweep swivels, make/type	:	
Nom. size ID	inch:	
Fittings, non-screwed type	yes/no:	Yes
Suitable for H2S service	yes/no:	

F.2 LOW PRESSURE MID SYSTEM

F.2.1 MUD TANKS

Quantity	no.:	15
Column Tanks		
Quanity	:	4
Capacity 85%		4600
Surface Tanks		

Quanity		10
Capacity 85%		4000
Capacity, tank No. 1	bbls:	460
Type (active/reserve)	:	Active
Capacity, tank No. 2	bbls:	460
Type (active/reserve)	:	Active
Capacity, tank No. 3	bbls:	460
Type (active/reserve)	:	Active
Capacity, tank No. 4	bbls:	650
Type (active/reserve)	:	Active
Capacity, tank No. 5	bbls:	650
Type (active/reserve)	:	Active
Capacity, tank No. 6	bbls:	680
Type (active/reserve)	:	Active
Capacity, tank No. 7	bbls:	160
Type (active/reserve)	:	Chemical
Capacity, tank No. 8	bbls:	160
Type (active/reserve)	:	Chemical
Capacity, tank No. 9	bbls:	160
Type (active/reserve)	:	Chemical
Capacity, tank No. 10	bbls:	160
Type (active/reserve)	:	Chemical
Mixer in each tank	yes/no:	Yes
Mud guns in each tank	yes/no:	Yes

F.2.2 PROCESSING TANKS

Quantity	no.:	6
Total capacity (@ 100%)	bbls:	450
Capacity Sand Trap tank	bbls:	75
Capacity degasser tank	bbls:	75
Capacity desander tank	bbls:	75
Capacity desilter tank	bbls:	75
Capacity desilter tank	bbls:	75
Capacity treated mud tank	bbls:	75

F.2.3 PILL/SLUG TANK

Capacity (@ 100%)	bbls:	150
Mud agitator	yes/no:	yes
Mud guns	yes/no:	yes

F.2.4 TRIP TANK

Capacity (@ 100%)	bbls:	100 2 x 50
Capacity/foot	bbls/ft:	TBA
Level indicator	yes/no:	yes
Electric pump make		Halco x 2
Model/type	:	Cent.
Motor output	hp:	30
Facility for casing fill-up	yes/no:	no
Alarm and strip chart recorder (See H.1.;11)	yes/no:	Yes

F.2.5 STRIPPING TANK

Capacity (@100%)	bbls:	10 Approx
Capacity/foot	bbls/ft:	TBA
Equalizing facility with triptank	yes/no:	Yes
Transfer pump	yes/no:	No
Alarm and strip chart recorder (See H.1.	yes/no:	Yes

F.2.6 CHEMICAL MIXING TANK Separate mixing tank above for mixing caustic

Capacity	bbls:	See F.2.1 Tks. 7- 10
Chemical mixer type	:	

F.2.7 SHALE SHAKERS

Primary:		
Quantity	no.:	7
Make/Model	:	Brandt/LCM-2D CS
Type	:	Linear Motion/ Cascading
Driven by no. of electric motors	no.:	3
Design flowrate	bbl/min:	Depending on Mud Characteristics
Cascading:		
Quantity	no.:	See Above
Make/Model	:	
Type	:	
Driven by no. of electric motors	no.:	
Design flowrate	bbl/min:	

F.2.8 DESANDER

Quantity	no.:	Desander cones over one cascading shale shaker
Make/Model	:	Brandt
Type	:	
Number of cones x sizes	no. x inch:	6 X 12” w/ discharge overboard
Type/size centrifugal pump	:	
Driven by electric motor of	hp:	
Is pump dedicated to desander	yes/no:	
Max. flowrate	bbl/min:	

F.2.9 DESILTER

Quantity	no.:	Desilter cones over one cascading shale shaker
Make/Model	:	Brandt
Type	:	
Number of cones x sizes	no. x inch:	40 X 4” W/ discharge over shaker or overboard
Type/size centrifugal pump	:	
Driven by electric motor of	hp:	
Is pump dedicated to desilter	yes/no:	
Max. flowrate	bbl/min:	

F.2.10 MUD CLEANER

Quantity	no.:	N/A
Make/Model	:	
Type	:	
Number of cones x sizes	no. x inch:	

Type/size centrifugal pump	:	
Driven by electric motor of	hp:	
Is pump dedicated to mud cleaner	yes/no:	
Max. flowrate	bbl/min:	

Inlet and outlet for centrifuge to be provided

F.2.11 MUD/GAS SEPARATOR (Poor Boy) Shall be capable to direct flow from flowline to MGS

Make/Type	:	Swaco
Gas discharge line ID	inch:	12” nominal
Gas discharge location, primary		Top
Can discharge be tied into burner system	yes/no:	no
Mud seal height	:	20
Calculated gas throughput	mmscf:	20
Dimensions		OAL 41.5 ft. X 6 ft.

F.2.12 DEGASSER

Quanty		2
Make/Type	:	Burgess/1500
Capacity	:	1000 GPM x 2
Type/size centrifugal pump	:	N/A
Driven by electric motor of power	hp:	N/A
Discharge line running to	:	6”
Vacuum pump make	:	Internal
Type	:	

F.2.13 MUD AGITATORS

Quantity	no.:	6
Make/Model	:	Philadelphia
Driven by motor of power	hp	15
Located in tanks (See F.2.1 for tank numbers)		8, 9, & 10
Quantity	no.:	3
Make/Model	:	Philadelphia
Driven by motor of power	hp	5
Located in tanks (See F.2.1 for tank numbers)		Shaker Tanks
Quantity	no.:	4
Make/Model	:	Philadelphia
Driven by motor of power	hp	10
Located in tanks (See F.2.1 for tank numbers)		1, 2, 3, & 4
Quantity	no.:	3
Make/Model	:	Philadelphia
Driven by motor of power	hp	40
Located in tanks (See F.2.1 for tank numbers)		5, 6, & 7

F.2.14 MUD CENTRIFUGE

Quantity	no.:	Power and space for 2

F.2.15 MUD HOPPER

Quantity	no.:	2
Make/Model	:	Halco

Feed pump make/model	:	Mixing pumps

F.2.16 SHEARING HOPPERS

Quantity	no.:	2
Make/Model	:	Halco/105-15
Feed pump make/model	:	Mixing pumps

F.2.17 DECK HOPPER

Quantity	no.:	1
Make/Model	:	Halco
Feed pump make/model	:	Mixing pumps

F.3 BULK SYSTEM

F.3.1 BARITE/BENTONITE SILOS

Quantity	no.:	5
Capacity of each silo	C.F.:	2500
Locations	:	Columns
Type weight loadcell	:	Hydraulic
Manufacturer	:	Martin Decker
Pressure rating		65
Relief valve(s) installed	yes/no:	yes

F.3.2 BARITE DAY TANKS

Quantity		2
Capacity of each silo	C.F:	1200
Locations	:	Moonpool
Type weight loadcell	:	Hydraulic
Manufacturer	:	Martin Decker
Pressure rating	psi:	65
Relief valve(s) installed	yes/no:	yes

F.3.3 SURGE TANK FOR BARITE

Quantity	no.:	2
Capacity of each tank	It:	70
Type weight loadcell	:	Hydraulic
Manufacturer	:	Martin Decker
Pressure rating	psi:	65
Relief valve(s) installed	yes/no:	yes

F.3.4 CEMENT SILOS

Quantity		3
Capacity of each silo	C.F:	2800
Locations	:	Columns
Type weight loadcell	:	Hydraulic
Manufacturer	:	Martin Decker
Pressure rating	psi:	65
Relief valve(s) installed	yes/no:	yes
Separate mud/cement loading facilities	yes/no:	yes
Discharge line for cement independent from		

barite/bentonite discharge line	yes/no:	Yes

F.3.5 CEMENT DAY TANKS

Quantity		2
Capacity of each silo	C.F:	1100
Locations	:	Cement Room
Type weight loadcell	:	Hydraulic
Manufacturer	:	Martin Decker
Pressure rating	psi:	65
Relief valve(s) installed	yes/no:	yes

F.3.6 SURGE TANK FOR CEMENT Third party

F.3.7 BULK TRANSFER SYSTEM (See also C.1.8 - Compressed Air Systems)

Independent air system for the silos and surge tanks consisting of a high-volume low-pressure compressor and air drier	yes/no:	no
Air reduced from main air supply through pressure regulators	yes/no:	yes
Separate volume tank and drier	yes/no:	no

G. CASING/CEMENTING EQUIPMENT Company Supplied
G.1 CASING EQUIPMENT Company Supplied
G.1.1 API CASING DRIFT Company Supplied
G.1.2 CLAMP-ON CSG THREAD PROT'S Company Supplied

G.1.3 CASING ELEVATOR

Manufacturer		Company Supplied
Type		
Capacity	st:	
Inserts for	inch:	

G.1.3 SIDE DOOR CASING ELEVATOR Company Supplied
G.1.4 SINGLE JOINT CASING ELEVATOR Company Supplied
G.1.5 SLIP TYPE ELEVATOR/SPIDERS

Quantity	no.:	Company Supplied

G.1.6 CASING SLIPS (Hand)

Quantity	no.:	Company Supplied
Make/Type	:	
For OD casing	inch:	
Quantity	no.:	
Make/Type	:	
For OD casing	inch:	
Quantity	no.:	
Make/Type	:	
For OD casing	inch:	

G.1.7 CASING BOWLS

Quantity	no.:	Company Supplied

Make/Type	:	
For OD casing (max/min)	inch/inch:	
Quantity	no.:	
Make/Type	:	
For OD casing (max/min)	inch/inch:	
Quantity	no.:	
Make/Type	:	
For OD casing (max/min)	inch/inch:	

G.1.8 CASING TONGS Company Supplied
G.1.9 POWER CASING TONGS Company Supplied
G.1.10 POWER UNIT FOR CASING AND TUBING TONGS

Quantity	no.:	1 Central Hydraulic unit
Driven by electric motor	yes/no:	YES

G.1.11 CASING CIRCULATING HEAD (Swedge) Company Supplied
G.1.12 CASING SPEARS (Internal) Company Supplied
G.1.13 CASING CUTTERS (Internal) Company Supplied
G.1.14 CROSSOVER CASING TO DRILL PIPE Company Supplied
G.1.15 CASING SCRAPERS Company Supplied

G.2 CEMENTING EQUIPMENT
G.2.1 CEMENT UNIT Company Supplied

G.2.2 CEMENTING MANIFOLD

Discharge manifold working pressure	psi:	15000
Cement pump discharge lines min. ID	inch:	3 Nonimal
Cement pump discharge lines working p	psi:	15000

G.2.3 CEMENT KELLY N/A
G.2.4 CEMENTING TUBING N/A

H. INSTRUMENTATION/COMMUNICATION
H.1 DRILLING INSTRUMENTATION AT DRILLER'S POSITION

H.1.1 WEIGHT INDICATOR

Make/Type	:	HITEC SMART DRILLING INSTRUMENTATION
Sensor type	:	ELECTRONIC DEADEND
Calibrated for number of lines strung (6, 8, 10, 12, etc.)	no.:	USER SELECTABLE

H.1.2 STANDPIPE PRESSURE GAUGES

Quantity	no.:	TBA
Make/Type	:	HITEC SMART DRILLING INSTRUMENTATION
Pressure range (maximum)	psi:	TBA

H.1.3 CHOKE MANIFOLD PRESSURE GAUGE

Quantity	no.:	2
Make/Type		HITEC SMART DRILLING INSTRUMENTATION
Pressure range (maximum)	psi:	0 - 15,000

H.1.4 ROTARY SPEED TACHOMETER

Make/Type	:	HITEC SMART DRILLING INSTRUMENTATION
Capacity range (maximum)	rpm:	0 - 200

H.1.5 ROTARY TORQUE INDICATOR : HITEC SMART DRILLING INSTRUMENTATION

H.1.6 MOTION COMPENSATOR INSTRUMENTS

Make/Type	:	HITEC SMART DRILLING INSTRUMENTATION
Hook position indicator	yes/no:	YES
Lock/unlock indicator	yes/no:	YES

H.1.7 PUMP STROKE COUNTERS

Make/Type	:	HITEC SMART DRILLING INSTRUMENTATION
One pump stroke indicator and one cumulative pump stroke counter for each pump.	yes/no:	YES

H.1.8 TONG TORQUE INDICATOR

Make/Type	:	
Capacity range (maximum)	ft lbs:	

H.1.9 PIT VOLUME TOTALIZER

Make/Model	:	HITEC SMART DRILLING INSTRUMENTATION
Floats in active mud tanks	yes/no:	YES
Floats in reserve mud tanks	yes/no:	YES
Loss/Gain indicator	yes/no:	YES
Alarm (audio and visual)	yes/no:	YES

H.1.10 MUD FLOW INDICATOR

Make/Model	:	HITEC SMART DRILLING INSTRUMENTATION
High/low alarm (audio and visual)	yes/no:	YES

H.1.11 TRIP TANK INDICATOR

Make/Model	:	HITEC SMART DRILLING INSTRUMENTATION
Chart recorder	yes/no:	DATA LOGGING
Alarm	yes/no:	YES

H.1.12 GENERAL ALARM SYS. yes/no: YES

H.1.13 AUTOMATIC DRILLER

Make/Type : HITEC SMART DRILLING INSTRUMENTATION

H.1.14 REMOTE CHOKE CONTROL UNIT (See E.14.1)

Make/Model : Houston Digital

H.2 DRILLING PARAMETER RECORDER

Quantity	no.:	USER DEFINED ELECT. DATA ACQUISITION
Location - 1	:	DRILLERS HOUSE
Location - 2	:	
Make/Type	:	HITEC SMART DRILLING INSTRUMENTATION
Quantity of pens	no.:	USER DEFINED ELECT. DATA ACQUISITION
Parameter recorded	:	”
Parameter recorded	:	”
Parameter recorded	:	”

Parameter recorded	:	”
Parameter recorded	:	”
Parameter recorded	:	”
Parameter recorded	:	”
Parameter recorded	:	”

H.3 INSTRUMENTATION AT CHOKE MANIFOLD

H.3.1 STANDPIPE PRESSURE GAUGE

Make/Type	:	Strain gauge
Pressure range (maximum)	psi:	0-10,000

H.3.2 CHOKE MANIFOLD PRESSURE GAUGE

Make/Type	:	Strain gauge
Pressure range	psi:	0-15,000
H.3.1 and H.3.2 combined on one panel	yes/no:	yes
Visible from choke operating position	yes/no:	yes

H.4 STANDPIPE PRESSURE GAUGE

Strain Gauges

Make/Type	:	OTECO
Pressure range	psi:	0-10,000
Visible from driller’s position	yes/no:	No

H.5 DEVIATION EQUIPMENT

H.5.1 MEASURING DEVICE

Quantity	no.:	1
Make/Type	:	Totco
Deviation range	degree:	0 - 8 / 0-12

H.5.2 WIRELINE WINCH

Make/Model	:	Mathey
Wire length (nominal)	ft:	25000
Depth counter	yes/no:	yes
Wire size	inch:	3/16
Pull indicator	Ibs:	yes

H.6 CALIBRATED PRESS. GAUGES : Strain Gauges

H.7 RIG COMMUNICATION SYSTEM

H.7.1 TELEPHONE SYSTEM

No. of stations	no.:	120
Make/Type	:	Mitel Exchange
Explosion proof	yes/no:	AS REQ’D.
No. of stations	no.:	
Make/Type	:	
Explosion proof	yes/no:	

H.7.2 PUBLIC ADDRESS SYSTEM

Can be combined with above	yes/no:	YES

Make/Type	:	Akusta
Explosion proof	yes/no:	AS REQ'D.

H.7.3 DRILL FLOOR - DERRICKMAN'S TALKBACK (For Intercom System)

No. of stations	no.:	14
Location	:	DWS - 2 / PHS
Location	:	CCR / ECR
Location	:	FLOOR, ROV, CP AREA, MONKEY BD., MP ROOM, MOONPOOL, SHAKERS, CROWN
Make/Type	:	AKUSTA
Explosion proof	yes/no:	AS REQ'D.

H.7.4 HAND-HELD VHF RADIOS

Quantity	12 MIN.
Make/Type	Earmark VOX 130

H.8 ENVIRONMENTAL INSTRUMENTATION

H.8.1 TEMPERATURE INDICATORS

Air temperature		Yes
Make/Model		Kongsberg
Sea water temperature		TBA
Make/Model	:	TBA
Recorder	yes/no:	Yes

H.8.2 BAROMETRIC PRESSURE yes/no: Yes

Make/Model	Kongsberg
Recorder	Yes

H.8.3 HUMIDITY SENSING INDICATOR Yes

Make/Model	Kongsberg
Recorder	No

H.8.4 WIND SPEED/DIRECTION Yes - QTY. 2

Make/Model	Kongsberg
Recorder	Yes

H.8.5 WAVE PROFILE RECORDER No

H.9 ADDITIONAL MODULE SPECIFIC INSTRUMENTATION

H.9.1 ROLL, PITCH AND HEAVE INDICATOR

Make/Type	Kongsberg
Recorder	

H.9.2 GYRO COMPASS

Make/Model	C. Plath / Navagat X
Located at	CCR ELECT. SPACE

H.9.3 ECHO SOUNDER Yes

Make/Model	Skipper
Located at	Bridge

Recorder		No
H.9.4 CURRENT INDICATOR		Doppler Current Profiler
Make/Model		TBA
Located at		Lower Hull Penetration
Recorder		TBA
H.9.5 WEATHER FACSIMILE RECOI		Yes
Make/Model	:	JRC / JAX - 9A
Located at	:	Radio Room
Recorder	yes/no:	Yes
H.9.6 RADAR	YES	Yes
Quantity	1	1
Make/Model		Norcontrol / Databridge 2000 BL
Located at		Bridge
Bandwidth	cm:	X-Band
Quantity	no.:	1
Make/Model	:	Norcontrol / Databridge 2000 BL
Located at	:	Bridge
Bandwidth	cm:	S-Band
H.10 RADIO EQUIPMENT		
H.10.1 SSB TRANSCEIVER		
Quantity		1
Make/Model		Sailor / RE2100
Power	watts:	600
Frequency ranges	hz:	100 khz - 30 MHz
(Synthesized/crystal)	:	Synthesized
Facsimile capable		No
Telex capable		N/A
H.10.2 E.P.I.R.B's		
Quantity		2
Make/Model	:	COSPAS / SARSAT / TRON 30S MK II
H.10.3 VHF RADIO TELEPHONE		
Quantity		5
Make/Model		Norcontrol - Sailor / RT 2048 W/ DSC
Power	watts:	25 W
Channels		
H.10.4 VHF RADIO TRANSCEIVER		
Quantity	no.:	3
Make/Model	:	Norcontrol - Sailor / RT 2048
Power	watts:	25 W
H.10.5 RADIO BEACON TRANSM		
Quantity		1
Make/Model	:	Southern Avionics / SA 100
Power	watts:	100 W

H.10.6 AEORNAUTICAL VHF TRANS

Quantity		1
Make/Model	:	Jotron
Power	watts:	40 W PEP
Frequency range	hz:	118 - 137
(Synthesized/crystal)	:	

H.10.7 WATCH RECEIVER

Quantity		1
Make/Model	:	Sailor / R501
Frequency	khz:	2182

H.10.8 SCRAMBLER

Quantity	no.:	No
Make/Model	:	

H.10.9 TELEX

Quantity	no.:	N/A
Make/Model	:	

H.10.10 SATELLITE COMM. SYS

Make/Model	:	NERA / C-10-0	/ NERA / H2095 B
Type	:	Type B	/ Type C
Facsimile link		Yes	
Telex link		Yes	
Telephone link		Data Link (9.6 K bits	/ Message Terminal
Other capabilities	:		

1. PRODUCTION TEST EQUIPMENT

1.1 BURNERS		N/A
1.2 BURNER BOOMS		Foundations Only
1.3 LINES ON BURNER BOOMS		N/A

1.3.1 OIL LINE

OD	inch:	4”
Working pressure	psi:	1480 psi
Connection type at burner end	:	Suitable to connect to well test equipment
H2S	yes/no:	Yes
Pressure gauge connection at barge end	inch:	Provided by well test company

1.3.2 GAS LINE

OD	inch:	3”
Working pressure	psi:	1480 psi
Extended beyond burner by	ft:	Provided by well test company
Connection type at burner end	type:	Suitable to connect to well test equipment
H2S	yes/no:	Yes
Pressure gauge connection at barge end	inch:	Provided by well test company

1.3.3 WATER LINE

OD	inch:	Seawater - 1-1/2”
Working pressure	psi:	285 psi

Connection type at burner end	type:	Suitable to connect to well test equipment
Pressure gauge connection at barge end	inch:	Provided by well test company

I.3.4 AIR LINE

OD	inch:	4”
Working pressure	psi:	285 psi
Connection type at burner end	type:	Suitable to connect to well test equipment
Pressure gauge connection at barge end	inch:	Provided by well test company

I.3.5 PILOT GASLINE

ID	inch:	Provided by well test company
Working pressure	psi:	
Connection type at burner end	type:	
Pressure gauge connection at rig end	inch:	

I.4 SPRINKLER SYSTEM

Sufficient to give protection to rig and personnel against heat radiation damage from the b	yes/no:	Provided by well test company

1.5 FIXED LINES FOR WELL TESTING

1.5.1 DRILL FLOOR TO SEPARATOR AREA

Type (Screwed/welded, both)	:	Tested and certified flexible flowlines provided by well test co. for connecting from rig floor to well test equip.

1.5.2 SEPARATOR AREA TO BOTH BURNER BOOMS

Type (screwed/welded, both.)	:	Welded
Quantity	no.:	2 ea. / one oil / one gas
Size OD	inch:	3” Gas / 4” Oil
Working pressure	psi:	1480 psi
Connection type at separator	type:	Suitable for connecting to well test company
Connection type at boom	type:	As above
Number of valves/lines	no.:	Provided by well test company
Size of valves	inch:	Provided by well test company
H2S	yes/no:	Yes
Valves installed near separator area for switching gas to either burner.	yes/no:	Yes

I.53 MUD PUMPS TO 2-BURNER : N/A

I.5.4 RIG AIR SYSTEM TO BOTH BURNER BOOMS

Type (screwed/welded, both)	:	Welded
Quantity	no.:	1 ea. Port and Starboard
Size OD	inch:	4”
Working pressure	psi:	
Non-return valves fitted	yes/no:	Yes

I.5.5 OIL STORAGE TANK TO OVERBOARD

Type (screwed/welded, both)	:	Provided by well test company
Quantity	no.:	
Size ID	inch:	

Working pressure	psi:	
Height above water level	ft:	
Connection type at separator area	type:	

I.5.6 SEPARATOR TO VENTSTACK OF RIG

Type (screwed/welded, both)	:	No vent from separator. Relief to flair
Quantity	no.:	
Size ID	inch:	
Working pressure	psi:	
Connection type at separator area	type:	

I.6 AUXILIARY POWER AVAILABILITY

I.6.1 FOR FIELD LABORATORY

Quantity	kw	2 - 480 volt boxes
Volts	v:	
Frequency	hz:	

I.6.2 FOR CRUDE TRANSFER PUMP

Quantity	kw:	Yes, as above
volts	v:	
Frequency	hz:	

I.6.3 FOR ELECTRIC HEATERS

Quantity	kw:	Yes, as above
Volts	v:	
Frequency	hz:	

J. WORKOVER TOOLS Company Supplied

K. ACCOMMODATION

K.1 OFFICES

K.1.1 CO. REP.'S OFFICE

Quantity	3
Complete with desk, filing cabinet(s) and other necessary furniture	YES
Unrestricted view to drill floor	NO(CCTV MONITOR)

K.1.2 CONT. REP.'S OFFICE

Quantity	3
Unrestricted view to drill floor	NO(CCTV MONITOR)

K.1.3 RADIO ROOM YES

Quantity 1

K.1.4 HOSPITAL ROOM

Number of beds/bunks	2 Beds
Wash basin	YES
Medical cabinet	YES
Dangerous drugs locker	YES

K.1.5 MUD LABORATORY AND FACILITIES

Separate room	yes/no:	YES
Equippped with:		
Mud balance	yes/no:	YES
Marsh funnel	yes/no:	YES
Filtration kit	yes/no:	YES
Sand content kit	yes/no:	YES
Stopwatch	yes/no:	YES

K.2 LIVING QUARTERS

K.2.1 TOTAL PERSONS ACCOMODATED

Quantity	130

K.2.2 ACCOMODATION FOR COMPANY'S PERSONNEL

Total quantity	60
Quantity of single bed rooms	2
C/W attached toilet	YES
Quantity of two bed rooms	30
C/W attached toilet	YES
Quantity of four bed rooms	0
C/W attached toilet	N/A

K.2.3 ACCOMODATION FOR CONTRACTOR'S PERSONNEL

Total quantity	70
Quantity of single bed rooms	7
C/W attached toilet	YES
Quantity of two bed rooms	30
C/W attached toilet	YES
Quantity of four bed rooms	O
C/W attached toilet	N/A

K.2.4 GALLEY

Quantity	1

K.2.5 MESS SEATING CAPACITY

Main mess	60
Aux. mess	N/A

K.2.6 MEETING ROOMS

Quantity	1

K.2.7 RECREATION ROOMS

Quantity	2
Recreation facilities:	YES
TV	YES
VCR	YES
Pool Table	NO
Ping Pong Table	YES
Computer	NO
Other	DARTS/CARDS/READING

K.2.8 OTHER ROOMS

Laundry	1 + 2 In change room for dirty clothes
Dry food store	1
Refrigerator	3
Change Rooms	4
Prayer Room	NO
Cinema	NO
Workout/Weight Room	YES

L. SAFETY EQUIPMENT
L.1 GENERAL SAFETY EQUIPMENT

L.1.1 GENERAL PERSONNEL PROTECTIVE GEAR

Safety bats (contractor only/everyone/not supplied	:	CONTACTOR ONLY
Safety boots (contractor only/everyone/not supplied	:	CONTACTOR ONLY
Safety clothing (contractor only/everyone/not supplied	:	CONTACTOR ONLY
Ear protection (contractor only/everyone/not supplied	:	EVERYONE
Rubber gloves (contractor only/everyone/not supplied	:	CONTACTOR ONLY
Rubber aprons (contractor only/everyone/not supplied	:	CONTACTOR ONLY
Fullface visors (contractor only/everyone/not supplied	:	CONTACTOR ONLY
Eye shields (for grinding machines, etc.) (Contractor only/everyone/not supplied	:	CONTRACTOR ONLY
Dust masks (contractor only/everyone/not supplied	:	CONTACTOR ONLY
Rubber gloves - elbow length for chemical handling (Contractor only/everyone/not supplied	:	CONTACTOR ONLY
Explosion proof handtorches c/w batteries (Contractor only/everyone/not supplied	:	CONTACTOR ONLY
Safety belts c/w lines (contractor only/everyone/not supplied	:	CONTRACTOR ONLY

L.1.2 EYE WASH STATIONS

Quantity	no.:	3
Make/model	:	TBA
Located at	pot water	MUD PROCESS ROOM
Located at	piping	DRILL FLOOR
Located at	:	MUD MIXING ROOM

L.1.3 DERRICK SAFETY EQUIPMENT

Derrick escape chute (rem chute)	no.:	N/A
Make/Type	:	
Derrick safety belts	no.:	2 W/ INERTIA REEL
Make/Type	:	TBA

L.1.4 DERRICK CLIMBING ASSISTANT
Make/Type

L.1.5 FRESH AIR BLOWERS (Bug Blowers)

Quantity	:	3
Make/Type	:	
Located at	:	Rig Floor
Located at	:	

L.2 GAS/FIRE/SMOKE DETECTION

L.2.1 H2S MONITORING SYSTEM

Make/Type	:	TBA
Sampling points at:		
Bellnipple	yes/no:	YES
Drillfloor	yes/no:	YES
Shale shaker	yes/no:	YES
Mud tanks	yes/no:	YES
Ventilation system into living quarters	yes/no:	YES
Other	:	YES
General alarm	yes/no:	
Alarm types (audible, visual, both) at:		
Driller's console	:	BOTH
Engine room	:	BOTH
Mud room	:	BOTH
Living quarters each level	:	AUDIBLE
Central area each structural level	:	BOTH
Other	:	BOTH
Central alarm panel	yes/no:	YES
Located at	:	CCR

L.2.2 COMBUSTIBLE GAS MONITORING SYSTEM

Make/Type	:	Simrad Integrated Alarm and Control System
Sampling points at:	yes/no:	
Bellnipple	yes/no:	YES
Drill floor	yes/no:	YES
Shale Shaker	yes/no:	YES
Mud tanks	yes/no:	YES
Ventilation system into living quarters	yes/no:	YES
Other	:	YES
General alarm	yes/no:	
Alarm types (audible, visual, both) at:		
Driller's console	:	BOTH
Other	:	BOTH
		YES

L.2.3 H2S DETECTORS (Portable)

Quantity	no.:	TBA
Make/Type	:	
Phials for H2S: measuring range		
from 1 to 20 ppm	no.:	
from 100 to 600 ppm	no.:	

L.2.4 CO2 GAS DETECTORS (Portable)

Quantity	no.:	TBA
Make/Type	:	
Phials for CO2: measuring range		
from 1 to 20 ppm	no.:	
from 20 to 200 ppm	no.:	
om 250-3000 ppm	no:	

L.2.5 EXPLOSIMETERS

Quantity	no.:	TBA
Make/Type	:	

L.2.6 FIRE/SMOKE DETECTORS IN ACCOMODATION

Make/type	:	THERMAL
Fire detection	yes/no:	YES
Smoke detection	yes/no:	YES
Central alarm panel	yes/no:	YES
Location	:	CCR

L.3 FIRE FIGHTING EQUIPMENT

L.3.1 FIRE PUMPS

Quantity	no.:	2
Make/Model	:	Patterson
Type	:	CENTRIFUGAL
Output	US gals/min:	550
All offtake points supplied by each pump	yes/no:	YES
Location of pumps	:	AUX. MACHINE ROOM PORT
Location of pumps	:	AUX. MACHINE ROOM FWD.
Fire fighting water delivery conforms to	yes/no:	YES
MODU spec version	:	

L 3.2 HYDRANTS AND HOSES

Hydrants positioned such that any point may be reached by a single hose length from two separate hydrants	yes/no:	YES
Quantity of hydrants	no.:	48
Hose connections/hydrant	no.:	46 X 1
Hose max. diam.	inch:	2.5” OD
Length	ft:	50’

L.3.3 PORTABLE FIRE EXTINGUISHERS

Quantity (total)	no.:	70
Type 1- CO2	no./lbs:	2 @ 4
	no./lbs:	37 @ 15
	no./lbs:	2 @ 150
Type 2 - Dry chemical	no./lbs:	17 @ 5
	no./lbs:	9 @ 10
	no./lbs:	3 @ 50
Type 3 - Foam	no./lbs:	0
	no./lbs:	0
	no./lbs:	0
Mounted adjacent to access ways and escape routes	yes/no:	yes

L.3.4 FIRE BLANKETS

Location	:	RIG FLOOR, GALLEY, HELICOPTER BOX
Quantity	no.:	3

L.3.5 FIXED FOAM SYSTEM

Automatically injected into fixed fire water system at central point with remote manual control	yes/no:	YES
Make/Type	:	Patterson
Quantity foam stored on site	GALLONS	700 GPM

Inductor tube	yes/no:	YES
Foam nozzles	no.:	4
Located at	:	HELIPORT -3 TURRET MOUNTED
Located at	:	HELIPORT -1 HOSE REELS
Located at	:	

L.3.6 HELIDECK FOAM SYSTEM

Dedicated system adequate for at least 10 minutes fire fighting at the rate quoted in the IMO MODU code	yes/no:	YES
IMO MODU code version	:	TBA
Make/Type	:	DOOLY
Quantity of monitors	no.:	3
Foam type	:	TBA
Rate	US gals/min:	350 gal. min. each

L.3.7 FIXED FIRE EXTINGUISHING SYSTEM

Protected spaces		
Engine room, type (Halon/CO2)		CO2
Paint locker, type (Halon/CO2)		CO2
Emergency generator, type (Halon/CO2)		CO2
SCR room, type (Halon/CO2)		CO2
Other (specify location & type)		CO2 IN MUD PUMP ROOM
Alarms (audible, visual or both)	:	
Automatic shutting of mechanical ventilation in protected spaces	yes/no:	YES
Remote manual release located at	:	
Remote manual release located at	:	
Remote manual release located at	:	

L.3.8 MANUAL WATER DELUGE SYSTEM	yes/no:	YES
Protected spaces	:	DRILL FLOOR, LIFEBOATS
Protected spaces	:	LIFERAFTS, MOONPOOL
Water supplied from fire main line	yes/no:	YES MAIN SALT WATER RING

L.3.9 WATER SPRINKLER SYSTEM IN ACCOMODATION

Automatic	yes/no:	YES
Working pressure	psi:	130
Pressurized tank capacity	ft3:	53.47

L.4 BREATHING APPARATUS : TBA

L.5 EMERGENCY FIRST AID EQUIPMENT

L.5.1 FIRST AID KITS

Quantity	no.:	TBA

L.5.*2* BURN KITS

Quantity	no.:	TBA

L.5.3 RESUSCITATORS

Quantity	no.:	TBA

Charged (spare) oxygen cylinders	no.:	

L.5.4 STRETCHERS

Quantity	no.:	TBA
Type	:	
Located at	:	

L.6 HELIDECK RESCUE EQUIPMENT

L.6.1 STORAGE BOXES

Quantity	no.:	TBA
Construction material	:	FIBERGLASS
Max height open	inch:	TBA

L.6.2 EQUIPMENT

Aircraft axe	yes/no:	YES
Large firemans rescue axe	yes/no:	YES
Crowbar	yes/no:	YES
Heavy duty hacksaw	yes/no:	YES
Spare blades	yes/no:	YES
Grapnel hook	yes/no:	NO
Length of wire rope attached	ft:	
Quick release knife	yes/no:	YES
Bolt croppers	yes/no:	YES

L.7 RIG SAFETY STORE

Equipment to repair, recharge and restock		R&BF will carry all spares necessary to ensure an efficient and safe operation.

L.8 EMERGENCY WARNING ALARMS

Approved system to give warning of different emergencies	yes/no:	YES

L.9 SURVIVAL EQUIPMENT

L.9.1 LIFEBOATS

Make/Type	:	TBA
Quantity	no.:	2
Capacity	person/craft:	65
Locations (fore, apt, port, stbd)	:	2 FORE
Fire protection	yes/no:	YES
Radios	yes/no:	YES
Flares	yes/no:	YES
Food	yes/no:	YES
First aid kits	yes/no:	YES
Maker/Type	:	TBA
Quantity	no.:	2
Capacity	person/craft:	65
Locations (fore, apt, port, stbd)	:	AFT
Fire protection	yes/no:	YES
Radios	yes/no:	YES
Flares	yes/no:	YES

Food	yes/no:	YES
First aid kits	yes/no:	YES

L.9.2 LIFERAFTS

Make/Type	:	TBA
Quantity	no.:	3
Capacity	person/craft:	30
Davit launched	yes/no:	YES & FLOAT FREE
Locations (fore, apt, port, stbd)	:	FORE
Fire protection	yes/no:	
Radios	yes/no:	TBA
Flares	yes/no:	YES
Food	yes/no:	YES
First aid kits	yes/no:	YES
Make/Type	:	TBA
Quantity	no.:	2
Capacity	person/craft:	30
Davit launched	yes/no:	YES
Locations (fore, apt, port, stbd)	:	AFT
Fire protection	yes/no:	
Radios	yes/no:	TBA
Flares	yes/no:	YES
Food	yes/no:	YES
First aid kits	yes/no:	YES

L.9.3 RESCUE BOAT

Make/Type	:	Port Fwd lifeboat is designated as a rescue boat
Engine power	hp:	

L.9.4 LIFE JACKETS

Make/Type		**TBA**
Quantity	no.:	163

L.9.5 LIFE BUOYS

Make/Type	:	TBA
Quantity	no.:	10

L.9.6 WORK VESTS

Make/Type	:	TBA
Quantity	no:	25

L.9.7 ESCAPE LADDERS/NETS

Make/Type	:	PERMANENT LADDERS
Quantity	no.:	4, 1 PER CORNER COL.

L.9.8 DISTRESS SIGNALS

Type	:	TBA
Quantity	no.:	1 SET

M. POLLUTION PREVENTION EQUIPMENT

M.1 SEWAGE TREATMENT

Make/Model	:	HAMMWORTHY (USCG APPROVED)
System type	:	BIOLOGICAL
Conforms to (Marpol annex IV, etc.)	:	YES

M.2 GARBAGE COMPACTION

Make/Model	:	To be provided
System type	:	
Conforms to (Marpol annex IV, etc.)	:	
Make/Model	:	
System type	:	
Conforms to (Marpol annex IV, etc.)	:	

M.3 GARBAGE DISPOSAL/GRINDER

Make/Model	:	To be provided
System type	:	
Conforms to (Marpol annex IV, etc.)	:	

N.1 THIRD PARTY EQUIPMENT

Mud Loggers (available sq feet)	555 sq. ft.
MWD / LWD (available sq feet)	555 sq. ft.
Cement Unit (available sq. feet)	1,087 sq. ft.
ROV (available sq. feet)	1184 sq. ft.
Electric Log (available sq. feet)	895 sq. ft.

EXHIBIT B-3

MATERIAL, SUPPLIES AND SERVICES

Categories: I. Furnished by CONTRACTOR, paid by CONTRACTOR.
II. Furnished by COMPANY, paid by COMPANY.
III. Furnished by CONTRACTOR, paid by COMPANY.

Category I

Furnished by CONTRACTOR, paid by CONTRACTOR

1.1 Fuel storage.
1.2 Lube oils and greases.
1.3 Tool joint lubricant for CONTRACTOR'S drill string.
1.4 Replacement screens on shale shaker for screen sizes 84 mesh and coarser.
1.5 Replacement screens for mud cleaner(s) for screen sizes 150 mesh and coarser.
1.6 Initial set of rig hoses for receiving or discharge of liquid and bulk consumables from workboats.
1.7 Initial installation and utility provision for AC drive cementing unit and cement mixing pumps in shipyard. (rental only - as provided in Rental Agreement).
1.8 Initial installation for ROV unit and installation of ROV cursor system. Provision of utilities for electric motor generator for ROV main power.
1.9 Welding services with welder in CONTRACTOR'S crew (overtime not included).
1.10 Except as otherwise provided in Exhibit "B-2" herein rig and equipment maintenance, running supplies, spares and replacement parts, and services for continuous operation of CONTRACTOR'S equipment.
1.11 Towing bridle and replacement of same from Drilling Unit to towing vessel(s) during all rig moves.
1.12 Supply vessel mooring system at Drilling Unit.
1.13 Labor on the Drilling Unit to load and unload all CONTRACTOR'S and COMPANY'S equipment, materials and supplies between supply vessels and Drilling Unit.
1.14 CONTRACTOR'S Shore Base.
1.15 Medical doctor on notice in the Operating Area for emergency treatment of CONTRACTOR'S personnel injured aboard the Drilling Unit.
1.16 Meals, bunk and accommodations, including medical services, on board Drilling Unit for all CONTRACTOR'S personnel and an average of ten (10) COMPANY and COMPANY third party personnel per day.
1.17 Personnel for Drilling Unit and shore base as set out in Exhibit "F".
1.18 Disposal of all liquids and other waste generated by CONTRACTOR including drum disposal.

1.19 Complement of personal protective equipment required to handle completion brines and synthetic base mud for those crew members with potential exposure.

1.20 Blowout preventers, choke and kill lines, ring gaskets, controls, handling, testing tools and spare parts as required set out in Exhibit “B-2”.

1.21 Wellhead connector and spare parts as required in Exhibit “B-2” to adapt CONTRACTOR’S BOP stack to COMPANY’S wellhead.

1.22 All other well control equipment components and replacement parts, including failsafe valves, riser, choke and kill lines and choke manifold. All replacement parts shall be Original Manufacturer’s Equipment.

1.23 Initial set of ram packer elements, annular elements, top seals, related equipment as required in Exhibit “B-2” CONTRACTOR’S BOP EQUIPMENT. All elements, packers, seals and related rubber goods shall be Original Manufacturer’s Equipment and oil mud compatible.

1.24 Manifolding and piping as required to flare burners for oil, gas, water and air.

1.25 CONTRACTOR shall conduct a drillpipe inspection on all drillpipe, drill collars, subs, rotary and handling tools prior to spudding the first well under this CONTRACT. A specified inspection including all optional inspections as specified by API-RP7G, such as; Transverse Defect inspection using induction coils and a magnetic particle inspection of tube ends, couplings, and verification of defects found by gamma ray wall thickness inspection. Drillpipe must satisfy criteria as new or premium drillpipe to be used on COMPANY’S wells.

1.26 CONTRACTOR shall conduct an inspection on all drillpipe after every 100,000’ drilled or 1500 rotating hours (whichever is less). Inspection type will satisfy criteria spelled out in API-IADC specified inspection for used drillpipe. Inspection will include all operational inspections in same API criteria along with magnetic particle for tube ends and couplings. Drillpipe must satisfy criteria as new or premium drillpipe to be used on COMPANY’S wells.

1.27 CONTRACTOR shall conduct an inspection on topdrive valves and subs, all drill collars, subs and related bottom hole assembly components every 250 rotating hours. All bottom hole assembly components shall meet a bending strength ratio of 2.25 to 3.00.

1.28 Living Quarters to accommodate 130 personnel minimum. Must have separate facilities for up to 10 women.

1.29 Three COMPANY designated offices. One for COMPANY’S drilling supervisors, one for COMPANY’S third partys and one for COMPANY’S geologists. All offices complete with intercom system, television, VCR’s, surge suppression for up to 4 computers, 2 desks and file cabinets.

1.30 All equipment shall comply with MMS regulations.

1.31 Spare parts inventory for surface and subsurface BOP equipment as per CONTRACTOR BOP EQUIPMENT LIST, Exhibit B-2. Spare parts inventory list to be provided to and agreed by COMPANY.

1.32 Supply labor required to test, service, and maintain, all surface, and subsurface BOP and well control equipment and tools including COMPANY’S wellhead running tools.

1.33 Mud pump liners and pistons for two (2) sizes as specified by COMPANY.

1.34 Fishing tools to include overshots, grapples, and crossover subs required to catch all contractor supplied drill string and bottom hole assembly components

listed in Exhibit “B-2”.

1.35 Diver services and equipment as required by CONTRACTOR.
1.36 Mud bucket for each size of CONTRACTOR supplied drill pipe.
1.37 Outside pipe wipers for each size of CONTRACTOR supplied drill pipe.
1.38 Pressure washer for rig floor and maintaining same.
1.39 Mud vacuum system for rig floor clean up and maintenance.
1.40 Space and utilities for the following COMPANY’S third party equipment: electric wireline logging unit, MWD/LWD logging unit, mud logging unit and two (2) centrifuges.
1.41 Space or accommodation for COMPANY’S warehouse.

Category II

Furnished by COMPANY, paid by COMPANY

2.1 Thread compound for COMPANY’S connectors and casing.
2.2 Potable and fresh water for drilling, cementing and wash down of CONTRACTOR’S equipment and for personnel use but with respect to the latter only in excess of the capacity of the distillation unit.
2.3 Diesel fuel.
2.4 Drill sites, location surveys, marker buoys.
2.5 All permits and licenses required for the drilling site and to permit access thereto and egress therefrom.
2.6 Weather forecast service.
2.7 Stabilizers, including sleeves and spare parts and maintenance.
2.8 Core heads, core catchers and coring service charges.
2.9 Drilling bits, bit breakers (not supplied per Exhibit B-2), underreamers, hole openers, shock subs, wall scrapers, and other down hole tools, plus maintenance and repairs.
2.10 Water based mud, chemicals and additives.
2.11 Synthetic oil base mud, oil emulsion and other special drilling and completion fluids for completing wells.
2.12 Mud engineering services, and other mud supervision.
2.13 Mud centrifuge.
2.14 Pumping and blowing of bulk materials from work boats to Drilling Unit and between workboats and dock storage facilities.
2.15 All completion and production equipment, including hangers, packers, liners, floats, centralizers, scratchers, casing shoes, float collars, wellheads, spacer spools, Christmas trees including ring gaskets, valves, well connections and all necessary tools and equipment for installation.
2.16 Wellhead running retrieving, handling and testing tools.
2.17 Cementing unit and cement mixing pumps.
2.18 Cement and cement services, including special rental charge.
2.19 Electric logging unit, services and related tools.
2.20 Gun perforating and related services.
2.21 Mud logging unit and related services.

2.22 Whipstocks, directional drilling tools and services.
2.23 All surface and down hole survey equipment and services, except for drift indicators and slick line unit as described in Exhibit “B-2”.
2.24 Drill stem, formation testing tools and services.
2.25 Test tanks and accessories for production testing.
2.26 Well test burner equipment, burners, separators, flow meters, any other well testing equipment, including installation costs and well testing services.
2.27 All permanent or special installations and services, including services for controlling blowouts and fires.
2.28 Diver, ROV services and equipment as required by COMPANY.
2.29 Additional welding services required by COMPANY.
2.30 Spare parts and operating supplies for COMPANY’S tools and equipment.
2.31 All transportation required for CONTRACTOR’S and COMPANY’S equipment, supplies, drilling and potable water and personnel between shore and Drilling Unit.
2.32 Transportation from base of operations to Drilling Unit by sea, air and/or helicopter.
2.33 Anchor handling vessels and crews to deploy and recover mooring system at COMPANY’S drilling location.
2.34 Dock and dockside facilities, including cranes and trucks, labor equipment for loading and unloading CONTRACTOR’S and COMPANY’S equipment, materials and supplies at COMPANY’S shore base, port charges, pilot fees, canal fees, wharfage, agent fees and related costs for movement of equipment and material at COMPANY’S shore base and dock facilities.
2.35 Any radio equipment required by COMPANY in excess of those described in Exhibit “B-2”, and maintenance of such radio equipment.
2.36 All radio permits and licenses for COMPANY’S radios.
2.37 Disposal of all liquid and other waste generated by COMPANY including drum disposal.
2.38 Disposal of cuttings, mud materials from the well, if required.
2.39 Wellhead, wellhead gasket, wear bushing and bore protectors. All other gaskets and bore protectors for CONTRACTOR’S account.
2.40 Casing and or tubing tools and crews not listed in Exhibit “B-2”.
2.41 All casing, tubing and accessories.
2.42 Casing cutting tools.
2.43 Drill pipe, drill collars and accessories other than that furnished by CONTRACTOR listed in Exhibit “B-2”.

Category III

Furnished by CONTRACTOR, paid by COMPANY

3.1 Special safety equipment required other than as described in Exhibit “D”.
3.2 Replacement screens on shale shakers for screen sizes finer than 84 mesh.
3.3 Replacement screens on mud cleaners for screen sizes finer than 150 mesh.
3.4 Welding consumables for welding COMPANY furnished equipment.
3.5 Additional off tour labor authorized by COMPANY for mixing cement, moving mud materials, COMPANY’S tubulars, etc.
3.6 Overtime beyond normal work schedule and extra CONTRACTOR personnel requested by COMPANY.
3.7 Replacement of CONTRACTOR supplied supply vessel mooring system ropes.
3.8 Replacement set of ram packer elements, top seals and annular elements. All elements, packers, seals and related rubber goods shall be Original Equipment Manufacturer equipment and oil mud compatible.
3.9 Replacement of CONTRACTOR supplied hoses for receiving and discharge of liquid and bulk consumables from workboats.
3.10 Meals and accommodations on board the Drilling Unit for COMPANY and COMPANY’S third party personnel in excess of an average of ten (10) per day calculated over a period of one (1) calendar month will be billed at CONTRACTOR’S actual cost.

EXHIBIT C

INSURANCE REQUIREMENTS

1. The insurance required to be carried by CONTRACTOR under this Contract is as follows:

   a. Workers' Compensation as may be required by the laws of the jurisdictions which the work is performed, including occupational disease. If the performance of the CONTRACT requires the use of watercraft or is performed over water, CONTRACTOR shall provide coverage for liability under the U.S. Longshoreman's and Harbor Workers Compensation Act, the Outer Continental Shelf Lands Act, and liability for admiralty benefits and damages under the Jones Act, Death on the High Seas Act, and general maritime laws on all employees except members of crews of vessels if crew liabilities are covered under Protection and Indemnity Insurance, and shall further provide that a claim "in rem", or against the Drilling Unit, shall be treated as a claim against the employer.

   b. Employer's Liability Insurance with limits not less than $10,000,000 per occurrence covering injury or death to any employee.

   c. Comprehensive General Liability Insurance, including contractual liability insuring the indemnity agreement as set forth in the Contract and products-completed operations coverage with a combined single limit of not less than $10,000,000 covering bodily injury, sickness, death and property damage. This insurance shall provide that a claim "in rem" or against the Drilling Unit be treated as a claim against the insured.

   d. Comprehensive Automobile Liability Insurance including contractual liability, insuring owned, non-owned, hired, and all vehicles used by CONTRACTOR with a combined single limit of not less than $10,000,000 applicable to bodily injury, sickness, or death and loss of or damage to property in any one occurrence.

   e. Watercraft Insurance: If the performance of this CONTRACT requires the use of watercraft to be provided by CONTRACTOR, CONTRACTOR shall carry or require the owners of the watercraft to carry: (1) Hull and Machinery (including Collision Liability) insurance, subject to the American Institute Hull Clauses or equivalent, in an amount not less than the stated value of the watercraft (any language in this policy which limits the coverage of an insured who is not an owner or who is not entitled to limitation of liability shall not apply to the extent the owner has assumed liability for the loss); (2) Protection and Indemnity Insurance, in an amount not less than the stated value of the watercraft or $5,000,000, whichever is greater (any language in this policy which limits the coverage of an insured who is not an owner or who is not entitled to limitation of liability shall not apply to the extent the owner has assumed liability for the loss); and (3) in respect to all chartered vessels, Marine Operator's Charterer's Legal Liability insurance with limits of not less that $5,000,000.

f. Aircraft Insurance: If the performance of this Contract requires the use of aircraft provided by CONTRACTOR, CONTRACTOR shall carry, or require the owners of the aircraft to carry: (1) All Risks Hull insurance in an amount equal to the replacement value of the aircraft, and (2) Bodily Injury Liability, including Passenger Liability of not less than $2,000,000 per passenger seat in any one occurrence and $25,000,000 property damage in any one occurrence.

g. All Risks Hull and Machinery/Physical Damage Insurance, includingCollision Liability, blowout and cratering coverage, in an amount equal to full value of the CONTRACTOR'S Drilling Unit and other equipment employed, including CONTRACTOR'S associated equipment and non-floating items normally situated in the ocean, such as blowout preventers, riser systems, anchors, anchor chains, and/or cable, pendant wires and pendant buoys. This coverage shall include at least $5,000,000 for costs or expenses of the removal of the wreck or debris of the Drilling Unit.

h. Protection and Indemnity Insurance on the Drilling Unit owned and/or operated by the CONTRACTOR in an amount of not less than the full value of the Drilling Unit or Five Million Dollars ($5,000,000), whichever is greater. This coverage may exclude liability to CONTRACTOR'S employees and members of the crew of the insured drilling unit provided the insurance set forth in Sections "a and b" hereof is warranted to remain in full force and effect during the term of this Contract. (Any language in this policy which limits the coverage of an insured who is not an owner or who is not entitled to limitations of liability shall not apply to the extent the owner has assumed liability for the loss.)

i. Pollution Liability Insurance on the vessel, in accordance with the terms of entry provided by the CONTRACTOR'S P&I Club (as required by the Oil Pollution Act of 1990 OPA 90).

2. All the insurance shall be carried by CONTRACTOR at CONTRACTOR'S expense with an insurance company or companies authorized to do business in the jurisdictions where the work is to be performed and satisfactory to Vastar. CONTRACTOR shall furnish certificates of insurance to Vastar evidencing the insurance required hereunder and, upon request, Vastar may examine true copies of the actual policies. Each certificate shall provide that the insurance is in full force and effect and that it shall not be canceled or materially changed without thirty (30) days (seven (7) days with respect to war risks, prior written notice to Vastar. All certificates must contain reference to endorsements (i.e., Additional Insured, Waiver of Subrogation, etc.) as required herein.

3. Vastar, its subsidiaries and affiliated companies, co-owners, and joint venturers, if any, and their employees, officers, and agents shall be named as additional insureds in each of CONTRACTOR'S policies, except Workers' Compensation for liabilities assumed by CONTRACTOR under the terms of this Contract.

4. All CONTRACTOR'S insurance policies shall be endorsed to provide that underwriters and insurance companies of CONTRACTOR shall not have any right of subrogation against Vastar, its subsidiaries, co-owners and joint venturers, if any, and their agents, employees, officers, invitees, servants, contractors, subcontractors, insurers, and underwriters.

5. Any coverage provided to Vastar by the CONTRACTOR'S insurance under this CONTRACT is primary insurance and shall not be considered contributory insurance with any insurance policies of Vastar, its subsidiaries, co-owners and joint venturers, if any..

6. All policies shall be endorsed to provide that there will be no recourse against Vastar for payment of premium.

7. CONTRACTOR shall require all its subcontractors to carry adequate insurance coverage during the term they are engaged in performing any work hereunder. Subcontractors shall furnish Vastar acceptable evidence of insurance upon its request.

8. Except where specifically provided for in this Contract any and all deductibles in the required insurance policies shall be assumed by, for the account of, and at CONTRACTOR'S sole risk.

9. In the event the premium for war, expropriation, nationalization and non re-exportation risks insurance for the CONTRACTOR'S Drilling Unit increases as a result of the importation of the Drilling Unit into a specific Area of Operations, CONTRACTOR shall notify Vastar of the increase in premium prior to payment by CONTRACTOR, and Vastar, at its sole option shall, within 48 hours of being given such notice either agree to reimburse CONTRACTOR for the documented increase in premium or allow the Drilling Unit to depart the Area of Operations for safe harbor once the well in progress is made safe.

EXHIBIT D

SAFETY, HEALTH, AND ENVIRONMENT MANAGEMENT SYSTEM

CONTRACTOR agrees in addition to CONTRACTOR'S Safety, Health and Environment program and COMPANY'S Safety, Health and Environment Manual ("SHE Manual"). to develop a **"RIG SITE SAFETY MANAGEMENT SYSTEM"**. The system shall contain provisions for self-monitoring and accountability.

The Rig Site Safety Management System shall, at a minimum, address the following items:

1. Safety and job planning meetings.
2. Training drills to verify viability of all response plans and to develop personnel.
3. A "Work Permit System" to include the following:
   a. Hotwork outside safe welding areas,
   b. Confined Space Entry,
   c. Working on High Pressure Lines,
   d. Pumping of Hazardous Materials,
   e. Maintenance of Life Boats,
   f. Bypassing or repairs to "Critical Safety Systems,"
   g. Handling of radioactive sources and explosives,
   h. Any work involving Dynamic Positioning system equipment,
   i. Work on or near remote start equipment, and
   j. Crane offload or backload lifts from workboat greater than 15 tons.

CONTRACTOR shall ensure that:

1. All chemicals received and shipped from the Drilling Unit are properly labeled, container undamaged, and a MSDS sheet accompanies product shipment. CONTRACTOR shall be responsible for the proper disposition of CONTRACTOR'S generated waste such as, but not limited to; lube oils, motor oils, antifreeze, batteries, tires, rubber products, junk iron, drill line, etc.

2. An inventory of all hazardous materials and chemicals is maintained on the Drilling Unit.

3. All radioactive sources and explosives shall be stored in appropriate and approved magazines.

4. All source containers are to be locked and stored in a safe area away from normal operations, living quarters and passage ways.

5. All personal protective equipment is identified and required to be used with each work activity.

6. CONTRACTOR will provide a Readiness Checklist for the following critical operations including, but not limited to, such as; Drill floor pre-tour, DP pre-tour, hydrocarbon transfer, lifesaving equipment, monthly Drilling Unit inspection, radioactive and explosives usage.

7. CONTRACTOR shall have in place a Safety Observation Program.

8. CONTRACTOR shall perform; pre-tour safety and weekly safety meetings, fire, abandon, man overboard and helicopter crash drills. Scenario drill records are to filed on location and be available for review by COMPANY'S personnel and regulatory bodies.

9. CONTRACTOR shall provide a designated firefighting team and equipment complete with back-up firefighting team.

10. CONTRACTOR and COMPANY will work together to incorporate an individual safety incentive program to be combined with safety and rig personnel performance and mutually agreed upon at a later date.

11. CONTRACTOR shall have an active Alcohol and Drug Screening Program. CONTRACTOR agrees to conduct periodic searches and testing for such substances. CONTRACTOR'S personnel who are considered to be safety sensitive personnel under the Department of Transportation regulations shall be subject to and in compliance with the U.S. Coast Guard regulations with respect to drug and alcohol testing as set forth in 46 CFR Parts 4 and 16, and 49 CFR Part 40.

12. CONTRACTOR shall ensure that all its employees receive Hazardous Materials training and how to use OSHA Form 20, known as Materials Safety Data Sheets, which permits employee reporting on toxic substances.

13. CONTRACTOR shall maintain current records of training and certification of personnel for the following: Hazcom, Well Control, Ballast Control, Crane Operations, Hotwork Firewatch Training, Welding, and Electrical. CONTRACTOR is required to maintain a Training Matrix Schedule for each position.

14. CONTRACTOR shall insure that Drilling Unit housekeeping, cleanliness and personal hygiene meets requirements of COMPANY'S SHE manual.

15. CONTRACTOR shall have on location at all times at least two (2) personnel trained in oil spill containment and hazardous materials handling and clean up.

16. CONTRACTOR shall immediately report to COMPANY'S representative, regardless of quantity, all environmentally sensitive spills such as, but not limited to, hydrocarbons or toxic materials.

17. CONTRACTOR to have an updated Spill Contingency Plan on site at all times.

18. CONTRACTOR shall immediately report to COMPANY'S representative and maintain records of the following: all incidents including but not limited to near misses, first aids, recordable accidents, lost time injuries, illnesses, spills, pollution, incidents involving hazardous and explosive materials, property and equipment damage.

19. CONTRACTOR shall maintain a daily Personnel on Board list to include personnel name, company and position.

20. During hurricane season, CONTRACTOR shall keep an updated Hurricane Evacuation Procedure complete with operational times to: secure the well, recover the riser/BOP's, secure the rig and offload all non essential or all personnel if required.

CONTRACTOR SAFETY REPORTING:

CONTRACTOR shall provide to the COMPANY'S Safety, Health and Environmental Representative a completed accident investigation report within twenty-four hours of each occurrence designated in Exhibit D-18 above. CONTRACTOR shall submit additional information each month concerning safety performance of CONTRACTOR'S employees in connection with the work performed hereunder. The following is a breakdown of the information that shall be submitted on or before the tenth day of each month for the previous month's safety performance.

1. Total man hours worked (month / YTD)
2. Total lost time accidents (month / YTD)
3. Total lost time days (month / YTD)
4. Total recordable accidents (month / YTD)
5. Total first aid cases (month / YTD)
6. Total cost equipment / property damage (month / YTD)
7. Any safety or health inspections, warnings, notices or asserted violations issued by any governmental agencies

This information should be mailed or telecopied to:

SHE Representative
Vastar Resources, Inc.
15375 Memorial Drive
Houston, Texas 77079

Telephone: 281/584-6100
FAX: 281/584-6810

SAFETY MANUAL RECEIPT ACKNOWLEDGMENT

Attached to the Drilling Contract between Vastar Resources, Inc.. and R&B Falcon Drilling Co. dated as of December 9, 1998.

Ron Tafery a duly authorized representative of Contractor and on behalf of Contractor hereby acknowledges receipt of the "Safety and Health Manual" of Vastar Resources, Inc. Contractor agrees that they have or agree to become familiar with said Safety and Health Manual and shall, to the extent not inconsistent with Contractor's manual, policy and procedures, comply and cause Contractor's employees, agents and others under Contractor's control entering upon Vastar Resources' premises in the performance of work or services or in connection therewith to comply with the applicable standards contained in the Safety and Health Manual of Vastar Resources, Inc. Vastar is not required by Contractor to police Contractor's compliance with any safety, health, and environmental rules, laws, regulations or orders and Contractor's agreement to comply therewith shall not impose any obligation on the part of Vastar under such rules, laws regulations or orders.

Contractor: R&B Falcon Drilling Co.

Name: Ron Tafery

Title: Vice President

Signature: /s/ Ron Tafery

Date: December 9, 1998

EXHIBIT E

TERMINATION PAYMENT SCHEDULE

Termination Pursuant to Article 27

Should COMPANY terminate the CONTRACT pursuant to Article 27.1, COMPANY shall pay CONTRACTOR a Lump Sum Payment as liquidated damages and not as a penalty, within ninety (90) days of termination calculated as follows:

Lump Sum equals Operating Rate less eighty (80)% of the documented operating costs times the number of days remaining under the Contract Term discounted to present value using the annual prime rate of interest as posted by CitiBank N.A. on the first day of the month in which Company terminates the Contract.

During the remaining Contract Period, CONTRACTOR shall make a good faith effort to market the Drilling Unit. Should CONTRACTOR be successful, CONTRACTOR shall refund to COMPANY any funds actually received or accrued from any other entity for the use of the Drilling Unit as follows:

(1) The repayment will be reduced by the eighty percent (80%) of the fixed cost not already paid by COMPANY.

(2) The repayment will be reduced by an amount equal to five percent (5%) as an incentive for CONTRATOR to actively market the Drilling Unit.

(3) Repayments by CONTRACTOR to COMPANY shall never exceed Contract Rate.

EXHIBIT F-1

CREW COMPLEMENT

Drill Crew	Total	On Board	Remarks
Drilling Rig Supt	2	1	
Toolpusher	4	2	
Driller	4	2	
Asst. Driller	8	4	
Pumpman	4	2	
Floorman	12	6	
Maintenance Supervisor (Electrical)	2	1	
Electrician	4	2	
Assistant Electrician	2	1	
Electronic Technician	4	2	
Mechanic	4	2	
Assistant Mechanic	2	1	
Welder	2	1	
Sub Sea Engineer	2	1	
Assistant Sub Sea	2	1	
Crane Operator	4	2	
Roustabout	16	8	
RTSC	2	1	
Medic	2	1	
Materialsman	4	2	
Captain/OIM	2	1	
Chief Officer	2	1	
D.P. Operator	4	2	
Assist. D.P. Operator	4	2	
A.B. Seaman/Painters	6	3	
Chief Engineer	2	1	
First Engineer	2	1	
2nd Engineer	4	2	
Oiler/Motorman	4	2	
Boatswain	2	1	
Galley	As Needed		
Total:	118	59	

a) Galley crew ratio of one to every 10 persons on board.
b) A mutually agreed pre-commencement manning schedule shall be attached.
c) Contractor may, with Company approval, reduce the marine crew manning based upon Coast Guard requirements, when available.

EXHIBIT F-2

COST OF ADDITIONAL PERSONNEL

Title	Total	On Drilling Rig	Regular Hourly Rate ($)	Overtime Rate with Burden	Daily Rate Per Man (w/ Burden)
Drilling Rig Supt	2	1	34.83	75.76	831.81
Toolpusher	4	2	30.48	66.29	736.47
Driller	4	2	25.69	55.88	637.43
Asst. Driller	8	4	17.85	38.83	465.29
Pumpman	4	2	13.50	29.36	369.78
Floorman	12	6	13.00	28.28	358.80
Maintenance Supervisor (Electrical)	2	1	26.12	56.81	641.12
Electrician	4	2	21.77	47.36	551.36
Assistant Electrician	2	1	16.50	35.89	435.65
Electronic Technician	4	2	22.86	49.72	575.30
Mechanic	4	2	21.77	47.36	551.36
Assistant Mechanic	2	1	16.50	35.89	435.65
Welder	2	1	15.75	34.26	419.18
Sub Sea Engineer	2	1	25.44	55.33	631.95
Assistant Sub Sea	2	1	21.77	47.36	551.36
Crane Operator	4	2	16.55	36.00	436.75
Roustabout	16	8	11.00	23.93	314.88
RTSC	2	1	17.85	38.83	465.29
Medic	2	1	15.67	34.09	417.42
Materialsman	4	2	15.02	32.67	398.00
Captain/OIM	2	1	35.70	77.65	850.88
Chief Officer	2	1	26.12	56.81	641.12
D.P. Operator	4	2	29.17	63.45	707.86
Assist. D.P. Operator	4	2	22.64	49.24	570.47
A.B. Seaman/Painters	6	3	11.00	23.93	314.88
Chief Engineer	2	1	28.30	61.55	688.79
First Engineer	2	1	22.64	49.24	570.47
2nd Engineer	4	2	19.59	42.62	503.50
Oiler/Motorman	4	2	14.00	30.45	380.76
Boatswain	2	1	17.42	37.89	455.85
Galley	As Needed				
Total:	118	59			

RBS8-D REPORTING ORGANIZATION CHART

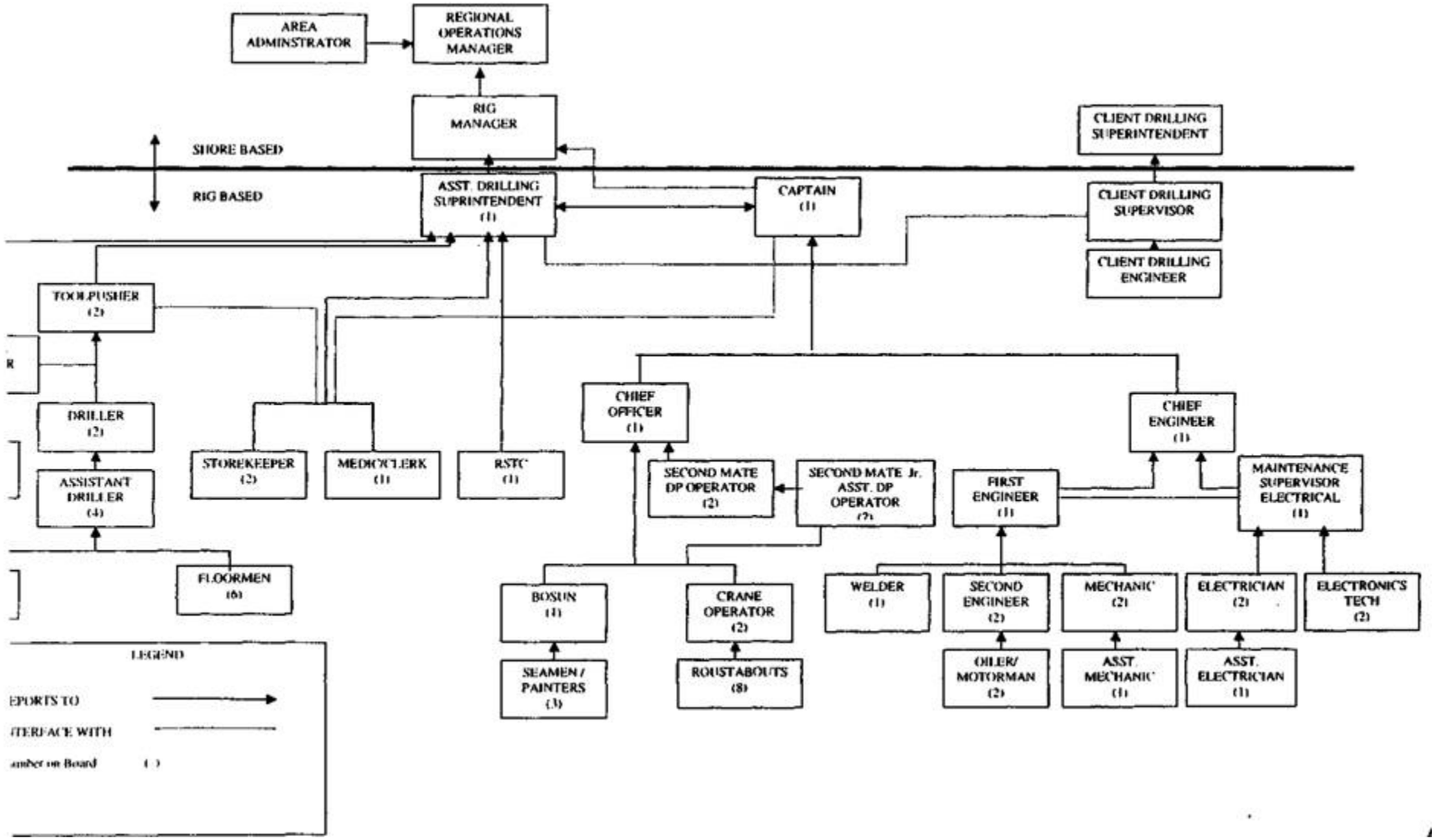

EXHIBIT G

VESSEL / EQUIPMENT PERFORMANCE / ACCEPTANCE

VESSEL TESTS / ACCEPTANCE

CONTRACTOR and COMPANY agree that the Drilling Unit must satisfy various sea worthy type certifications, including but not limited to, U.S. Coast Guard, ABS, and certifications pertinent to the flag the vessel will be registered under. CONTRACTOR shall supply COMPANY with a copy of these certificates witnessed or approved by any regulatory body.

CONTRACTOR shall provide OPERATOR with a preliminary copy of the Drilling Unit's Operations Manual as soon as it is available, prior to the Commencement Date and a final signed, dated and approved by ABS, as soon as received.

Additional vessel and equipment function/acceptance test criteria shall be developed and mutually agreed by CONTRACTOR and COMPANY and provided by the CONTRACTOR as a condition of delivery of the vessel. These shall include, but not be limited to: vessel, equipment acceptance, seatrials, full scale recoil test, dynamic position system (DP) / power systems failure mode effect analysis (FMEA) and fault tree analysis and a blowout preventer (BOP) multiplex control system (Mux) System FMEA and fault tree analysis. In principle, Shipyard Sea Trials shall be conducted as specified in the Shipyard Specifications, Chapter 18, Test and Trials. Additional test may be required upon arrival in the Gulf of Mexico, as mutually agreed. The project managers of the Parties agree to provide the following:

- Vessel / equipment acceptance / seatrials procedures: one (1) month prior to delivery
- DP/power systems FMEA and fault tree analysis: two (2) month after final design
- BOP mux control system FMEA and fault tree analysis: two (2) month after final design

EXHIBIT H

PROJECT EXECUTION PLAN

Construction and operation of the Drilling Unit (RBS8D) represents a major financial commitment to the Parties. Additionally, the Drilling Unit will be an integral part of COMPANY'S long range business plan for oil and gas exploration in the deepwater's of the Gulf of Mexico. Any change in cost, delivery or operability relating to the Drilling Unit could have a substantial impact on COMPANY'S plan, therefore, COMPANY must be notified immediately of any changes that would effect these items.

To help mitigate the risk, a mutually agreed Project Execution Plan will be developed to insure the Drilling Unit is delivered on time, within budget, is outfitted and will operate in accordance with this CONTRACT. To ensure that the latest technology is incorporated and maximum performance achieved, representatives from third party suppliers shall also be included. As a minimum, The Project Execution Plan will address the following items in appropriate detail:

- Project Goals/Operating Principles
- Project Organization
  - Roles/Responsibilities/Accountabilities
- Project Description/Schedule/Milestones
- Overall Assurance Plan
- Safety
- Interface Coordination Plan (Communication)
- Quality Plan
- Document Control
- Approval Process
- Change Control Procedures
- Management of Change
- Meeting/Presentation Schedule
- Risk Management Register
- Cost Control

Without limiting CONTRACTOR'S obligations under this CONTRACT, COMPANY will provide representatives to monitor the design and construction of the Drilling Unit. Any changes to the Drilling Unit that would effect the Dayrate, delivery or operability will require an amendment to the CONTRACT as set forth in Article 35.2. All changes to the design or specifications set forth in this CONTRACT require the Company Project Manager approval.

The project manager of the Parties agree to have a mutually agreed Project Execution Plan finalized by February 1, 1999.

April 13, 1999

Vastar Resources, Inc.
15375 Memorial Drive
Houston, TX 77079

Attention: Mr. Don Weisinger

Re: Drilling Contract dated December 08, 1998 between Vastar Resources, Inc. and R&B Falcon Drilling Co. for the Drilling Unit "RBS-8D" - Effective Date Establishment of Base Figures in accordance with Article 2.3.2 of the Contract

Gentlemen:
Pursuant to Article 2.3.2, we wish to advise that our base figures for the 4 items are as follows:

a. Labor (all inclusive)	U.S.$21,420 \ Day
b. Catering	U.S.$2,364 \ Day
c. Spare Parts & Supplies	PPI Code No. 1191.02 Base = 133.8 (Preliminary - December, 1998) -
d. Insurance	U.S.$2,660 \ Day

As the United States Department of Labor has not yet published the final December, 1998 index for Code No. 1191.02 "Oil Field and Gas Field Drilling Machinery", the above base index of 133.8 is still officially classified as preliminary and may be subject to change. The final index will be published in early May 1999. We shall write to you again at this time either to confirm 133.8 as the final figure or to advise the new figure. In any event, we felt it best not to further delay the submission to you of the other base figures due to the 4 month time lag in the publication of Government economic statistics.

Whilst writing, we wish to bring to your attention the following errors in Exhibit F-2 "Cost of Additional Personnel":

Title	Hrly Rate Shown			Correct Hrly Rate
Drilling Rig Supt	$ 34.83	Should be	$	35.70
Captain/OIM	$ 35.70	Should be	$	34.83
Chief Officer	$ 26.12	Should be	$	27.43
D. P. Operator	$ 29.17	Should be	$	23.08
Assist D. P. Operator	$ 22.64	Should be	$	20.90

We shall go ahead and formally change Exhibit F-2 to show the correct rates and revised corresponding extension figures upon receipt of your agreement to the above.

Sincerely yours,
R&B Falcon Drilling Co.

/s/ W.L. Ellis
W.L. Ellis
Regional Operations Manager

Contract Budget Request
RBS8-D Vastar Resources, Inc. / Gull of Mexico
Expatriate Rig Payroll

Exchange Rate: US $1.00 =1 U.S. $ [03PAY]

Rig-based	Budgeted On Board Expats	Budgeted Total Expats	Total Per Employee: Annual Work Days	Regular Monthly Base	Regular Monthly Travel Pay	Regular Monthly Total	Regular Annual Total	Payroll/ Calenday Day	Payroll Per Work Day
Asst. Superintendent*	1.00	2.00	182.50	8,000		8,000	96,000	263	526
Toolpusher	2.00	4.00	182.50	7,000		7,000	84,000	230	460
Tourpusher						0	0		
Barge Engineer*				6,000		6,000	72.000		
Asst. Barge Engineer*				4,800		4,800	57,600		
Maintenance Supervisor*	1.00	2.00	182.50	6,000		6,000	72,000	197	395
Driller	2.00	4.00	182.50	5,900		5,900	70,800	194	388
Alternate Driller	4.00	8.00	182.50	5,000		5,000	60,000	164	329
Alternate Driller Trainee						0	0		
Derrickman				3,330		3,330	39,960		
Pumpman	2.00	4.00	182.50	3,101	250	3,351	40,212	110	220
Motorman				3,215		3,215	38,580		
Welder	1.00	2.00	182.50	3,617		3,617	43,404	119	238
Crane Operator	2.00	4.00	182.50	3,800		3,800	45,600	125	250
Heavy Lift Crane Operator**						0	0		
Barge Captain						0	0		
Asst. Barge Captain						0	0		
Control Room Operator*				4,500		4,500	54,000		
Asst. Control Room Operator*				3,600		3,600	43,200		
Mechanic	2.00	4.00	182.50	5,000		5,000	60,000	164	329
Asst. Mechanic	1.00	2.00	182.50	3,790		3,790	45,480	125	249
Mechanic Helper						0	0		
Electronic Technician*	2.00	4.00	182.50	5,250		5,250	63,000	173	345
Electrician	2.00	4.00	182.50	5,000		5,000	60,000	164	329
Asst. Electrician	1.00	2.00	182.50	3,790		3,790	45,480	125	249
Electrician Helper						0	0		
Subsea Engineer*	1.00	2.00	182.50	7,000		7,000	84,000	230	460
Asst. Subsea Engineer*	1.00	2.00	182.50	5,000		5,000	60,000	164	329
Materialsman						0	0		
Storekeeper	2.00	4.00	182.50	3,450		3,450	41,400	113	227
Medic	1.00	2.00	182.50	3,450		3,450	41,400	113	227
Radio Operator				3,101		3,101	37,212		
Floorman	6.00	12.00	182.50	2,986	250	3,236	38,832	106	213
Lead Roustabout						0	0		
Roustabout	8.00	16.00	182.50	2,526	250	2,776	33,312	91	183
Paint Foreman						0	0		
Painter				2,124		2,124	25,488		
Captain/Master***	1.00	2.00	182.50	8,000		8,000	96,000	263	526
Chief Officer***	1.00	2.00	182.50	6,300		6,300	75,600	207	414
First Officer***				5,300		5,300	63,600		
Second Officer***				4,800		4,800	57,600		
Third Officer***				4,200		4,200	50,400		
Chief Engineer***	1.00	2.00	182.50	6,500		6,500	78,000	214	427
First Engineer***	1.00	2.00	182.50	6,000		6,000	72,000	197	395
Second Engineer***	2.00	4.00	182.50	5,200		5,200	62,400	171	342
Bosun***	1.00	2.00	182.50	4,000		4,000	48,000	132	263
Deck Supervisor***				4,000		4,000	48,000		
D.P. Operator***	2.00	4.00	182.50	5,300		5,300	63,000	174	348
Asst. D.P. Operator***	2.00	4.00	182.50	4,800		4,800	57,600	158	316
Oiler***	2.00	4.00	182.50	3,215	250	3,465	41,580	114	228
Able Seaman***	3.00	6.00	182.50	2,526	250	2,776	33,312	91	183
Rig Safety & Training Coordinator	1.00	2.00	182.50	4,100		4,100	49,200	135	270
Other						0	0		
Total	59.00	118.00	Overtime Wages Total				0		
			OIM Premium ($4,800 if applicable)				4.800		
			Total Annual Expatriate Payroll				6,257,544		
			Total Per Day Expatriate Payroll				17,144	(Posts to Rig Payroll)	
			Total Payroll Burden Per Day			20%	3,429	(Posts to Payroll Burden)	

* Semisubmersibles Only

** Super Tenders Only

Contract Budget Request
RBS8-D / Vastar Resources, Inc. / Gulf of Mexico
Expatriate Training Costs

Exchange Rate: US $1.00 =1 U.S. $ [09XPTTRN]

Employee Name	Employee Position	Name of School	School Location	# of Days	Training Wages Per Day	Outside Tuition	International Airfare	Domestic/ Charter	Hotel Per Day	Meals Per Day	Other
T.B.A.	Various	Well Control		10	75	2,500	300		100	35	20
T.B.A.	Various	Cyberchair		10	75	2,500	300		100	35	20
T.B.A.	Various	Varco		10	75	2,500	300		100	35	20
T.B.A.	Various	PM		10	75	2,500	300		100	35	20
T.B.A.	Various	GE		10	75	2,500	300		100	35	20
T.B.A.	Various	Burgess		10	75	2,500	300		100	35	20
T.B.A.	Various	Brandt		10	75	2,500	300		100	35	20
T.B.A.	Various	Fire Fighting		10	75	2,500	300		100	35	20
T.B.A.	Various	Sea Survival		10	75	2,500	300		100	35	20
T.B.A.	Various	Wartslia		10	75	2,500	300		100	35	20
T.B.A.	Various	Kamewa		10	75	2,500	300		100	35	20
T.B.A.	Various	Simrad		10	75	2,500	300		100	35	20
T.B.A.	Various	High Voltage		10	75	2,500	300		100	35	20
T.B.A.	Various	Alborg		10	75	2,500	300		100	35	20
T.B.A.	Various	Bridge Mgn		10	75	2,500	300		100	35	20
T.B.A.	Various	Radar		10	75	2,500	300		100	35	20
T.B.A.	Various	GMDSS		10	75	2,500	300		100	35	20
T.B.A.	Various	HLO		10	75	2,500	300		100	35	20
T.B.A.	Various	Crane Ops		10	75	2,500	300		100	35	20
T.B.A.	Various	AWC		10	75	2,500	300		100	35	20
T.B.A.	Various	STOP / H2S		10	75	2,500	300		100	35	20
T.B.A.	Various	EPT		10	75	2,500	300		100	35	20
T.B.A.	Various	DGPS		10	75	2,500	300		100	35	20
				230	1,725	57,500	6,900	0	2,300	805	460

Total Training Wages	17,250	
Total Outside Tuition	57,500	
Total Training Travel	38,410	
Total Training Costs	113,160	
Per Day Training Costs	310	(Posts to Training Costs)

Contract Budget Request
RBS8-D / Vastar Resources, Inc. / Gulf of Mexico
Expatriate Operational Travel

Exchange Rate: US $1.00 =1 U.S. $ [15EXTRAV]

Crew Change Commuter Travel

Airport of Origin	Total Personnel	Annual Roundtrips Per Emp.	Cost Per Trip: International Airfare	Cost Per Trip: Domestic/ Charter	Cost Per Trip: Hotel	Cost Per Trip: Meals	Cost Per Trip: Other	Total Annual costs	Commuter Schedule	Round Trips Per Year
East Coast	12	8.69		300	75	35	20	44,840	7x7	26.07
West Coast	12	8.69		300	75	35	20	44,840	14x14	13.04
North Central	12	8.69		200	75	35	20	34,412	21x21	8.69
Texas	12	8.69		100	75	35	20	23,984	28x28	6.52
Louisana	12	8.69		100	75	35	20	23,984	35x35	5.21
Mississippi	12	8.69		100	75	35	20	23,984	42x42	4.35
Other	4							0	56x56	3.26
								0	14x7	17.38
								0	21x14	10.43
								0	28x14	8.69
								0	56x28	4.35
								0	112x56	2.17
								0		
								0		
								0		
								0		
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								0		
								0		
Expatriate Commuters	76		Total Annual Expatriate Commuter Travel					196.046		
			Expat Cost / Man / Calendar Day				7.07			
			Total Annual Expatriate Operationl Travel					196,046		
			Total Per Day Expatriate Operational Travel					537	(Posts to Operational Travel)	

Contract Budget Request
RBS8-D / Vastar Resources, Inc. / Gulf of Mexico
Catering

Exchange Rate: US $1.00 =1 U.S. $ [12CAT]

Category	Personnel On Board	Manday Rate	Total/Day Per Category	Annual Catering Costs
Expatriate	59.00	34.26	2,021	737,789
TCN	0.00	34.26	0	0
National	0.00	34.26	0	0
Total Regular Crews	59.00		2,021	737,789
AVG OPERATOR ON BOARD	30.00	34.26	1,028	375,147
OPERATOR RECHARGE	(20.00)	(34.26)	(685)	(250,098)
NET OPERATOR CATERING	10.00			

NOTE:

AVG OPERATOR ON BOARD = ACTUAL AVERAGE OPERATOR/THIRD PARTY PERSONNEL ON BOARD. MANUAL INPUT REQUIRED.
OPERATOR RECHARGE = AUTOMATIC CALCULATION.
NET OPERATOR CATERING = CONTRACT SPECIFIED NUMBER OF OPERATOR/THIRD PARTY PERSONNEL TO PROVIDE CATERING.
MANUAL INPUT REQUIRED.

Office Staff	0.00	34.26	0	0	
Crew Change	0.00	34.26	0	0	
Other Mandays	0.00	34.26	0	0	
Total Other Mandays	0.00		0	0	
			Other Annual Amounts	0	
			Other Annual Amounts	0	
			Total Annual Catering Cost	862,838	
Daily Personnel On Board	89.00		Total Per Day Catering Cost	2,364	(Posts to Catering)

Bureau of Labor Statistics Data

Data extracted on: April 12, 1999 (10:20 AM)

Producer Price Index-Commodities

Series Catalog:

Series ID : wpu119102

Not Seasonally Adjusted
Group : Machinery and equipment
Item : Oil field and gas field drilling machinery
Base Date : 8200

Data:

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
1989	96.9	97.1	97.2	97.1	97.6	97.6	97.6	98.4	98.6	99.3	99.5	99.5	98.0
1990	99.6	99.6	99.2	99.2	99.3	99.9	100.2	101.5	105.8	106.2	106.6	106.6	102.0
1991	106.7	107.7	108.7	108.8	110.0	110.0	110.0	110.0	110.0	110.0	110.1	110.1	109.3
1992	110.1	110.1	110.1	110.1	110.2	110.4	110.6	110.6	110.6	110.8	112.4	112.5	110.7
1993	112.8	112.9	113.3	112.1	112.0	112.2	112.3	112.3	113.4	113.4	113.4	114.6	112.9
1994	114.6	114.6	114.6	114.6	114.7	114.9	115.4	115.4	115.9	117.8	117.8	117.8	115.7
1995	118.3	118.6	119.2	119.2	119.3	119.6	120.4	120.4	120.4	122.0	122.2	122.2	120.1
1996	124.0	124.0	124.0	124.3	124.2	124.8	125.3	125.3	125.3	126.2	126.6	127.1	125.1
1997	127.7	127.9	128.6	129.1	129.2	129.3	129.3	129.5	129.7	130.3	131.4	132.0	129.5
1998	133.1	132.9	133.1	133.0	133.0	133.0	132.9	132.9	132.9	133.6	133.6	133.8(P)	133.2(P)
1999	134.0(P)	133.9(P)	133.9(P)										

P: Preliminary. All indexes are subject to revision four months after original publication.

Data Home Page

BLS Home Page

http://146.142.4.24/cgi-bin/srgatc

Memo

To: **John Luedtke** **Date: August 3, 1998**

From: **Robert B. Carvell**

Subject: **Estimated Annual Premium**

RBS-8 M

Effective 15 March 1998

CONFIDENTIAL

I.	Coverage:	All Risk Hull & Machinery
	Insured Value:	$325,000,000
	Deductible:	$250,000 Per Occurrence
	NET ANNUAL PREMIUM:	$528,996.80
II.	Coverage:	Loss of Hire
	Daily Indemnity:	$189,000
	Policy Limits:	180 Days
	Deductible Period	21 Days
	NET ANNUAL PREMIUM	$232,867
III.	Coverage:	Primary Marine Protection & Indemnity
	Policy Limits:	$1,000,000 Per Occurrence
	Deductible:	$100,000 Per Occurrence
	NET ANNUAL PREMIUM (U.S. WATERS)	$182,000.00
	NET ANNUAL PREMIUM (FOREIGN WATERS)	$ 78,000.00
IV.	Coverage:	Excess Liability
	Policy Limits:	$400,000,000
	Deductible:	XS of Primary Marine P&I
	NET ANNUAL PREMIUM	$6,795.00

Continued/.....

V.	Coverage:		Contingent Energy Exploration & Development
	Policy Limits:		$100,000,000
	Deductible		$250,000 Per Occurrence
	NET ANNUAL PREMIUM		$704.76
VI.	U.S. Brokers:		Aon Risk Services, Inc.
	ANNUAL FEE		$19,379.85
TOTAL ANNUAL PREMIUM:		(U.S. Waters)	$970,743.41
		(Foreign Waters)	$866,743.41

Mike Roth
MARKETING MANAGER NAR

R & B FALCON DRILLNG CO.
311 BROADFIELD BLVD., SUITE 400
HOUSTON, TEXAS 77084

July 24, 2001

Vastar Resources, Inc
15375 Memorial Drive
Houston, TX 77079

Attn: Mr. Don Weisinger

Re: Vastar Resources Inc. ("Vastar") & R & B Falcon Drilling Company ("R &B")
Drilling Contract — RBS-8D — Deepwater Horizon ("Rig") (hereinafter referred to as the "Contract")

Deepwater Horizon Contract Amendment — Additional Personnel

Dear Mr. Weisinger,

Reference is made for all purposes to that certain *Offshore Drilling/Workover/Completion Contract* dated December 9, 1998 ("Contract"), by and between **R&B Falcon Drilling Co.** ("R&B") and **Vastar Resources, Inc.** ("Vastar").

Upon Commencement Date of the Contract, Vastar has requested and R&B agrees to provide two additional (2) Deck Foremen, four (4) Assistant Pumphands, four (4) Solid Control Technicians and four (4) Roustabouts in addition to those specified to be provided in Exhibit F-2 of the Contract, for operations on the semi-submersible Deepwater Horizon. Exhibit F-2 shall be amended, effective as of June 26, 2001 to provide for these additional personnel, at cost to be paid by Vastar based upon the following rates, subject to the labor cost escalations set forth therein:

Title	Total	On Rig	Overtime Rate (per person per hour) with Burden	Daily Rate (per person) with Burden	Total Day Rate with Burden
Asst. Pumpman	4	2	$ 27.18	$ 368.30	$ 736.60
Solid Control Tech	4	2	$ 27.18	$ 368.30	$ 736.60
Deck Foreman	2	1	$ 38.14	$ 478.93	$ 478.93
Roustabout	4	2	$ 23.08	$ 332.89	$ 665.78
TOTAL ADDITIONAL PERSONNEL	14	7			$ 2,617.91

Above rates are exclusive of a $65.00 per manday cost of training and transportation.

Vastar reserves the right to elect to release one or all of the above additional personnel upon thirty (30) days written notice to R&B. R&B may, if at that time R&B deems such personnel necessary for its operations, elect to retain such personnel at its own cost.

PHONE: 281-647-8518 FAX: 281-647-8754 EMAIL:mroth@deepwater.com

VASTAR RESOURCES, INC.
Deepwater Horizon Contract Amendment – Additional Personnel June 26, 2001
TSF File #01-063

Except as expressly amended herein, the terms and conditions of the Contract shall remain in full force and effect as originally executed.

If the above and foregoing sets forth your understanding of the agreement between R&B and Vastar, please sign both originals in the space provided below and return one fully executed original agreement to the undersigned.

Sincerely,
R & B Falcon Drilling Co.

/s/ Mike Roth
Mike Roth

AGREED AND ACCEPTED
THIS 26 DAY OF JULY, 2001

VASTAR RESOURCES INC.

SIGNED ***/s/ Don Weisinger***
PRINTED ***Don Weisinger***
TITLE ***Drilling Team Leader***

TERRY BONNO
SR. MARKETING REPRESENTATIVE

R & B FALCON DRILLING COMPANY
311 BROADFIELD BLVD., SUITE 400
HOUSTON, TEXAS 77084

December 12, 2001

BP America Production Company
Attn: Don Weisinger
501 WestLake Park Blvd.
Houston, TX 77079

Reference: **Drilling Contract No. 980249** between **Vastar Resources Inc.** , predecessor in interest to BP America Production Company ("BP") and **R&B Falcon Drilling Company** ("R&B") dated December 9, 1998 for RBS-8D (now known as the **Deepwater Horizon),** as amended (the "Contract")

Subject: **Letter of Agreement for Cost Escalation and Naming Convention Adjustments**

Dear Mr. Weisinger,

In accordance with Article 2 – Dayrates, Section 2.3 – Adjustment in Dayrates, we have recently completed an analysis of the costs of the Deepwater Horizon. To assist in clarification of position titles as related to the merger between R&B Falcon and Transocean, we have amended Exhibit F-1 – Crew Compliment and Exhibit F-2 – Cost of Additional Personnel. Both amended exhibits are attached and titled, ***Exhibit F-1a*** and ***Exhibit F-2a,*** which are the original Exhibit F-1 and F-2 with the only revisions made are position title changes as per the Naming Conventions of the merged company and will supercede the originals.

Cost analysis for the ***Deepwater Horizon*** has been calculated based on the contract and the Establishment of Base Figures letter dated April 13, 1999. All costs have been reviewed and adjusted relative to the Contract Section 2.3.2 a) Labour Costs, b) Catering Costs, c) Spare Parts/Supplies Element, and d) Insurance Element. Please find the attached documents to substantiate our escalations including the Basis for Cost Escalations spreadsheet, Personnel List with rates, and the Bureau of Labor Statistics Data printout. The attached Basis for Cost Escalation Spreadsheet specifies the base rates, the new totals after this escalation and the variance column indicates the increase or decrease as appropriate per section. Payments of such adjustments shall be deemed to be effective beginning on the date the rig commenced operations, September 18, 2001. R&B shall issue an invoice for this retroactive adjustment and BP shall pay this invoice in accordance with the billing and payment procedures in the Contract.

In accordance with the terms of the referenced contract, the parties agree to the following new dayrate changes under this letter of agreement:

2.3.2a The Base Labor cost adjustment will be an increase of $6,876 from the baseline of $21,420 with a new total of $28,296. Labor will also increase by $239 on the additional personnel to a new total of $2,613.

2.3.2b Contractor's cost of catering has decreased by ($541) to a new total of $2,067 under the baseline of $2,608.

PHONE: 281-675-8848 FAX: 281-647-8754 EMAIL:tbonno@deepwater.com

BP America Production Company
Deepwater Horizon Contract - Cost Escalation
TSF File #01-063

2.3.2c Based on the initial base Spare Parts/Supplies Element of $12,692, there will be an increase of $1,159 to a new baseline of $13,851.

2.3.2d The insurance element has decreased by $861 over the baseline figure of $2,660 and the new Total Base Insurance Cost will be $1,799.

Except as expressly provided herein, the terms and conditions of the Contract shall remain in full force and effect. Each party represents that this letter agreement has been validly executed and delivered, and has been duly authorized by all action necessary for the authorization therefore.

In summary, the following changes are effective as follows:

Paragraph	2.3.2a	$	6,876	
Paragraph	2.3.2a		239	(additional personnel)
Paragraph	2.3.2b		(541)	
Paragraph	2.3.2c		1,159	
Paragraph	2.3.2d		(861)	
Total		$	6,872	

If the above and foregoing sets forth your understanding of the agreement between R&B and BP, please sign both originals in the space provided below and return one fully executed original agreement to the undersigned.

If you have any questions, please contact the undersigned or John Keeton at Transocean's Park Ten Office 281-647-8500.

Sincerely,

/s/ Terry Bonno
Terry Bonno
Sr. Marketing Representative
On Behalf of R & B Falcon Drilling Co.

AGREED AND ACCEPTED
THIS 13th DAY OF JUNE, 2002

BP AMERICA PRODUCTION COMPANY

SIGNED ***/s/ R. Kevin Guerre***
PRINTED ***R. Kevin Guerre***
TITLE ***TL - SCM***

EXHIBIT F-1a

CREW COMPLEMENT

Drill Crew	**Total**	**On Board**
~~Drilling Rig Supt~~/OIM	2	1
Toolpusher	4	2
Driller	4	2
Asst. Driller	8	4
Pump**hand**	4	2
Floorhand ~~Roughneck~~	12	6
~~Maintenance~~ **Electrical Supervisor** ~~(Electrical)~~	2	1
Chief Electrician	4	2
~~Assistant~~ Electrician	2	1
Chief Electronic Technician	4	2
Chief Mechanic	4	2
~~Assistant~~ Mechanic	2	1
Welder	2	1
Sub Sea **Supervisor** ~~Engineer~~	2	1
Assistant Sub Sea	2	1
Crane Operator	4	2
Roustabout	16	8
Rig Safety & Training **Coordinator** ~~Officer~~	2	1
Medic	2	1
~~Materialsman~~ **Materials Coordinator**	4	2
~~Captain~~ **Master**/~~OIM~~	2	1
Chief **Mate** ~~Officer~~	2	1
D. P. Operator	4	2
Assist. D.P. Operator	4	2
A.B. Seaman/Painters	6	3
Chief Engineer	2	1
First **Asst.** Engineer	2	1
2nd **Asst.** Engineer	4	2
Motor**hand**	4	2
~~Beatswain~~ **Bosun**	2	1
Galley	As Needed	
Tota1:	118	59

a) Galley crew ratio of one to every 10 persons on board.
b) A mutually agreed pre-commencement manning schedule shall be attached.
c) Contractor may, with Company approval, reduce the marine crew manning based upon Coast Guard requirements, when available.

Contract No. 980249

BASIS FOR COST ESCALATIONS
DEEPWATER HORIZON
As of September 1, 2001

		Per Baseline Costs Plus July 24, 2001 Letter	Sept. 2001	2001 Variance
Base Labor Cost:				
Labor & Burden (per schedule)		$ 20,573	25,476	4,903
Training & Transportation Costs		847	2,820	1,973
Total Base Labor Cost		**$ 21,420**	**$ 28,296**	**$ 6,876**
Percentage Increase				**32%**
Additional Crew Increase per agreement dated July 24, 2001				
Labor & Burden (per schedule)		2,163	2,278	115
Training & Transportation Costs		$ 211	335	**124**
Total Additional Personnel Cost		**$ 2,374**	**$ 2,613**	**$ 239**
Percentage Increase				**10%**
Base Catering Cost:				
59 Combined Personnel @	$ 27.20	$ 2,021	$ 1,605	(417)
7 Additional Personnel @	$ 27.20	$ 244	$ 190	(53)
10 Company Personnel @	$ 27.20	$ 343	$ 272	(71)
Total Base Catering Costs		**$ 2,608**	**$ 2,067**	**$ (541)**
Percentage Increase				**-21%**
Base Insurance Cost		**$ 2,660**	**$ 1,799**	**$ (861)**
Percentage Increase				**-32%**
Base Repair and Maintenance Cost		**$ 12,692**	**$ 13,851**	**$ 1,159**
Percentage Increase				**9%**
Total Baseline Operating Costs		**$ 41,754**	**$ 48,626**	**$ 6,872**

Horizon Cost Escalations

DEEPWATER HORIZON

Adjusted Base Labor as of September 1, 2001

Gulf of Mexico Crew Complement				A	B	C	D
				GOM Base Labor w/Burden		GOM Overtime Rates	
	No. of Personnel						
JOB CODE	On Board	Assigned To Rig	JOB CLASSIFICATION	Daily Rate (per person) w/ Burden*	Total Daily On Board Cost**	Daily Rate w/ Burden**	Hourly Rate w/ Burden**
	1	2	Offshore Installation Manager	930.23	855.23	Salaried	
	2	4	Toolpusher	761.90	1,373.80	Salaried	
	2	4	Driller	650.87	1,151.74	650.12	54.18
	4	8	Assistant Driller	493.35	1,673.41	462.88	38.57
	2	4	Pumphand	408.82	667.65	362.40	30.20
	10	20	Floorhand	395.57	3,205.71	346.65	28.89
	10	20	Roustabout	353.97	2,789.67	297.20	24.77
	1	2	Welder	475.62	400.62	441.80	36.82
	2	4	Crane Operator	493.35	836.70	462.88	38.57
	2	4	Chief Mechanic	581.84	1,013.67	568.06	47.34
	1	2	Mechanic	471.20	396.20	436.55	36.38
	2	4	Motor Operator	395.97	641.93	347.12	28.93
	1	2	Electrical Supervisor	663.46	588.46	Salaried	
	2	4	Chief Electrician	581.84	1,013.67	568.06	47.34
	1	2	Electrician	471.20	396.20	436.55	36.38
	2	4	Chief Electronic Technician	590.67	1,031.34	578.56	48.21
	1	2	Senior Sub Sea Supervisor	768.23	693.23	Salaried	
	1	2	Assistant Sub Sea Supervisor	546.43	471.43	525.97	43.83
	2	4	Materials Coordinator	435.79	721.58	394.46	32.87
	1	2	Master	810.10	735.10	Salaried	
	1	2	Chief Mate	675.99	600.99	679.98	56.66
	1	2	Chief Engineer	751.42	676.42	Salaried	
	1	2	1st Assist. Engineer	634.12	559.12	630.21	52.52
	2	4	2nd Assist. Engineer	599.57	1,049.14	589.14	49.10
	2	4	Dynamic Position Operator	546.43	942.86	525.97	43.83
	2	4	Assistant Dynamic Position Operator	457.95	765.89	420.79	35.07
	1	2	Deck Pusher	512.80	437.80	486.00	40.50
	1	2	Bosun	457.95	382.95	420.79	35.07
	3	6	Able Bodied Seaman	413.70	1,016.11	368.20	30.68
	1	2	Rig & Safety Training Technician*	466.78	391.78	431.29	35.94
	1	2	Rig Medic/Clerk	348.23	273.23	290.38	24.20
	66	**132**		**Total Base Labor Costs =**	**$ 27,753.63**		

*** Does include catering, transportation, or training expense.**

**** Does NOT include catering transportation, or training expense.**

Notes:

1) The figures in column "A" are to be used as the basis for adding personnel to the permanent crew and for determining the credit for crew members short.

2) The figures in column "B" are the product of multiplying the number of "on board" personnel by the "Daily Rate w/ Burden" in column "A". The Sum of column "B" is the "Total Base Labor Cost" per day.

3) The figures in columns "C" and "D" are the basis for charging the Operator for overtime hours worked at the request of the Operator.

Data extracted on: June 13, 2002 (10:18 AM)

Producer Price Index-Commodities

Series Catalog:

Series ID : wpu119102

Not Seasonally Adjusted
Group : Machinery and equipment
Item : Oil field and gas field drilling machinery
Base Date : 8200

Data :

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
1992	110.1	110.1	110.1	110.1	110.2	110.4	110.6	110.6	110.6	110.8	112.4	112.5	110.7
1993	112.8	112.9	113.3	112.1	112.0	112.2	112.3	112.3	113.4	113.4	113.4	114.6	112.9
1994	114.6	114.6	114.6	114.6	114.7	114.9	115.4	115.4	115.9	117.8	117.8	117.8	115.7
1995	118.3	118.6	119.2	119.2	119.3	119.6	120.4	120.4	120.4	122.0	122.2	122.2	120.1
1996	124.0	124.0	124.0	124.3	124.2	124.8	125.3	125.3	125.3	126.2	126.6	127.1	125.1
1997	127.7	127.9	128.6	129.1	129.2	129.3	129.3	129.5	129.7	130.3	131.4	132.0	129.5
1998	133.1	132.9	133.1	133.0	133.0	133.0	132.9	132.9	132.9	133.6	133.6	133.6	133.1
1999	133.8	133.7	133.7	133.9	133.9	134.0	134.0	133.7	133.7	133.7	134.4	134.6	133.9
2000	134.9	136.3	136.3	136.3	136.5	136.5	136.5	136.6	136.7	138.7	138.7	138.7	136.9
2001	143.5	143.9	144.0	144.0	144.0	145.5	145.6	145.8	145.7	146.1	146.1	146.1	145.0
2002	146.2	146.0(P)	146.7(P)	146.7(P)	146.5(P)								

Preliminary. All indexes are subject to revision four months after original publication.

Bureau of Labor Statistics
Square Building
2 Massachusetts Ave., NE
Washington, DC 20212-0001

Phone: (202) 691-5200
Fax-on-demand: (202) 691-6325
Data questions: **blsdata_staff@bls.gov**
Technical (web) questions: **webmaster@bls.gov**
Other comments: **feedback@bls.gov**

Memo

To: Terry Bonno **Date:** December 6, 2001

From: James Mitchell, Director of Risk Management

Subject: Estimated Annual Premium – Deepwater Horizon

CONFIDENTIAL

The following annual premiums have been established for the Deepwater Horizon and are effective September 1, 2001:

Coverage:	All Risk Hull & Machinery
Insured Value:	$350,000,000
Deductible:	($5MM/$7.5MM/$7.5MM/$10MM aggregate layers)
NET ANNUAL PREMIUM:	$470,329
Coverage:	Primary Marine Protection & Indemnity
Policy Limits:	$1,000,000 per occurrence
Deductible:	$250,000 Per Occurrence
NET ANNUAL PREMIUM (US WATERS):	$125,352
NET ANNUAL PREMIUM (FOREIGN WATERS):	$53,796
Coverage:	Excess Liability
Insured Value:	$452,000,000
Deductible:	XS of Primary Marine P&I
NET ANNUAL PREMIUM:	$26,334
U.S. BROKERS:	McGriff Seibels & Williams, Inc.
ANNUAL FEE	$34,454
TOTAL ANNUAL PREMIUM: (U.S. WATERS)	$656,469
TOTAL ANNUAL PREMIUM: (FOREIGN WATERS)	$584,913

Rig Name Contractor & No.	Effective Date	Commence Date	Duration Mos. &	Last Update/	Reoccurrence Timing	Reoccurrence Condition
Horizon(2) **Vastar (BP)** **01-063**	Dec. 8, 1998	Sept. 1, 2001			Annually	=> 5%

	12/8/98 Baselines	9/1/01 Costs		
A. Baseline Labor	$ 21,420	$ 28,296	32.10%	$ 6,876
Addtl Personnel	$ 2,374	$ 2,613		$ 239
Total Labor	**$ 23,794**	**$ 30,909**		**$ 7,115**
B. Catering	$ 2,608	$ 2,067		$ -541
C. Cost of R&M	***$ 12,692***	$ 13,851		$ 1,159
BLS Indices	133.6	145.8	9.13%	
D. Insurance Premiums	$ 2,660	1,799.00		$ -861
	$ 41,754	$ 48,626		$ 6,872
				16%

Summary

Escalations and baselines provide for increases in labor costs, catering costs, increases in the cost of repairs and maintenance and insurance premiums. All increases must exceed 5% and can be addressed as early as the Commencement Date and then only annually there after.

R & B FALCON DRILLNG CO.

1311 BROADFIELD BLVD., SUITE 400
HOUSTON, TEXAS 77084

JOHN KEETON
RIG MANAGER

April 23, 2002

Vastar Resources, Inc.
C/O BP America Inc.
15375 Memorial Drive
Houston, TX 77079

Attn: Mr. Mike Stefanov

Reference: Deepwater Horizon Letter Agreement — Additional Personnel for Mad Dog Project CONTRACTOR-5121-2002-005

Dear Mr. Stefanov,

Reference is made for all purposes to that certain *Offshore Drilling/Workover/Completion Contract* dated December 9, 1998 ("Contract"), by and between **R&B Falcon Drilling Co.** ("Contractor") and **Vastar Resources, Inc.** ("Company"), as amended.

Company has requested and Company and Contractor agree that CONTRACTOR will provide one (1) additional OIM and one (1) additional Sr. Toolpusher to work on the Mad Dog Project. The OIM and the Sr. Toolpusher will be shorebased and work at CONTRACTOR's Park 10 office and at COMPANY's offices as required to support the Mad Dog Project on an even rotating schedule. Work will commence on or about May 15, 2002 with an expected duration of approximately three (3) months.

CONTRACTOR shall invoice COMPANY at the rate of US$1,200 (one thousand two hundred) per day with CONTRACTOR being responsible for all costs for lodging, food, transportation and CONTRACTOR required training. The OIM and Sr. Toolpusher will be available for work seven days a week on an even rotating schedule and COMPANY shall be billed for the full seven days each week. CONTRACTOR will supply supporting documentation with each monthly invoice as evidence of days available for work.

COMPANY reserves the right to release the services of the OIM and Sr. Toolpusher at anytime upon thirty (30) days prior written notice to CONTRACTOR. COMPANY and CONTRACTOR will document when the OIM and Sr. Toolpusher are released from duty for services on this special Mad Dog Project assignment, thus ending the applicability of this contract amendment.

All other terms and conditions of the referenced Contract, as amended, shall remain in full force and effect.

If the above sets forth your understanding of the agreement, please sign both originals in the space provided below and return one (1) fully signed original to us for our file.

PHONE: 832-587-8533 FAX: 832-587-8754 EMAIL:JKeeton@houston.deepwater.com

We appreciate this opportunity to be of service to BP. If you have questions, please contact Terry Bonno for commercial concerns at 832-587-8848 or myself for technical concerns at 832-587-8533.

Sincerely,

/s/ John Keeton
John Keeton
R & B Falcon Drilling Co.

/ks

AGREED AND ACCEPTED THIS 24 DAY OF APRIL, 2002

VASTAR RESOURCES INC.

SIGNED	***/s/ Allen Cook***
PRINTED	***Allen Cook***
TITLE	***MD Well Delivery TL***

R & B FALCON DRILLNG CO.
1311 BROADFIELD BLVD., SUITE 400
HOUSTON, TEXAS 77084

TERRY BONNO
SR. MARKETING REPRESENTATIVE

June 3, 2002

BP America Production Company
501 WestLake Park Blvd.
Houston, TX 77079

Attn: Mr. Jon Sprague
Mr. Charles Taylor

Reference: Deepwater Horizon Letter Agreement — Additional Personnel for Deepwater Horizon CONTRACTOR-5121-2002-006

Gentlemen:

Reference is made for all purposes to that certain *Offshore Drilling/Workover/Completion Contract* dated December 9, 1998 ("Contract"), by and between **R&B Falcon Drilling Co.** ("Contractor") and **Vastar Resources, Inc. predecessor in interest to BP America Production Company** ("Company"), as amended.

Company and CONTRACTOR have recently discussed and agreed that the current manning level on the Deepwater Horizon is not sufficient to produce the potential operating efficiency levels for this type of Drilling Unit. In addition, recent feedback from the crew provided clear evidence that the crews feel that there are insufficient personnel to conduct simultaneous operations.

In a recent survey of crewing levels on similar Drilling Units in our fleet the following results were obtained:

	Horizon	Nautilus	Marianas
Crew Total	72	88	96

Based on these findings and our experience on these Drilling Units, CONTRACTOR suggests the following additional personnel to be added to the Deepwater Horizon on a semi-permanent basis to afford both companies the opportunity to conduct simultaneous operations.

Upon execution of this Letter Agreement by COMPANY and CONTRACTOR, CONTRACTOR agrees to provide two (2) additional Toolpushers, four (4) Floorhands, four (4) Crane Operators and eight (8) Roustabouts in addition to those specified to be provided in Exhibit F-2 of the Contract as amended, for operation on the semi-submersible Deepwater Horizon. Exhibit F-2 shall be amended to provide for these additional personnel, at cost to be paid by COMPANY based upon the following rates (as per the Escalation Letter Agreement dated December 12, 2001), subject to the cost escalations set forth therein:

Title	Total	On Rig	Overtime Rate (per person per hour) with Burden	Daily Rate (per person) with Burden	Total Day Rate with Burden
Toolpusher	2	1	N/A	$ 761.90	$ 761.90
Floorhand	4	2	$ 28.89	$ 395.57	$ 791.14
Crane Operator	4	2	$ 38.57	$ 493.35	$ 986.70
Roustabout	8	4	$ 24.77	$ 353.97	$ 1,415.88
TOTAL ADDITIONAL PERSONNEL	18	9			$ 3,955.62

In addition, COMPANY requests that one (1) additional Driller and welder per crew be added during the upcoming

PHONE: 832-587-8848 FAX: 832-587-8754 EMAIL:tbonno@houston.deepwater.com

VASTAR RESOURCES INC
Deepwater Horizon Letter Agreement - Additional Personnel
CONTRACTOR File #01-063

twenty-one day batch setting exercise on Atlantis as follows:

Title	Total	On Rig	Overtime Rate (per person per hour) with Burden	Daily Rate (per person) with Burden	Total Day Rate with Burden
Driller	2	1	$ 54.18	$ 650.87	$ 650.87
Welder	2	1	$ 36.82	$ 475.62	$ 475.62
TOTAL ADDITIONAL PERSONNEL	4	2			$ 1,126.49

COMPANY reserves the right to release the services of the additional personnel at anytime upon thirty (30) days prior written notice to CONTRACTOR.

All other terms and conditions of the referenced Contract, as amended, shall remain in full force and effect.

If the above sets forth your understanding of the agreement, please sign both originals in the space provided below and return one (1) fully signed original to us for our file.

We appreciate this opportunity to be of service to BP. If you have questions, please contact me for commercial concerns at 832-587-8848 or John Keeton for technical concerns at 832-587-8533.

Sincerely,

/s/ Terry Bonno
Terry Bonno
R & B Falcon Drilling Co.

/ks

AGREED AND ACCEFTED THIS 10th DAY OF JUNE, 2002

BP AMERICA PRODUCTION COMPANY

SIGNED ***/s/ R Kevin Guerre***
PRINTED ***R Kevin Guerre***
TITLE ***TL-SCM***

R & B FALCON DRILLNG CO.
1311 BROADFIELD BLVD., SUITE 400
HOUSTON, TEXAS 77084

TERRY BONNO
SR MARKETING REPRESENTATIVE

June 12, 2002

BP America Production Company
501 WestLake Park Blvd.
Houston, TX 77079

Attn: Mr. Don Weisinger

Reference: Deepwater Horizon Letter Agreement – Cameron Variable Bore Rams Deepwater Horizon CONTRACTOR-5121-2002-007

Gentlemen:

Reference is made for all purposes to that certain *Offshore Drilling/Workover/Completion Contract* dated December 9, 1998 ("Contract"), by and between **R&B Falcon Drilling Co.** ("Contractor") and **Vastar Resources, Inc.** ("Vastar"), predecessor in interest to **BP America Production Company** ("Company"), as amended.

Company and Contractor have recently discussed and agreed to provide a Cameron 3-1/2" X 6-5/8" Variable Bore Rams ("Equipment") for use on the Deepwater Horizon. This Letter Agreement outlines the terms and conditions to provide the Equipment as follows:

1. The Equipment is limited to the following components

Description	Quantity
Variable Bore Ram 18-3/4" 15M BOP, 3-1/2" X 6-5/8" OD Pipe, API 16A, ABS and DNV Certification	2
Ram Wear Pad, Right Side 18-3/4" BOP	2
Ram Wear Pad, Left Side 18-3/4" BOP	2
Screw, Ram Wear Pads	8

2. Company has authorized Contractor to purchase Equipment and has agreed to a dayrate reimbursement fee of $125.00 per day to be paid over the remainder of the Contract on the Deepwater Horizon. Dayrate reimbursement fee shall commence on June 13, 2002.

3. If the Contract is terminated prior to September 18, 2004, Company shall reimburse Contractor via a lump sum payment of $125.00 per day times the days remaining in contract after termination date. Such payment shall be due within thirty days after presentation of an invoice to Company.

4. The Equipment provided under this agreement shall become part of Contractor's equipment and incorporated into Exhibit B-2 of the Contract.

All other terms and conditions of the referenced Contract, as amended, shall remain in full force and effect.

PHONE: 832-587-8848 FAX: 832-587-8754 EMAIL:tbonno@houston.deepwater.com

VASTAR RESOURCES, INC.
Deepwater Horizon Letter Agreement – Variable Bore Rams
CONTRACTOR File #01-063

If the above sets forth your understanding of the agreement, please sign both originals in the space provided below and return one (1) fully signed original to us for our file.

We appreciate this opportunity to be of service to BP. If you have questions, please contact me for commercial concerns at 832-587-8848 or John Keeton for technical concerns at 832-587-8533.

Sincerely,

/s/ Terry Bonno
Terry Bonno
R & B Falcon Drilling Co.

/ks

AGREED AND ACCEPTED THIS 20th DAY OF JUNE, 2002

BP AMERICA PRODUCTION COMPANY

SIGNED ***/s/ Jerry R Rhoads***
PRINTED ***Jerry R Rhoads***
TITLE ***Contracts Specialist***

R & B FALCON DRILLNG CO.
1311 BROADFIELD BLVD., SUITE 400
HOUSTON, TEXAS 77084

CHRISTOPHER S. YOUNG
SR. MARKETING REPRESENTATIVE

August 26, 2002

BP America Production Company
501 WestLake Park Blvd.
Houston, TX 77079

Attn: Mr. Randy Rhoads

Reference: Deepwater Horizon Letter Agreement - CONTRACTOR-5121-2002-010

Gentlemen:

Reference is made for all purposes to that certain *Offshore Drilling/Workover/Completion Contract* dated December 9, 1998 ("Contract"), by and between **R&B Falcon Drilling Co.** ("Contractor") and **Vastar Resources, Inc. predecessor in interest to BP America Production Company** ("Company"), as amended.

This is to document the recent agreement between our Mr. Doug Halkett and your Mr. Jon Sprague with respect to the cost of re-drilling the GC74344 well as a result of the recent "lost hole" incident.

Due to the special circumstances involved in the recent event in which the hole was lost while running 20" casing, the parties agree that, by way of compromise and in order to avoid further disputes with respect to the obligations under the Contract with respect to such event, commencing as of 13:00 August 15, 2002, Contractor shall be obligated at Company's election to re-drill the hole, and Company shall pay ninety percent (90%) of the applicable Operating Rate, until such time as the depth at which the hole was lost is reached, but otherwise all subject to the terms and conditions of the Contract. Once we reach the depth at which the hole was lost, the parties agree that the applicable Operating Rate shall control per the Contract.

All other terms and conditions of the referenced Contract, as amended, shall remain in full force and effect.

If the above sets forth your understanding of the agreement, please sign both originals in the space provided below and return one (1) fully signed original to us for our files. We appreciate this opportunity to be of service to BP. If you have questions, please contact me at 832-587-8506 or John Keeton at 832-587-8533.

Yours very truly,

/s/ Christopher S. Young
Christopher S. Young
R & B Falcon Drilling Co.

PHONE: 832-587-8506 FAX: 832-587-8754 EMAIL:cyoung@houston.deepwater.com

BP America Production Company.
Deepwater Horizon Letter Agreement
CONTRACTOR File #01-063

/ks

AGREED AND ACCEPTED THIS 16th DAY OF SEPTEMBER, 2002

BP AMERICA PRODUCTION COMPANY

SIGNED	***/s/ Jerry R Rhoads***
PRINTED	***Jerry R Rhoads***
TITLE	***Contracts Specialist***

R&B FALCON DRILLING COMPANY
1311 BROADFIELD, SUITE 400
HOUSTON, TX 77084

CHRISTOPHER S. YOUNG
SR. MARKETING REPRESENTATIVE

September 18, 2002

BP America Production Company
501 WestLake Park Blvd.
Houston, TX 77079

Attn: Mr. Randy Rhoads

Re: **Drilling Contract No. 980249** dated December 9, 1998 by and between **R&B Falcon Drilling Company** ("Contractor") and **Vastar Resources, Inc. predecessor in interest to BP America Production Company** ("Company"), as amended for RBS-8D (now known as the **Deepwater Horizon)**

Subject: **Letter of Agreement for adding Deck Pusher**
CONTRACTOR-5121-2002-011

Dear Mr. Rhoads,

This letter will serve as our agreement to add another Deck Pusher to the crew complement of the Deepwater Horizon. Upon execution of this Letter Agreement by Company, Contractor agrees to provide one (1) Deck Pusher onboard the **Deepwater Horizon** in addition to those specified to be specified to be provided in Exhibit F-2 of the Contract as amended. Since we added the Deck Pusher in August, Exhibit F-l of the Contract shall be amended, as of August 1, 2002 to provide for the following additional personnel:

Title	On Board	Assigned to Rig	Daily Rate per Person w/ Burden	Hourly Overtime Rate w/Burden
Deck Pusher	1	2	$ 512.80	$ 40.50

Therefore, the amended crew complement shall show two (2) Deck Pushers "On Board" and four (4) "Assigned to Rig". The amended crew complement is attached. In summary, all rates in the Contract shall increase by **$512.80** per day effective August 1, 2002. Except as specifically provided herein, all other terms and conditions of the Contract shall remain in full force and effect. Please indicate your agreement in the space provided below and return one fully executed copy of this letter to me for our files.

If you have any questions, please contact John Keeton at (832) 587-8533 or me at (832) 587-8506. Thank you for the opportunity to be of service.

Sincerely,

/s/ Christopher S. Young
Christopher S. Young
Sr. Marketing Representative
On Behalf of R & B Falcon Drilling Co.

PHONE: (832) 587 8506 FAX: (832) 587 8754 EMAIL:cyoung@houston.deepwater.com

BP
Horizon – Escalation 2002
TSF File #01-063

AGREED AND ACCEPTED THIS 2ND DAY OF DECEMBER, 2002

BP AMERICA PRODUCTION COMPANY

SIGNED ***/s/ Jerry R Rhoads***
PRINTED ***Jerry R Rhoads***
TITLE ***Contracts Specialist***

DEEPWATER HORIZON

Adjusted Base Labor as of September 18, 2002

Gulf of Mexico Crew Complement				A	B	C	D
				GOM Base Labor w/Burden		GOM Overtime Rates	
	No. of Personnel						
JOB CODE	On Board	Assigned To Rig	JOB CLASSIFICATION	Daily Rate (per person) w/ Burden*	Total Daily On Board Cost* *	Daily Rate w/ Burden* *	Hourly Rate w/ Burden* *
1883	1	2	Offshore Installation Manager	930.23	855.23	Salaried	
1276	3	6	Toolpusher	761.90	2,060.70	Salaried	
1295	2	4	Driller	650.87	1,151.74	650.12	54.18
1302	4	8	Assistant Driller	493.35	1,673.41	462.88	38.57
1845	2	4	Pumphand	408.82	667.65	362.40	30.20
1296	12	24	Floorhand	395.57	3,846.86	346.65	28.89
1297	14	28	Roustabout	353.97	3,905.54	297.20	24.77
799	1	2	Welder	475.02	400.02	441.00	36.82
1289	4	8	Crane Operator	493.35	1,673.41	462.88	38.57
1381	2	4	Chief Mechanic	581.84	1,013.67	568.06	47.34
1286	1	2	Mechanic	471.20	396.20	436.55	36.38
1305	2	4	Motor Operator	395.97	641.93	347.12	28.93
1355	1	2	Electrical Supervisor	663.46	588.46	Salaried	
1345	2	4	Chief Electrician	581.84	1,013.67	568.06	47.34
1280	1	2	Electrician	471.20	396.20	436.55	36.38
1387	2	4	Chief Electronic Technician	590.67	1,031.34	578.56	48.21
1388	1	2	Senior Sub Sea Supervisor	768.23	693.23	Salaried	
1372	1	2	Assistant Sub Sea Supervisor	546.43	471.43	525.97	43.83
394	2	4	Materials Coordinator	435.79	721.58	394.46	32.87
1668	1	2	Master	810.10	735.10	Salaried	
1299	1	2	Chief Mate	675.99	600.99	679.98	56.66
1539	1	2	Chief Engineer	751.42	676.42	Salaried	
0	1	2	1st Assist. Engineer	634.12	559.12	630.21	52.52
0	2	4	2nd Assist. Engineer	599.57	1,049.14	589.14	49.10
1688	2	4	Dynamic Position Operator	546.43	942.86	525.97	43.83
1323	2	4	Assistant Dynamic Position Operator	457.95	765.89	420.79	35.07
1238	2	4	Deck Pusher	512.80	875.60	486.00	40.50
1298	1	2	Bosun	457.95	382.95	420.79	35.07
1300	3	6	Able Bodied Seaman	413.70	1,016.11	368.20	30.68
1608	1	2	Rig & Safety Training Technician*	466.78	391.78	431.29	35.94
1677	1	2	Rig Medic/Clerk	351.73	276.73	294.53	24.54
	76	**152**		**Total Base Labor Costs =**	**$ 31,475.54**		

*** Does include catering, transportation, or training expense.**

*** * Does NOT include catering transportation, or training expense.**

Notes:

1) The figures in column "A" are to be used as the basis for adding personnel to the permanent crew and for determining the credit for crew members short.

2) The figures in column "B" are the product of multiplying the number of "on board" personnel by the "Daily Rate w/ Burden" in column "A". The Sum of column "B" is the "Total Base Labor Cost" per day.

3) The figures in columns "C" and "D" are the basis for charging the Operator for overtime hours worked at the request of the Operator.

AGREEMENT FOR ASSIGNMENT OF DRILLING CONTRACT

This Agreement ("Agreement") is entered into this 14 day of October, 2002 between R&B FALCON DRILLING CO. (hereinafter "RBFDC"), an Oklahoma corporation having an office at Park Ten Centre, 1311 Broadfield Boulevard, Suite 400, Houston, Texas 77084 and TRANSOCEAN HOLDINGS INC. (hereinafter "THI"), a Delaware corporation, having an office at 4 Greenway Plaza, Houston, Texas 77046. RBFDC and THI may hereinafter sometimes be referred to individually as "Party" and collectively as "Parties".

WHEREAS, RBFDC is a party to that drilling contract No. 980249 of December 9, 1998 with VASTAR RESOURCES, INC. (hereinafter "VASTAR"), now succeeded in interest by BP AMERICA PRODUCTION COMPANY (hereinafter "BP"), pertaining to the mobile offshore drilling unit "DEEPWATER HORIZON" (hereinafter "RIG"), as amended to date (hereinafter "Drilling Contract"); and,

WHEREAS, RBFDC wishes to assign the Drilling Contract to THI and THI is willing to accept said assignment.

NOW THEREFORE, for Ten Dollars (US$10.00) and other good and valuable consideration including the mutual covenants and agreements contained in this Agreement, the Parties agree as follows:

1.0 Effective at midnight October 31, 2002, RBFDC assigns to THI all of RBFDC's rights and obligations under the Drilling Contract, and THI accepts the assignment and agrees to assume and perform all the said obligations under the Drilling Contract.

2.0 RBFDC agrees to notify and provide reasonably requested documentation to the other party to the Drilling Contract to effect the assignment.

3.0 Written notice to a Party under this Agreement will be considered to be properly served if received at the Party's address appearing above by personal delivery or registered mail.

4.0 Any failure by a Party to enforce the terms of this Agreement or to exercise any rights will not constitute a waiver of those terms or rights, nor will it constitute any precedence.

5.0 This Agreement is to be governed by and construed in accordance with the governing law provisions of the Drilling Contract.

IN WITNESS WHEREOF, the Parties execute this Agreement as of the date first above written.

R&B FALCON DRILLING CO.	TRANSOCEAN HOLDINGS INC.
By: /s/ Jean P. Cahuzac	By: /s/ Eric B. Brown
Name: Jean P. Cahuzac	Name: Eric B. Brown
Title: Vice President	Title: Vice President

TRANSOCEAN OFFSHORE DEEPWATER DRILLING INC.
1311 BROADFIELD, SUITE 400
HOUSTON, TX 77084

CHRISTOPHER S. YOUNG
SR. MARKETING REPRESENTATIVE

November 1, 2002

BP America Production Company
501 WestLake Park Blvd.
Houston, TX 77079

Attn: Mr. Randy Rhoads

Re: **Drilling Contract No. 980249** dated December 9, 1998 ("Contract") by and between **R&B Falcon Drilling Company predecessor in interest to Transocean Holdings, Inc,**("Contractor or TODDI") and **Vastar Resources, Inc. predecessor in interest to BP America Production Company** ("Company"), as amended for RBS-8D (now known as the **Deepwater Horizon)**

Subject: **Letter of Agreement for 6 5/8" Drill Pipe Rental**
CONTRACTOR-5121-2002-011

Dear Randy,

This letter is to document the agreement between Transocean Offshore Deepwater Drilling Inc. (TODDI) and Company for the rental of 18,000 feet of 6 5/8" R-3 drill pipe for use on the Deepwater Horizon.

Company and TODDI hereby agree to the following terms and conditions:

1. TODDI shall purchase the following pipe and rent it to Company over the remaining term of the Contract referenced above. Specifications of the pipe are as follows:

Footage	18,000	Joints	439
Pipe OD	6 5/8"	Connection	6 5/8 FH
Weight	34.01	OD	8 1/4"
Grade	S-135	ID	4 1/4"
Upset	IEU	Pin Tong	10"
Range	3	Box Tong	13"
Internal Coating	TK 34 XT*	Hardfacing Pin	None
Inspection	Truscope AS	Hardfacing Box	Armacor M
Delivery	16 weeks*		
Make & Break & 95% wall included			

* Changes from Grant Prideco quote 30726

2. Tooljoints (Pin & Box) shall be manufactured long enough to provide for a minimum of two full recuts and still have sufficient tong space excluding proud hardbanded area. Company's coating, hardbanding and make & break specifications are attached and made a part of this Agreement.

PHONE: (832) 587-8506 FAX: (832) 587-8754 EMAIL:cyoung@houston.deepwater.com

3. The rental rate will be approximately $3,000/day assuming that 18 months will be remaining on the contract at time of pipe delivery and that the total cost of the pipe is approximately $1.29 million. The exact calculation will be made when the pipe is delivered and the total cost (based on good footage) and the remaining number of days in the term are known. The total rental amount to be recovered will be calculated at 1.27418155 times the total cost of the pipe. The total cost of the pipe will include inspection and transportation.

4. The rental rate shall begin upon delivery of the pipe to TODDI following acceptance in accordance with Company's QA/QC specifications and inspection criteria. These specifications and criteria are made a part of this Agreement. The rental rate shall cease when the total rental paid equals 1.27418155 times the final cost of the pipe. The rental agreement will continue as long the Contract is in force however the rental rate will be zero after the total rental paid equals 1.27418155 times the final cost of the pipe.

5. Contractor shall furnish all handling equipment required for this pipe during the term of the rental at no cost to Company.

6. Initial inspection is included in the cost of the pipe. Company reserves the right to re-inspect the pipe at Company's cost. Company will be responsible for all inspections during the term of the rental.

7. The pipe shall be treated as Contractor's in-hole equipment per Article 22.3 of the Contract except for the cost of inspections.

8. During the term of the rental, Company will have the option of moving the pipe to another Transocean Rig at Company's option and expense.

If you are in agreement with the above, please sign in the space provided below and return one fully executed copy of this letter to me for our files.

If you have any questions, please contact John Keeton at (832) 587-8533 or me at (832) 587-8506. Thank you for the opportunity to be of service.

Sincerely,

/s/ Christopher S. Young
Christopher S. Young
Sr. Marketing Representative

AGREED AND ACCEPTED THIS 3RD DAY OF FEBRUARY, 2003
BP AMERICA PRODUCTION COMPANY

SIGNED ***/s/ Jerry R Rhoads***
PRINTED ***Jerry R Rhoads***
TITLE ***Contracts Specialist***

B P DEIP

INTERNAL PLASTIC COATING OF DRILL PIPE AND WORKSTRINGS

Approved By: _____ Date: _____

1.0 Scope.

1.1 This procedure details the BP GoM requirements for internal plastic coating of both new and used drill pipe, workstrings and pup joints. Additionally, this procedure details the BP GoM minimum requirements for used internal plastic coatings.

1.2 This procedure includes a visual examination of all threaded connections after internal blasting at final inspection. All workstring tubing, and workstring tubing pup joints will be full length drifted at final inspection.

2.0 Referenced Documents.

2.1 The following documents are used as references for establishing this procedure.

2.1.1 NACE TM-01-70

2.1.2 NACE TM-03-89

2.1.3 BP GoM OCTG Inspection Procedures and Requirements.

2.1.4 The Coating Contractor's Standard Operating Procedures manual for the application and inspection of internal coatings.

3.0 Contractors Internal Coating Operating Procedures And Equipment Capabilities.

3.1 The coating Contractor shall provide to BP for approval, complete standard operating procedures and equipment capabilities applicable to the individual pieces of equipment utilized for this process. The procedures will be of sufficient detail to enable the operator to perform required setup, calibration and adjustments to the equipment for preparation, application and inspection of the coatings.

4.0 Requirements For Material And Equipment.

4.1 All material, equipment, tools and supplies furnished by the Contractor shall be of good quality and adequate design, shall be maintained in good condition during use, shall conform to the requirements described in the Contractor's Specifications and Standard Operating Procedures and shall be subject to BP's approval.

5.0 Preparation.

5.1 Thread protectors shall be removed cleaned and stored until they are re-applied after final inspection.

5.2 All threaded connections shall be cleaned with steam cleaners, soapy water, varsol or other mineral spirits.

5.3 The material will then be visually examined internally for obvious defects, such as ridges or rough surfaces that would limit the coat-ability of the material. Rejected lengths will be identified, marked, segregated from the prime material and BP will be notified. No attempt will be made to coat these lengths until corrections have been made. Material with uncorrectable damage will be classified as "not suitable for coating" (NSC).

5.4 The material will undergo a thermal cleaning by prebaking the material at 600° – 800° F (pipe temperature) for a minimum period of 2 hours or as agreed to by BP. Longer prebake periods may be required depending upon the characteristics of the material being processed.

5.5 In order to insure that the proper oven temperatures are maintained, the BP QA/QC Inspector will be given a copy of the heat charts. These heat charts will be included with the BP QA/QC Inspector's final job report. Additionally, at BP's request the contractor will satisfactorily demonstrate to the BP QA/QC Inspector that the surface temperature of the pipe meets but does not exceed the established temperature limitations during the thermal cleaning, regardless of the method by which the material is heated (i.e., conveyor system or batch ovens).

5.6 After thermal cleaning is completed, the material will be internally blasted "to white metal" with an abrasive material to thoroughly clean and roughen the metal surface in order to form a suitable anchor pattern for coating.

Note: "White metal" blast cleaning is defined by NACE as follows: "White metal blasting cleaning is a method of preparing steel surfaces which, when viewed without magnification, shall be free of all visible oil, grease, dirt, drilling mud, cement, mill scale, rust, paint and coatings." All surfaces blasted to "white metal" will be inspected visually from both ends, without magnification, using visual comparators to insure proper surface preparation to NACE TM-01-70.

5.7 The abrasive blasting operation will be repeated until the proper "white metal" surface condition is achieved.

5.8 The Material must be dry before abrasive blasting begins.

5.9 The compressed air used for abrasive blasting shall be free of water and oil. At the beginning of each shift the operator will verify this. The operator will partially open the air supply at the blast station and hold a clean cloth or blotter against the airflow. If any oil or water is found, the system must be cleaned or dried prior to abrasive cleaning. Air pressure will be provided at 85 to 110 P.S.I. as measured at the blast plot.

5.10 The abrasive materials used for cleaning will be coarse Flintabrasive, Garnet, or other abrasive material meeting the Contractor's specifications. Prior to the start of the job, the Contractor shall present, blast material specifications and quality control procedures for abrasive materials, to BP for acceptance.

5.11 Prior to abrasive blasting, the material shall have protector masks installed to protect threads, seal areas and shoulders from damage.

5.12 After abrasive blasting, the material shall be thoroughly cleaned with dry, oil free compressed air to remove abrasive blasting material and other foreign material from the surface area.

5.13 The Contractor will conduct tests on both ends of the first 10 blasted pieces to establish that the anchor profile depth and appearance are satisfactory. Thereafter, tests will be conducted on both ends of every twenty-fifth piece. The test must be conducted with Testex Coarse Press-O-Film or equivalent and measured with the appropriate gauge. These tests will be conducted after full length blasting but before end blasting. Acceptable anchor profile depth will be verified to the Contractor's Specifications. At BP's request the BP QA/QC Inspector shall witness these tests, maintain the test results and include them with the final job report.

5.14 After the material is blasted and the anchor profile depth and appearance tests are completed, the material will be visually inspected to determine coat-ability. The material will be classified “not suitable for coating” (NSC), if, in the opinion of the Contractors representative or the BP QA/QC Inspector, the surface condition of the material would preclude application of coatings to the material in accordance with the Contractors Specifications. The Contractor must, however, make every reasonable effort to blast the surface of the material to a coat-able condition. The NSC material will be identified, marked and segregated from the coat-able material and BP shall be notified. If it is determined by the Contractor or the BP QA/QC Inspector that a second blast attempt on the NSC joint would possibly result in a coat-able piece, a second blast attempt, of at least two (2) passes, will be made.

6.0 Internal Plastic Coating Application.

6.1 Application of the coating material, as designated by BP, will be performed so that the required film thickness and coating properties are attained.

6.2 Coating, mixing, and thinning will be controlled in accordance with the Contractor’s Standard Operating Procedures. These procedures will specify the coating material handling requirements, mixing methods, and general equipment settings necessary for a quality application.

6.3 Individual coats should produce a uniform continuous coverage of the internal surface. When additional coats are required to meet specifications, those additional processes will be the decision and responsibility of the Contractor.

6.4 Prior to coating, the material shall be properly masked to protect the threads, seal areas and shoulders from coating overspray or damage.

6.5 When required, a sample from each batch of liquid coating will be taken. This sample will be sealed with tape, properly labeled with the batch number, job number and well charges. At BP’s request the BP QA/QC Inspector shall witness this process and initial each sample. The sample will be retained by the Contractor for subsequent evaluation, as directed, by BP.

6.6 Different coating batches will not be mixed on individual lengths of material.

6.7 The coating batch number(s) applicable to each BP order must be documented by the Contractor and retained in a permanent job file. At BP’s request the BP QA/QC Inspector will verify the coating batch(s) utilized and include them in the final job report.

6.8 The shelf life of the batch(s) utilized on the BP material will be verified and documented by the Contractor. If the age of the coating exceeds the manufacturer’s suggested shelf life, it will not be applied to the BP material. At BP’s request the BP QA/QC inspector will verify the shelf life of the batch(s) utilized and include them in the final job report.

6.9 The first coat of coating shall be applied as soon as possible after blasting. In no case shall coating be delayed more than one (1) hour without reblasting. If the event a rust bloom or visual oxidation occurs before the application of the first coat, the material must be re-blasted.

6.10 Coating thickness and number of coats shall be in accordance with the Contractor’s coating specifications and provide a dry film thickness (DFT) as specified by the Contractor.

6.11 Coating intermediate and final bake temperatures and times shall be in accordance with the Contractor's coating specifications. Intermediate baking will be performed at 250° – 350° F for periods of 45 minutes to 1-1/2 hours depending on coating, material size and weight. Final baking will be done at temperatures of 400° – 500° F for periods of 1-4 hours depending on coating, material size and weight. The staging of temperatures during final bake is permitted. In order to insure that proper oven temperatures are maintained the BP QA/QC Inspector will be given a copy of the heat charts. These heat charts will be included with the BP QA/QC Inspector's final job report. Additionally, at BP's request the Contractor shall satisfactorily demonstrate to the BP QA/QC Inspector that the surface temperature of the material meets but does not exceed the established temperature limitations for both the intermediate and final bakes regardless of the method by which the material is heated (i.e., conveyor system or batch ovens).

6.12 Minor irregularities in individual coats may be repaired to meet specifications anytime prior to final bake at the option of the Contractor. Repairs of this nature are limited to the end area of material where thickness of repairs can be measured. Minor surface irregularities that are within the coating thickness specifications will be considered acceptable. Runs, sags, blobs, filled threads and/or blisters will be rejected.

6.13 The Contractor will conduct a sufficient number of visual and film thickness checks on the material in order to assure conformity to final product specifications.

7.0 Final Inspection.

7.1 After the final bake, the BP QA/QC Inspector shall conduct, at random, a dry film thickness test and visual inspection of the coated material. In addition to obvious defects such as blobs, blisters, etc., the visual inspection will verify that the final coating color is within the Contractors specifications. The color of the coating should be uniform throughout the entire length of the material.

7.2 The color of finished baked coatings is variable. The Contractor will maintain coating color standards at the coating facility. The coating color standards will be used to determine the acceptable finished color of all thermoset coatings. Lengths that contain coating color within the standard range of the coating color standards will be considered acceptable. After each final bake, the color will be verified with the proper comparator. The BP QA/QC Inspector shall witness the coating color inspection process.

7.3 The material shall be visually inspected from each end with sufficient light to detect any coating anomalies. The material will be sufficiently rotated during the visual inspection to inspect the entire inside area of the material. The material must be in a single layer for the inspection. Material will not be stacked during the final inspection. The final product should be free of runs, sags, and blisters. Surface roughness or surface irregularities will not be considered cause for rejection provided that the coating thickness is within specification.

7.4 The dry film thickness of the material will be measured on both ends of the material with a MIKROTEST DFG magnetic thickness gauge. The calibration of the thickness gauge will be conducted at the beginning of each shift or every eight hours, whichever comes first, and must be witnessed by the BP QA/QC Inspector. Material with coating thickness outside of the specified ranges (specified by the Contractor) will be rejected and reprocessed.

BP requires the average Dry Film Thickness to be .5 mils greater than the Contractor's specified minimum Dry Film Thickness and .5 mils less than the Contractor's specified maximum Dry Film Thickness. However, if any Dry Film Thickness measurement of the coating is not within this range, three additional Dry Film Thickness measurements must be taken. These measurements will be taken at 90°, 180°, and 270° and an average of the four readings will then be computed. If this average falls in the Contractor's specified Dry Film Thickness range that end of the piece is acceptable and if this average falls out of the Contractor's specified Dry Film Thickness range the whole piece is rejected.

7.5 Coatings on the face of the pipe ends are exempted from the standard minimum coating thickness requirements.

8.0 Holiday Testing.

8.1 Holiday testing will be performed per NACE Standard TM-03-84 on each length of pipe coated with thin film holiday free internal coating. The testing will be performed utilizing a "Tinker-Rasor" type M-1 holiday tester or equivalent, which is calibrated at the beginning of each shift or when requested by the BP QA/QC Inspector. All calibrations and testing must be witnessed by the BP QA/QC Inspector. The procedure for holiday testing of the material is as follows:

- A 2" thick cellulose sponge probe head saturated with selected electrolyte and detergent will be employed.
- The sponge will be large enough to insure a 360° contact throughout the length of the pipe. The sponge will be replaced when worn.
- A constant potential of 67.5 volts DC will be maintained between the sponge probe and the body of the tube during testing. The negative lead shall be connected to the pipe and the positive lead shall have continuity to the sponge. The tester alarm shall be activated before the testing of each joint to insure that continuity exists between the tube body and the holiday tester.
- The sponge probe will be moved through the pipe at a rate of 60 fpm ±5%.
- Each length of pipe will be holiday tested once at the Contractor's facility. Thin film coatings will be defined as holiday free when the electrical resistance between the wet sponge and the tube body is at no point less than 80,000 ohms.
- The holiday test will be performed in both directions while running the wet sponge in and out of the tube.
- All thin film corrosion coatings for both new and used pipe will be holiday free and will be applied and tested in accordance with the methods outlined above.
- The holiday free specifications will apply only while the material is at the Contractor's coating facility.
- All coated pipe that is rejected shall be reprocessed according to surface preparation, application, and inspection procedures as outlined in this specification. Those coated lengths not meeting holiday specifications after being coated a second time are to be classified as NSC. Any length that Contractor or BP determines to be unsuitable for coating (NSC) due to internal surface defects (e.g., slivers, pitting, etc.) will be set aside. This pipe will be reprocessed only upon instructions from BP.

9.0 **Full Length Drifting.**

9.1 After final inspection, each length will be full length drifted with a plastic or wooden drift mandrel meeting the applicable API specifications for coated material with the exception of drill pipe products, which do not require full length drifting.

10.0 **Visual Thread Inspection.**

10.1 After final inspection and full length drifting, is completed, the threads and sealing surfaces shall be visually inspected in accordance with the procedure BP-DEIP-P004. Thread compound, as specified by BP, will be applied to all threaded surfaces and the proper clean dry thread protectors installed.

11.1 **Marking and Stenciling.**

11.1 The Contractor will re-apply inspection bands and stencils as instructed by BP. Further, a clear mill varnish, acceptable to BP, will be applied to the outer surface of the material to prevent corrosion.

12.1 **Documentation, Records And Reporting.**

12.1 At the end of the job, the Contractor will provide BP the following documents:

- Prebake Heat Charts.
- Testex Coarse Press-O-Film test strips.
- Coating Batch number(s).
- Intermediate Bake Heat Charts.
- Final Bake Heat Charts.
- Final report, stating the piece quantity, Prime and rejects (including NSC), along with the footage's. The reason for rejection must be reported.
- Individual pipe tally sheets indicating "threads off' footage.

12.2 Documentation, records and reporting requirements as listed in BP-DEIP-P005 shall apply.

13.0 **Health, Safety And Environmental.**

13.1 Health, safety and environmental requirements as listed in BP-DEIP-P001 shall apply.

14.0 **Visual Inspection Of Used Internal Plastic Coatings.**

15.1

BP DEIP

HARDBANDING OF DRILL PIPE TOOLJOINTS HEAVY WEIGHT DRILL PIPE AND DRILL COLLARS

Approved By: _____ Date: _____

1.0 Scope.

1.1 This procedure details the BP GoM requirements for the hardbanding of drill pipe tooljoints (loose or attached), heavyweight drill pipe and drill collars. It is applicable to new or used non-hardbanded material and material which requires re-hardbanding.

1.2 The application of proud wear resistant alloy hardfacing bands onto tooljoints, heavyweight drill pipe and drill collars significantly reduces external wear and casing wear.

2.0 Referenced Documents.

2.1 The following documents were used as reference for establishing this procedure.

2.1.1 Part 1 BP Drill-string Hardbanding Specification for General Release (4/6/2000).

2.1.2 ISO 9002 Quality Systems – Model for quality assurance in production and installation.

2.1.3 ISO 9003 Quality Systems – Model for quality assurance in final inspection and test.

2.1.4 API Q1 – Specification for Quality Programs.

2.1.5 ASME IX – ASME Boiler and Pressure Vessel Code. Welding and Brazing Qualifications.

2.1.6 ASTM E 709 – Standard Guide for Magnetic Particle Examination.

2.1.7 ASTM E 165 – Standard Test Method for Liquid Penetrant Examination.

2.1.8 API Specification 7 - Rotary Drill Stem Elements.

2.1.9 API Recommended Practice 7G - Drill Stem Design and Operating Limits.

3.0 Quality Assurance.

3.1 The Applicator shall operate a Quality Assurance organization responsible for formulating and implementing a Quality System, which insures that the requirements of this procedure are met.

3.2 The Applicator's Ouality System shall be based on ISO 9002 and ISO 9003 or API Q1. Particular attention is drawn to Section 4.8.2 in ISO 9002 and Section 3.12 in API Q1 concerning Special Processes. Hardbanding and the associated practices are considered to be Special Processes and shall be qualified strictly in accordance with the requirements of this procedure.

3.3 The effectiveness of the Applicator's Quality System will be subject to monitoring by BP and may be audited following and agreed period of notice.

4.0 Hardbandinq Types.

4.1 There are two basic types or categories of hardbanding for drill pipe tooljoints, heavyweight drill pipe and drill collars utilized in the Oil Industry today. These comprise weld overlays that consist of wear resistant alloys that do not contain tungsten carbide granules and weld overlays consisting of tungsten carbide granules within a metallic substrate (normally a low carbon steel). In this procedure these types will be referred to as "Wear Resistant Alloy Overlays" and "Tungsten Carbide Overlays".

4.2 **Wear Resistant Alloy Overlays.** These materials are hard alloys containing no solid particles. Therefore, unlike tungsten carbide overlays, there is no possibility of hard particles standing proud or becoming exposed from a softer matrix and producing severe abrasive wear of the casing. Wear resistant alloy overlays are required when applying hardfacing for BP GoM and are strongly recommended verses tungsten carbide overlays in all cases.

4.3 **Tungsten Carbide Overlays.** These consist of granules of tungsten carbide in a steel matrix. The use of tungsten carbide overlays is not permitted when applying hardfacing for BP GoM on drill pipe tooljoints, heavyweight drill pipe or drill collars. The use of drill pipe with tungsten carbide overlays is not permitted without the express consent of the responsible BP Engineer. Since heavyweight drill pipe and drill collars are used in open-hole sections the majority of time while drilling, BP GoM may accept tungsten carbide overlays on these items. However, if tungsten carbide overlays are used on heavyweight drill pipe or drill collars BP GoM reserves the right to examine the hardfacing for acceptance on a case, by case basis.

5.0 Welding Issues.

5.1 **Welding Processes.** Hardbanding shall be deposited by the use of a mechanized GMAW welding technique using a solid wire or cored wire consumable. Self shielded or open arc welding techniques may also be used. Other techniques for the deposition of hardbanding may be proposed for consideration by BP.

The hardbanding shall be applied as individual circumferential weld beads laid side by side to achieve the specified width of hardbanding. The as welded surface shall be smooth and the adjacent beads shall be deposited with sufficient overlap to avoid the formation of inter-bead troughs or valleys. High crowns or severe ridges must also be avoided.

5.2 **Preheat And Interpass Temperature.** A minimum preheat temperature of 400°F shall be achieved through the full thickness of the component prior to the start of hardbanding or application of mild steel (butter-pass) and this temperature shall be maintained as the minimum interpass temperature throughout the welding process. The maximum interpass temperature for the application of hardbanding or mild steel shall be 650°F.

5.3 **Post Weld Thermal Regime.** Immediately on completion of welding, the component shall be subjected to one of the following alternative thermal regimes:

5.3.1 The temperature of the internal and external surface of the component shall be measured and if necessary the component shall be heated such that a temperature of 650°F is attained through the full thickness. The component shall then be allowed to slow cool to ambient temperature while fully wrapped in an insulating blanket or specially constructed insulating can. The components shall be kept under cover and shall not be exposed to any wind, drafts or rain during the cooling period.

5.3.2 The component shall be placed in an oven and maintained at a temperature of 400°F for a minimum period of two (2) hours prior to slow cooling under insulation, as detailed in section 5.3.1 above.

5.4 **Welding Parameters.** The welding parameters employed for hardbanding should be based on those recommended by the consumable manufacturer. However, it should be noted that these parameter values are often provided for guidance only and Applicators should undertake sufficient welding procedure development work to insure that they have established a stable welding condition prior to welding procedure qualification.

5.5 **Welding Procedures (WPS).** All welding procedures associated with the application of hardbanding or mild steel shall be qualified in accordance with ASME IX, QW 216, QW 453 and the requirements of this procedure. Production welding equipment shall be employed for the welding procedure qualification.

Individual welding procedures shall be qualified by the Applicator for:

- The application of flush and proud hardbanding. A separate WPS is required for each type of hard metal consumable.
- The application of mild steel.
- The application of mild steel (butter-pass), flush and proud hardbanding on re-hardbanded components. A separate WPS is required for each type of hard metal consumable.

The application of mild steel and hardbanding on re-hardbanded components may be qualified in a single procedure.

The welding procedure specification (WPS) and procedure qualification record (PQR) shall be submitted to BP GoM for approval prior to the commencement of any production welding. These documents shall be prepared in the ASME format with supplementary pages as necessary to provide a full and detailed description of the hardbanding procedure.

5.6 **Welding Procedure Qualification (PQR).** All welding procedure qualifications shall be performed on a 4145H tubular material, preferred size of 6 5/8" OD and 2 $^{3}/_{4}$" ID, representing a typical drill collar. The manufacturer's certificate, including full details of heat treatment, mechanical testing results and chemical analysis, for this material and the welding consumable shall be included in the PQR documentation. All relevant welding parameters shall be monitored and recorded during the production of the test weld and reported in the PQR.

The hardbanding shall be allowed to stand at ambient temperature for a minimum of forty-eight (48) hours prior to the examination detailed in Note 3, QW 453. The acceptance criteria for this examination shall be as detailed in section 10.0 of this procedure.

Subsequent to the above an ultrasonic examination of the hardbanding and parent metal interface shall be performed to demonstrate freedom from lack of fusion or any under bead cracking. The surface of the hardbanding shall be prepared for this examination by machining or grinding. Testing shall examine the full width of the hardbanding at five equally spaced locations around the circumference.

Following the above ultrasonic examination the Rockwell hardness of each band of hardfacing shall be measured at each of the five locations and each hardness reading shall meet the published recommendations of the consumable supplier.

Two coupons shall be cut and prepared for examination as detailed in Note 8, QW 453 except that only one surface on each need be polished and etched. These coupons shall be taken at least 90° apart. A macrograph shall be taken of each prepared surface and included in the PQR.

Additionally, three (3) vertical hardness traverses shall be made across the fusion boundary from the weld deposit into the heat-affected zone of the 4145H material. These measurements shall be made using a Vickers indenter with either a 5kg or 10kg load.

A full chemical analysis shall be performed in accordance with Note 9, QW 453.

5.7 **Manufacturing Reference Standards.** Subsequent to the testing detailed in Section 5.6 above the remainder of the welding procedure qualification test piece shall be retained by the Applicator to act as a reference standard during production.

5.8 **Welder/Machine Operators Performance Qualification.** Working in accordance with a qualified WPS each hardbanding welder/machine operator shall manufacture a test piece as detailed in section 5.6 in order to demonstrate his ability. The test piece shall be subjected to the examination detailed in Note 3, QW 453 and meet the criteria outlined in section 10.0 of this procedure. Each welder/machine operator performing a successful welding procedure qualification test shall be deemed to have completed a satisfactory performance test.

The Applicator's Quality Assurance department shall maintain a record of each welder/machine operator's qualification and working experience. A welder/machine operators qualification shall lapse and re-qualification will be required if he/she does not perform hardbanding for a period exceeding three months.

5.9 **Production Welding.** Production welding shall be undertaken strictly in accordance with the qualified welding procedures. All welder/machine operators shall be qualified in accordance with section 5.8. A copy of the basic elements of the WPS shall be available for reference at each hardbanding station.

Appropriate shop floor supervision and detailed working procedures shall be available to ensure hardbanding is deposited to this Specification at all times. Regular monitoring and recording of preheat temperatures, welding set up, welding parameters and the post weld thermal regime shall form an integral part of these procedures. All production records shall be retained within the Applicator's Quality System archives.

6.0 Hardbandinq Configurations.

6.1 **Definitions.** When applying new hardbanding and for the purposes of this procedure the following definitions shall apply.

- "Proud" hardbanding is an overlay that stands proud from the base material. Tolerances for proud hardbanding are + 3/32" to + 1/8" as measured from the base material surface.

- "Flush" hardbanding is an overlay that is flush with the base material surface. Tolerances for flush hardbanding are + 1/64" and — 0 as measured from the base material surface.

6.2 **Drill Pipe Tooljoints.** Hardbanding (Wear Resistant Alloy Overlay) shall be applied in the following locations:

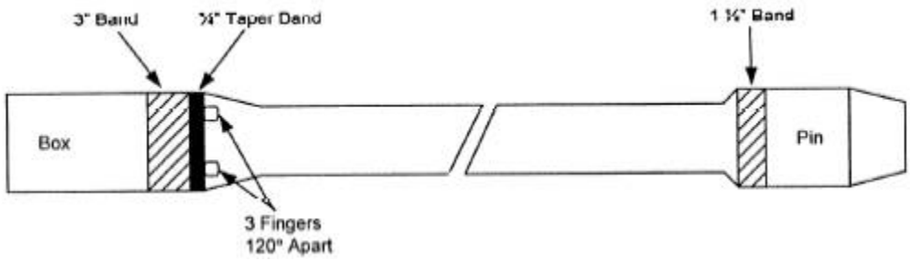
- A three (3") inch wide band on the box tooljoint OD next to the taper. These bands shall be applied proud.

- One $^{3}/_{4}$" wide band on the box tooljoint 18° taper. This band shall be applied flush.

- Three $^{3}/_{4}$" long fingers 120° apart projecting from the base of the hardbanding on the box tooljoint taper onto the box upset. Fingers shall be applied flush.

- A one and one half (1 $^{1}/_{2}$") inch wide band on the pin tooljoint OD next to the taper. These bands shall be applied proud.

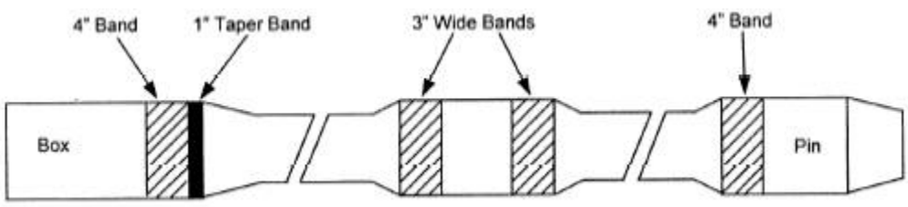
Figure 1.1 (Drill Pipe)



6.3 **Heavy Weight Drill Pipe.** Hardbanding (Wear Resistant Alloy Overlay) shall be applied in the following locations:

- One 4” inch wide band on the box and pin tooljoint OD next to the taper. These bands shall be applied proud.
- One 1” wide band on the tapered section of the box tooljoint. This band shall be applied flush.
- Two 3” wide bands on each end of the center wear pad. These bands shall be applied proud.

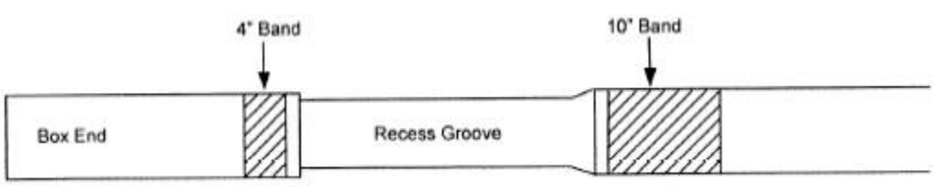
Figure 1.2 (Heavy Weight Drill Pipe)



6.4 **Drill Collars With Slip Recess Groove.** Hardbanding (Wear Resistant Alloy Overlay) shall be applied in the following locations:

- One, 4” wide band on the box end OD located 1” away from the beginning of the slip recess groove. This band shall be applied proud.
- One, 10” wide band on the drill collar OD located 1” away from the end of the slip recess groove. This band shall be applied proud.

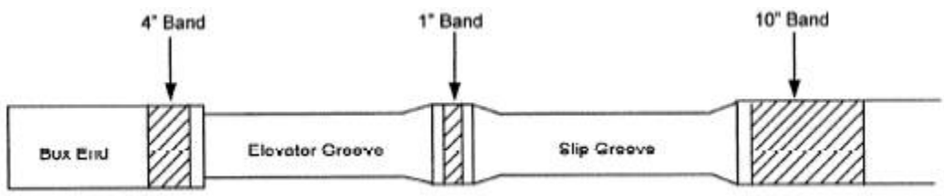
Figure 1.3 (Drill Collar with Slip Recess Groove)



6.5 **Drill Collars With Slip And Elevator Recess Grooves.** Hardbanding (Wear Resistant Alloy Overlay) shall be applied in the following locations:

- One, 4” wide band on the box end OD located 1” away from the beginning of the slip recess groove. This band shall be applied proud.
- One, 1” wide band on the wear pad OD between the two recess grooves. This band shall be applied proud.
- One, 10” wide band on the drill collar OD located 1” away from the end of the slip recess groove. This band shall be applied proud.

Figure 1.4 (Drill Collar with Slip And Elevator Recess Grooves)



7.0 **<u>Pre-Hardbanding Considerations</u>.**

7.1 **Mill Slots, Chip Slots and Identification Grooves.** Inspect the tooljoints to determine if there are mill slots, chip slots, identification grooves or other machined areas on the tooljoints that will interfere with the application of hardbanding per section 6.2. If machined areas exist and will interfere with the hardbanding application process notify the Material Supplier prior to hardbanding the material and obtain permission to fill the machined areas in with mild steel. The application of mild steel shall meet the requirements outlined in section 5.0 and 9.0.

7.2 **Internal Plastic Coating.** Inspect the material to determine if it is internally plastic coated. If the material is internally plastic coated notify the Material Supplier prior to hardbanding the material and inform the Material Supplier that the material will require re-coating after the hardbanding process.

Note: Under no circumstances shall material be filled with water during the hardbanding process to preserve the internal plastic coating.

7.3 **Pre-Existing Hardband.** Inspect the material to determine it the material has been previously hardbanded. If the material has been previously hardbanded notify the Material Supplier prior to the hardbanding the material and inform the Material Supplier that the existing hardbanding will have to be removed in accordance with section 9.0 prior to applying the new hardbanding.

Note: Under no circumstances shall new hardband be applied over pre-existing hardband of any type without prior approval by the BP QA/QC Manager.

8.0 Hardbanding Procedure.

8.1 **Machining.** When applying proud hardbanding, a groove shall be machined into the surface of the material prior to the application of hardbanding. The groove depth shall be 1/32” (+/-.010”) as measured from the surface of the material. When applying flush hardbanding, a groove shall be machined into the surface of the material prior to the application of hardbanding. The groove depth shall be 3/32” (- 0 + 1/32”) as measured from the surface of the material. When applying flush hardbanded fingers, three, $^{3}/_{4}$” long, $^{1}/_{2}$” wide and 3/32” deep slots shall be ground into the drill pipe box end upset. All groove and slot widths shall equal the intended width of the hardbanding to be applied as defined in section 6.0.

Note: It may be necessary to modify the groove depth on the box taper to achieve a smooth tie in to the three (3) inch band located on the box OD.

8.2 **Surface Preparation.** Hardbanding shall be deposited onto a machined or ground white metal surface. This surface shall be free from dirt, drilling mud, cement, paint, rust, cutting fluid, grease etc. Additionally, a two (2) inch band on either side of the machined area shall be thoroughly cleaned and degreased.

8.3 **Preheat.** Preheat the area requiring hardbanding in accordance with the BP approved WPS (See section 5.0 for more details). The preheat temperature shall be verified on each area requiring hardbanding on each piece with a calibrated pyrometer or the properly rated temperature sticks. When temperature sticks are used the Applicator shall have at a minimum, temperature sticks rated to the preheat temperature and maximum interpass temperature.

8.4 **Hardbanding Application.** Apply hardbanding to the material in accordance with the BP approved WPS (See section 5.0 for more details).

8.5 **Interpass Temperature.** Monitor the interpass temperature throughout the hardband application process to insure the minimum and maximum interpass temperatures are maintained in accordance with the BP approved WPS (See section 5.0 for more details). The interpass temperature shall be measured with a calibrated pyrometer or the properly temperature sticks. When temperature sticks are used the Applicator shall have at a minimum, temperature sticks rated to the minimum interpass temperature and maximum interpass temperature.

8.6 **Post Weld Thermal Regime / Slow Cooling.** Immediately on completion of the hardband application, the material shall be subjected to a post weld thermal regime in accordance with the BP approved WPS (See section 5.0 for more details).

8.7 **Surface Finish.** After the material has slow cooled to ambient temperature, remove all weld spatter or protrusions by grinding, sanding or machining methods. Close control of the hardband welding parameters should result in a good surface finish, such that it is not usually necessary to grind, sand or machine the entire hardbanded surface.

Note: Unless specified by BP, Amorphous type hardfacings do not require post application grinding or sanding to increase the surface hardness of the material.

8.8 **Inspection.** Perform a dimensional inspection on each hardbanded area to insure the requirements outlined in section 6.0 have been met.

8.8.1 Perform a visual inspection on each hardbanded area. Acceptance and rejection criteria shall be per section 10.0.

Note: When required by BP, contrast paint shall be applied to the hardbanding in order to assist the visual examination.

8.8.2 Clean all connections and perform a visual inspection on the threaded and sealing surfaces in accordance with procedure BP-DEIP-P004.

8.8.3 Perform a bi-directional wet magnetic particle inspection on the HAZ and at least two (2) inches of the surrounding parent metal around all hardbanded areas. The bi-directional WMPI shall be performed in accordance with procedure BP-DEIP-P002 (the transverse MPI method shall be per section 7.0 and the longitudinal MPI method shall be per section 8.0). Acceptance and rejection criteria shall be per section 10.0.

8.9 **Finishing.** Blow the material ID out with compressed air to remove any debris. Apply the appropriate thread compound to all connections as specified by the Material Supplier and install clean dry thread protectors wrench tight. Apply a thin coat of rust inhibitor to the freshly hardbanded, ground, sanded or machined areas.

9.0 Removal of Existing Hardbanding and Application of Mild Steel.

9.1 **Removal of Existing Hardbanding.** The removal of existing hardbanding shall be performed with pre-approved methods or techniques such as, plasma arc gouging, grinding or machining. When plasma arc gouging techniques are used care shall be taken to minimize the heat input.

9.1.1 After removal of the existing hardbanding with plasma arc gouging techniques, the excavated area shall be machined smooth to provide a suitable surface for WMPI.

9.2 **Inspection.** All areas where previous hardbanding has been removed shall be etched with a 5% Nital solution to verify that all of the hardband material has been removed. This process shall be repeated as many times as necessary to insure all previous hardband material has been completely removed.

9.2.1 Perform a bi-directional wet magnetic particle inspection on all areas where hardbanding has been removed and all areas that have been affected during the removal process. The bi-directional WMPI shall be performed in accordance with procedure BP-DEIP-P002 (the transverse MPI method shall be per section 7.0 and the longitudinal MPI method shall be per section 8.0). Acceptance and rejection criteria shall be per section 10.0.

9.3 **Application of Mild Steel.** Apply mild steel to the previously excavated areas and/or mill slots, chip slots or identification grooves if necessary in accordance with the BP approved WPS (See section 5.0 for more details).

9.4 **Machining.** Machine the areas where mild steel has been applied back to the original OD or taper of the area.

Note: Grooves for new hardbanding as outlined in section 8.1 can be machined in conjunction with the above machining process prior to performing the WMPI detailed in section 9.5.

9.5 **Inspection.** Perform a bi-directional wet magnetic particle inspection on all areas where mild steel has been applied. The bi-directional WMPI shall be performed in accordance with procedure BP-DEIP-P002 (the transverse MPI method shall be per section 7.0 and the longitudinal MPI method shall be per section 8.0). Acceptance and rejection criteria shall be per section 10.0.

10.0 Acceptance Criteria.

10.1 Mild Steel And Parent Material. Relevant indications on the external or internal surface (including HAZ) of parts shall be removed by grinding or machining, provided that the part still conforms to BP's, the Manufacturer's or API acceptance criteria after the removal process.

Note: All areas that have had indications removed shall be re-inspected in accordance with the appropriate MPI method in accordance with procedure BP-DEIP-P002 section 7.0, 8.0 or 9.0 after the removal process to insure complete imperfection removal.

10.2 Wear Resistant Alloy Overlays. These hard wear resistant deposits possess relatively low ductility. Therefore, weld metal cracking often occurs transverse to the weld bead under the influence of residual stresses. Typically, these cracks may run straight across the weld bead or at an angle between 30° and 45°. Occasionally the cracks will interconnect. This is acceptable as long as the cracks are less than 1/16" wide or have a minimum spacing of $^1/_2$" apart when the cracks run across the full width of the hardbanded region. If cracks fail to meet this criteria remove the deposit and re-hardband the material in accordance with sections 8.0 and 9.0.

Figure 1.5 (Transverse Cracks)

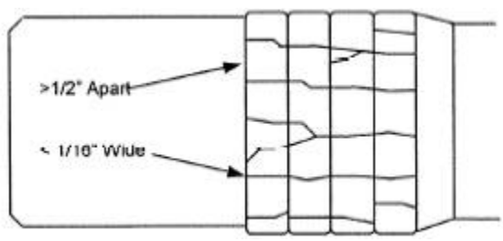


Figure 1.5 illustrates an acceptable configuration of transverse cracks. Crack widths are less than 1/16" and cracks extending the full width of the hardband deposit are greater than 1/2" apart.

If there are circumferentially running cracks, these are unacceptable where a single continuous crack is greater than 3" long, as they can result in a premature fatigue failure of the material. Additionally, flaking or spalling of the hardband deposit is unacceptable. In such circumstances remove the deposit and re-hardband the material in accordance with sections 8.0 and 9.0.

Figure 1.6 (Circumferential Cracks and Flaking)

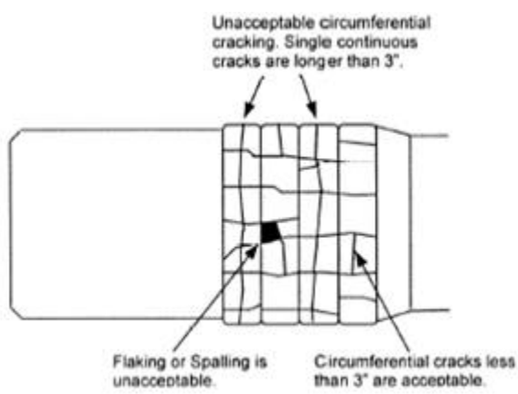


Figure 1.5 illustrates unacceptable circumferential cracking and flaking and acceptable circumferential cracking.

Small troughs between individual weld beads are acceptable as long as they are no more than 1/8” wide or 1/16” deep.

Figure 1.7 (Inter-Bead Troughs)

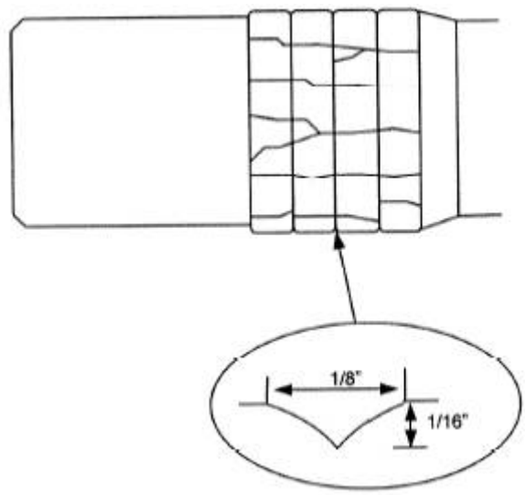


Figure 1.7 illustrates Inter-Bead Troughs. “Troughs” are acceptable if less than 1/8” wide and 1/16” deep.

If any cracking is detected in the HAZ, mild steel or parent material, the hardbanding and cracked areas must be completely removed in accordance with section 9.0, provided that the material still conforms to BP’s, the Manufacturer’s or API acceptance criteria after the removal process. The area shall be re-hardbanded in accordance with section 8.0.

If there are surface breaking non-linear defects, such as porosity on the hardband weld beads greater than 1/8” diameter or 1/16” deep, these may be filled using semi-automatic GMAW or SMAW. This type of repair must be performed with a consumable matching the composition of the hardband material and will require a BP approved WPS (See section 5.0 for more details).

Note: The acceptance criteria outlined in this section are the minimum requirements BP will accept, regardless of the Hardband Manufacturer’s, Material Supplier or Applicator’s acceptance criteria. However, it is necessary to obtain and review the Hardband Manufacturer’s, Material Supplier and Applicator’s acceptance criteria to insure the material is inspected correctly.

11.0 Documentation, Records and Reporting.

11.1 The Applicator shall submit to BP an inspection record, which will clearly state that the hardbanding has been applied and inspected in accordance with this procedure. The scope and content of this record shall include:

- A reference list of the Applicator’s procedures used in the production of the hardbanding and a copy of the WPS(s) and PQR(s).
- A copy of all NDE reports.

11.2 Documentation, records and reporting requirements as listed in procedure BP-DEIP-P005 shall apply.

12.0 **General Requirements.**

12.1 General requirements as listed in procedure BP-DEIP-P001 shall apply.

13.0 **Marking And Stenciling.**

13.1 Marking and stenciling requirements as listed in procedure BP-DEIP-P001 shall apply.

14.0 **Documentation, Records and Reporting.**

14.1 Documentation, records and reporting requirements as listed in procedure BP-DEIP-P005 shall apply.

15.0 **Health, Safety And Environmental.**

15.1 Health, safety and environmental requirements as listed in BP-DEIP-P001 shall apply.

BP DEIP

MAKE AND BREAK OF DRILL PIPE AND WORKSTRING TOOLJOINTS

Approved By: _____ Date: _____

1.0 **Scope.**

1.1 This procedure describes the processes established to make and break new drill pipe and workstring tooljoints, both, affixed or loose.

1.2 Since newly machined connections are susceptible to galling the make and break process is utilized to break in new connections (tooljoints) by work hardening the connection surface.

2.0 **Personnel Qualifications.**

2.1 Personnel performing make and break operations must be trained and experienced in the operation of the make and break unit.

3.0 **Required Materials & Equipment.**

3.1 **Hydraulic Make And Break Unit.** The make and break unit shall be capable of making up and breaking out two joints of range III drill pipe together to the manufacturers recommended torque value.

3.1.1 The unit shall be equipped with load cells and gauges capable of indicating the torque values obtained in Ft./Lbs.

3.1.2 Calibration of the load cells and gauges on the make and break unit shall be performed a minimum of once every six (6) months. The calibration documentation shall be available for review at the job site.

3.1.3 The make and break unit shall be equipped with the properly sized power and backup tongs.

3.1.4 Power and backup tongs will utilize low stress, large contact surface area dies to reduce grip marks.

3.2 **Additional Required Equipment.** The following equipment shall be available on the job sight and in good working order: Depth (pit) gauge, files, 50’ metal tally tape, absorbent pad, catch pans, cleaning solvent, cleaning brushes, thread compound, dope brushes, assorted paints and metal markers.

4.0 **Make And Break Procedures.**

4.1 Remove the thread protectors and stack them off the ground to prevent contamination with dirt, grit, grass etc.

4.2 Visually inspect the condition of the thread compound to insure a thin uniform coat of make-up thread compound has been applied and is not contaminated with dirt, grit, rust, scale etc.

Note: The thread compound must be an approved make-up compound such as ZN-50 or Jet Lube Kopr-Kote. If the thread compound on the connections is not an approved make-up compound (i.e., kendex) it must removed by cleaning the connections with solvent, varsol etc. and drying the connections prior to applying the proper make-up thread compound.

4.3 Verify the make and break unit has been set up properly prior to commencing the make and break operation. The unit must be level and both tongs must be perpendicular to the tooljoints. In addition, the tooljoints shall be centered in the tongs and tong dies shall contact the tooljoints in a uniform fashion to prevent excessive grip marks and slippage.

4.4 Recommended torque values shall be obtained from the drill pipe manufacturer or their published documents prior to the start up of the make and break operation.

4.5 The make and break process shall consist of and be performed in the order listed below.

1. Make up a box and pin connection to 100% of the specified optimum torque value. Break out the box and pin connections.

2. Clean both connections and perform visual inspection for damages or excessive grip marks. Repair any minor damages with a file or emery cloth and apply a thin coating of dry moly lubricant over the repaired connection.

   Note: If the connections are damaged beyond minor field repair shut the make and break operation down and contact the responsible BP Inspection Coordinator for further instructions.

3. Provided that the damages are minor or non-existent repeat the operations outlined in step one (1) above two (2) more times without cleaning the connections.

4. After the third make and break cycle clean both connections and perform visual inspection for damages. Repair any minor damages with a file or emery cloth and apply a thin coating of dry moly lubricant over the repaired connection.

5. Repeat the operations outlined in steps one (1), two (2), three (3) and four (4) on the next four (4) sets of boxes and pins.

6. Provided that the damages are minor or non-existent on the first five (5) sets connections the remaining connections in the order shall be made up to 100% of the specified optimum torque value and broken out three (3) consecutive times without cleaning the connections between make and break cycles.

7. Clean all connections after the final make and break cycle and perform a visual inspection for damages or excessive grip marks. Repair any minor damages with a file or emery cloth and apply a thin coating of dry moly lubricant over the repaired connection.

8. Allow the connections to dry or dry the connections with compressed air. Apply a thin, uniform film of the specified thread compound to all connections and install thread protectors wrench tight.

5.0 Visual And Dimensional Inspection.

5.1 Visual and dimensional requirements as listed in procedure BP-DEIP-P004 shall apply.

6.0 General Requirements.

6.1 General requirements as listed in procedure BP-DEIP-P001 shall apply.

7.0 Marking And Stenciling.

7.1 Marking and stenciling requirements as listed in procedure BP-DEIP-P001 shall apply.

8.0 Documentation, Records and Reporting.

8.1 Documentation, records and reporting requirements as listed in procedure BP-DEIP-P005 shall apply.

9.0 Health, Safety And Environmental.

9.1 Health, safety and environmental requirements as listed in BP-DEIP-P001 shall apply.

TRANSOCEAN HOLDINGS INC.
1311 BROADFIELD, SUITE 400
HOUSTON, TX 77084

CHRISTOPHER S. YOUNG
SR. MARKETING REPRESENTATIVE

January 6, 2003

BP America Production Company
501 WestLake Park Blvd.
Houston, TX 77079

Attn: Mr. Jon Sprague — Atlantis Wells Delivery Leader

Re: **Drilling Contract No. 980249** dated December 9, 1998 by and between **R&B Falcon Drilling Company predecessor in interest to Transocean Holdings Inc.** ("Contractor") and **Vastar Resources, Inc. predecessor in interest to BP America Production Company** ("Company"), as amended for RBS-8D (now known as the **Deepwater Horizon**)

Subject: **Letter of Agreement for adding Offshore Safety Assistant**
CONTRACTOR-5121-2002-011

Dear Mr. Sprague:

This letter will confirm our agreement to add additional Transocean personnel to the crew complement of the **Deepwater Horizon**. Upon execution of this Letter Agreement by Company, Contractor agrees to provide two (2) Offshore Safety Advisors (OSA) on the **Deepwater Horizon** in addition to those specified to be specified to be provided in Exhibit F-1 of the Contract as amended. Exhibits F-1 and F-2 of the Contract shall be amended, as of January 1, 2003 to provide for the following additional personnel:

Title	On Board	Assigned to Rig	Daily Rate per Person w/ Burden	Hourly Overtime Rate w/Burden
Offshore Safety Advisor	1	2	$ 930.23	NA

Therefore, the amended crew complement shall show one (1) OSA "On Board" and two (2) "Assigned to Rig". The amended crew complement is attached. In summary, all rates in the Contract shall increase by **$930.23** per day effective January 1, 2003. Except as specifically provided herein, all other terms and conditions of the Contract shall remain in full force and effect. Please indicate your agreement in the space provided below and return one fully executed copy of this letter to me for our files.

If you have any questions, please contact John Keeton at (832) 587-8533 or me at (832) 587-8506. Thank you for the opportunity to be of service.

Sincerely,

/s/ Christopher S. Young
Christopher S. Young
Sr. Marketing Representative
On Behalf of Transocean Holdings Inc..

PHONE: (832) 587-8506 FAX: (832) 587-8754 EMAIL: cyoung@houston.deepwater.com

BP
Horizon – OSA
TSF File #01-063

AGREED AND ACCEPTED THIS 27th DAY OF JANUARY, 2003

BP AMERICA PRODUCTION COMPANY

SIGNED ***/s/ Jerry R Rhoads***
PRINTED ***Jerry R Rhoads***
TITLE ***Contracts Specialist***

TRANSOCEAN HOLDINGS INC.
1311 BROADFIELD, SUITE 400
HOUSTON, TX 77084

CHRISTOPHER S. YOUNG
SR. MARKETING REPRESENTATIVE

January 7, 2003

BP America Production Company
501 WestLake Park Blvd.
Houston, TX 77079

Attn: Mr. Jon Sprague — Atlantis Wells Delivery Leader

Re: **Drilling Contract No. 980249** dated December 9, 1998 ("Contract") by and between **R&B Falcon Drilling Company predecessor in interest to Transocean Holdings Inc.** ("Contractor") and **Vastar Resources, Inc. predecessor in interest to BP America Production Company** ("Company"), as amended for RBS-8D (now known as the **Deepwater Horizon**)

Subject: **Letter of Agreement for Recycling program — Deepwater Horizon**
CONTRACTOR-5121-2002-011

Dear Mr. Sprague:

This letter will confirm our agreement that effective, January 1, 2003, the parties desire to amend the Contract in order for Contractor to implement a recycling program on the Deepwater Horizon and that Company shall reimburse Contractor for the costs and charges associated with this Service as detailed in Attachment 1, which is attached hereto and made a part of this Letter Agreement.

Except as expressly amended herein, the terms and conditions of the Contract, as previously amended, will remain in effect. Please indicate your agreement in the space provided below and return one fully executed copy of this letter to me for our files. If you have any questions, please contact John Keeton at (832) 587-8533 or me at (832) 587-8506. Thank you for the opportunity to be of service.

Sincerely,

/s/ Christopher S. Young
Christopher S. Young
Sr. Marketing Representative
On Behalf of Transocean Holdings Inc..

AGREED AND ACCEPTED THIS 7th DAY OF FEBRUARY, 2003

BP AMERICA PRODUCTION COMPANY

SIGNED ***/s/ Jerry R Rhoads***
PRINTED ***Jerry R Rhoads***
TITLE ***Contracts Specialist***

PHONE: (832) 587-8506 FAX: (832) 587-8754 EMAIL: cyoung@houston.deepwater.com

BP
Horizon – OSA
TSF File #01-063

ATTACHMENT 1
SCOPE OF WORK AND COMPENSATION
RECYCLING PROGRAM — DEEPWATER HORIZON

1. Scope of Work

Company has requested and Contractor has agreed to provide a recycling program covering recyclable waste materials from Contractor's Deepwater Horizon Drilling Unit ("Rig"). This program will commence on 1/1, 2003 and shall continue for the remaining primary term of the Contract unless terminated by Company by providing written notice thirty (30) days in advance of the termination date.

Contractor (or its subcontractor) will provide the following services:

1. Provide a recycling service to reduce and separate the waste on the Rig.
2. Furnish recycling and general waste compactor units to the Rig.
3. Supply storage bins at dock locations for collection of recycled materials.
4. Collect and transport compacted bags of recycled materials from the storage bins.
5. Track and provide totals of the volume of recycled material collected
6. Maintain and repair compactor units as needed.
7. Training of Rig personnel in operating, tagging and delivery of the recycled materials to the storage bins

At the Fourchon dock location, Company shall be responsible for ensuring that properly marked recyclable material received at the dock is placed into the appropriate "Recycle the Gulf" storage bin(s) for collection.

2. Rates

Company shall reimburse Contractor the following fees and costs during the term of this recycling service:

Service Fee $75.00/day

This Service Fee includes:

1. Equipment on the Rig to separate and compact recyclables
2. Storage Bin located at dock location (Fourchon)
3. Pick up and transportation (from Fourchon dock)
4. Employee Training packet
5. Processing service

Recycle the Gulf Bags — New	5.5 cuft Tri-2 Bags	$ 10.35/each
	14 cuft 6 x 2 bags	$ 10.15/each

Model 4000 Trash Compactor Bags	$ 10.20/each
Processing Fee (per bag of recycled material)	$ 1.85/bag

TRANSOCEAN OFFSHORE DEEPWATER DRILLING, INC.
4 GREENWAY PLAZA (77046)
POST OFFICE BOX 2765
HOUSTON, TEXAS 77252-2765

Gregory L. Cauthen
Senior Vice President, Chief Financial Officer and Treasurer

February 18, 2003

BP America Production Company
501 WestLake Park Blvd.
Houston, TX 77079

Attn: Mr. Randy Rhoads

Re: **Drilling Contract No. 980249** dated December 9, 1998 by and between **R&B Falcon Drilling Company predecessor in interest to Transocean Holdings Inc.** ("Contractor") and **Vastar Resources, Inc. predecessor in interest to BP America Production Company** ("Company"), as amended for RBS-8D (now known as the **Deepwater Horizon**)

Subject: **Direct Payment of Invoices**
CONTRACTOR-5121-2002-011

Dear Randy,

This letter is a formal request for BP to pay invoices related to the Contract referenced above by wire transfer to the following account:

Transocean Holdings Inc
Wells Fargo Bank
Houston, Texas
Beneficiary: Transocean Holdings Inc
Account number:
ABA Number:
SWIFT Number:

Thank you for your cooperation. If you have any questions, please contact John Keeton at (832) 587-8533 or Chris Young at (832) 587-8506. Thank you for the opportunity to be of service.

Sincerely,

/s/ Gregory L. Cauthen
Gregory L. Cauthen
Senior Vice President, Chief
Financial Officer & Treasurer

cc: Craig Duncan
Chris Young

TRANSOCEAN HOLDINGS INC.
4 GREENWAY PLAZA
HOUSTON, TX 77046

CHRISTOPHER S. YOUNG
SR. MARKETING REPRESENTATIVE

February 28, 2003

BP America Production Company
501 WestLake Park Blvd.
Houston, TX 77079

Attn: Mr. Randy Rhoads

Re: **Drilling Contract No. 980249** dated December 9, 1998 by and between **R&B Falcon Drilling Company predecessor in interest to Transocean Holdings Inc.** ("Contractor") and **Vastar Resources, Inc. predecessor in interest to BP America Production Company** ("Company"), as amended for RBS-8D (now known as the **Deepwater Horizon**)

Subject: **Letter of Agreement for Cost Escalation 2003**
CONTRACTOR-5121-2002-011

Dear Randy,

We performed the "annual" cost analysis for the ***Deepwater Horizon*** as of January 1, 2003 in accordance with Article 2.3 "Adjustment in Dayrates" of the Contract referenced above. The following table summarizes the Baseline Cost changes detailed on the attached schedule "Basis for Cost Escalation":

Reference	2001 Baseline Costs plus Previous Agreements	Actual Baseline Costs @ Jan. 1, 2003	Increase/ (Decrease)	Dayrate Increase/ (Decrease)
2.3.2a Base Labor Costs	**$ 36,008**	**$ 36,139**	**$ 131**	*****
2.3.2b Catering Costs	**$ 2,366**	**$ 2,780**	**$ 414**	**$ 414**
2.3.2c Maintenance Element	**13,851**	**13,946**	**$ 95**	*****
2.3.2d Insurance	**$ 1,799**	**$ 5,137**	**$ 3,338**	**$ 3,338**
Total	**$ 54,024/day**	**$ 58,002/day**		**$ 3,752/day**

* According to Article 2.3.2, rates for each item must vary by => 5% before they can be adjusted.

Notes:

2.3.2a Base Labor rates did not change but several of our "burdens" did change on January 1. FICA limits increased as well as pension accruals and some insurance related items. We reduced the utilization bonus. The net result was a slight increase but not the 5% required to trigger an increase. Please note that the total includes all personnel added by letter agreement.

2.3.2b Contractor's cost of catering has increased from $27.20 per man per day to $31.95, an increase of 17.5%. Please note the catering cost shown on the accompanying schedule only reflects the crew complement in the contract (77 on board the rig) while we actually have 83.

PHONE: (832) 587-8506 FAX: (832) 587-8754 EMAIL:cyoung@houston.deepwater.com

2.3.2c The Maintenance Element of the Baseline Cost increased $95 per day based on the change on the relevant Producer Price Index. The Index number for December 2002 increased to 146.8 from 145.8 in August of 2001, an increase of .69 %. The Bureau of Labor Statistics Data for the Producer Price Index series ID: WPU119102 is attached. Since the change was less than 5% we did not include it in the rate adjustment.

2.3.2d The insurance element increased $3,338 per day for a 186% increase and accounts for the majority of the overall cost increase. The cost of the various coverages is broken out on the accompanying schedule. Insurance costs increased dramatically throughout the industry for reasons already discussed. Please note that we lowered the insured value of the rig from $350 million to $320 million and increased the deductible from $500,000 to $10 million to reduce the H&M premium. Without the increased deductible, the premiums would have been significantly higher. Basically, we are self-insured for the first $10 million of coverage. The Marine P&I insurance cost shown on the accompanying schedule reflects a $4,832 per assigned person per year accrual determined by our insurance company for the self-insured $10 million.

The following documents are attached for reference: 1) “Basis for Cost Escalations” schedule; 2) “Adjusted Base Labor as of January 1, 2003”; 3) the Bureau of Labor Statistics Data for the relevant Producer Price Index, and 4) a statement of our annual insurance premiums.

In summary, all rates in the Contract shall increase by **$3,752 per day effective January 1, 2003**. Except as specifically provided herein, all other terms and conditions of the Contract shall remain in full force and effect.

Please indicate your agreement in the space provided below and return one fully executed copy of this letter to me for our files. If you have any questions, please contact John Keeton at (832) 587-8533 or me at (832) 587-8506. Thank you for the opportunity to be of service.

Sincerely,

/s/ Christopher S. Young
Christopher S. Young
Sr. Marketing Representative
On Behalf of R & B Falcon Drilling Co.

AGREED AND ACCEPTED THIS 17 DAY OF APRIL, 2003

BP AMERICA PRODUCTION COMPANY

SIGNED ***/s/ J. W. Farnsworth***
PRINTED ***J. W. Farnsworth***
TITLE ***VP Exploration***

BASIS FOR COST ESCALATIONS
DEEPWATER HORIZON
January 1, 2003
$ Per Day

	2001 Baseline Costs Plus Agreements	2001 Baseline Costs Plus Subsequent Agreements	January 2003 Actual Baseline Costs	Actual Variance	Dayrate Increase	Adjusted 2003 Baseline Costs
2.3.2a) Base Labor Cost:						
Labor & Burden (for original Contract Crew Complement)	$ 25,476	$ 25,476	$ 25,598	$ 122		$ 25,476
Training & Transportation Costs (for original Contract Crew Complement)	$ 2,820	$ 2,820	$ 2,820	$ 0		$ 2,820
** Labor & Burden for 7 Addl Personnel included in 2001 Baseline Calc.	$ 2,278	NA	NA	NA		NA
** Training & Transportation Costs (7 Addl Personnel incl. In 2001)	$ 335	NA	NA	NA		NA
*** Labor & Burden (18 Addl Pers. (incl. 7 added above) @ Jan 2003)	$ 0	$ 6,852	$ 6,860	$ 9		$ 6,852
*** Training & Transportation Costs (18 Addl Personnel - Onboard)	$ 0	$ 860	$ 860	$ 0		$ 860
Total Base Labor Cost	**$ 30,909**	**$ 36,008**	**$ 36,139**	**$ 131**	**$ 0**	**$ 36,008**
Percentage Increase				**036%***		
2.3.2b) Base Catering Cost:						
59 Contractor Personnel in Original Contract	$ 1,605	$ 1,605	$ 1,885	$ 280		$ 1,885
** 7 Additional Personnel included in 2001 Baseline Cost Calculation	$ 190	NA	NA	NA		NA
*** 18 Additional Personnel (including the 7 Addtl. Included in 2001)	$ 0	$ 490	$ 576	$ 86		$ 576
10 Company Personnel	$ 272	$ 272	$ 320	$ 48		$ 320
Total Base Catering Costs	**$ 2,067**	**$ 2,366**	**$ 2,780**	**$ 414**	**$ 414**	**$ 2,780**
Percentage Increase				**17.5%**		
2.3.2c) Base Maintenance Element:	**$ 13,851**	**$ 13,851**	**$ 13,946**	**$ 95**	**$ 0**	**$ 13,851**
Percentage Increase				**0.69%***		
2.3.2d) Base Insurance Cost:						
Hull & Machinery	$ 1,289	$ 1,289	$ 2,422	$ 1,133		$ 2,422
Marine P&I	$ 343	$ 343	$ 2,039	$ 1,695		$ 2,039
Excess Liability	$ 72	$ 72	$ 520	$ 448		$ 520
Brokers Fee	$ 94	$ 94	$ 110	$ 15		$ 110
Oil Pollution	$ 0	$ 0	$ 46	$ 46		$ 46
Total Base Insurance Cost:	**$ 1,799**	**$ 1,799**	**$ 5,137**	**$ 3,338**	**$ 3,338**	**$ 5,137**
Percentage Increase				**185.6%**		
Total	**$ 48,626**	**$ 54,024**	**$ 58,002**	**$ 3,977**	**$ 3,752**	**$ 57,776**
				Total Dayrate Increase =	**$ 3,752/day**	

* Note: The Index did not vary by 5% so the baseline cost and index stays the same as in 2001
** Note: The 7 Addl Personnel are shown as line items to identify that they were included in the previous (2001) escalation.
*** 18 Addtl. Personnel represent all addtl. Personnel added to the crew complement since the original contract.

DEEPWATER HORIZON
Adjusted Labor as of
January 1, 2003

No. Of Personnel			A	B	C	D
			GOM Base Labor		GOM Overtime Rates	
On Board	Assigned To Rig	JOB CLASSIFICATION	Daily Rate per person (inc. TT&C)	Total Daily on Board Cost	Daily Overtime Rates	Hourly Overtime Rates
1	2	OIM	965.59	871.93	824.67	68.72
1	2	OSA - Horizon	889.04	795.38	748.12	62.34
3	6	Toolpusher	786.15	2,077.48	645.23	53.77
2	4	Driller	662.47	1,137.62	621.66	51.81
4	8	Assistant Driller	511.05	1,669.57	441.18	36.76
2	4	Pumpman	430.72	674.11	345.42	28.79
12	24	Floorman	386.35	3,901.75	342.26	28.52
14	28	Roustabouts	346.81	3,998.53	295.13	24.59
1	2	Welder	494.23	400.57	421.13	35.09
4	8	Crane Operator	511.05	1,009.57	441.10	36.76
2	4	Chief Mechanic	595.17	1,003.03	541.45	45.12
1	2	Mechanic	490.02	396.36	416.11	34.68
2	4	Motor Operator	386.77	651.13	342.76	28.56
1	2	Electrical Supervisor	675.09	581.43	534.17	44.51
2	4	Chief Electrician	595.17	1,003.03	541.45	45.12
1	2	Electrician	490.02	396.36	416.11	34.68
2	4	Chief Electronic Technician	603.59	1,019.85	551.47	45.96
1	2	Senior Sub Sea Sup	777.26	683.60	636.35	53.03
1	2	Assistant Subsea	561.53	467.87	501.34	41.78
2	4	Material Co-Ordinator	456.37	725.43	376.00	31.33
1	2	Master	863.11	769.45	722.19	60.18
1	2	Chief Mate	687.71	594.05	651.74	54.31
1	2	Chief Engineer	803.26	709.59	662.34	55.19
1	2	1st Assistant Engineer	645.65	551.99	601.61	50.13
2	4	2nd Assistant Engineer	612.00	1,036.68	561.50	46.79
2	4	DP Operator	561.53	935.73	501.34	41.78
2	4	Assistant Dp Operator	477.40	767.49	401.07	33.42
2	4	Deck Pusher	497.81	873.21	475.11	39.59
1	2	Bosun	477.40	383.74	401.07	33.42
3	6	AB Seaman	403.59	1,027.17	362.81	30.23
1	2	RSTT	485.82	392.16	411.10	34.26
1	2	Medic	385.88	292.22	291.98	24.33
0	0	-	—	—	—	—
0	0	-	—	—	—	—
0	0	-	—	—	—	—
0	0	-	—	—	—	—
0	0	-	—	—	—	—
0	0	-	—	—	—	—
0	0	-	—	—	—	—
0	0	-	—	—	—	—
77	**154**		**Total Labor Costs =**	**$ 32,458.08**		

The figures in column "A" are to be used as the basis for adding personnel to the permanent crew and for determining the credit for crew members short. This includes all Training, Transportation and Catering costs.

The figures in column "B" are the daily cost of all crew members <u>excluding</u> Training, Transportation and Catering costs.

The figures in column "C" are the daily cost of overtime <u>excluding</u> Training, Transportation and Catering costs (assuming a daily schedule of 12 hours)

The figures in column "D" are the hourly cost of overtime <u>excluding</u> Training, Transportation and Catering costs.

BETSY KELLY
MANAGER-INSURANCE

TRANSOCEAN OFFSHORE DEEPWATER DRILLING INC.
4 GREENWAY PLAZA
HOUSTON, TX 77046

Chris Young
Transocean Holdings, Inc.
1311 Broadfield
Houston, TX 77083

Re: Annual Premiums for Deepwater Horizon 2003

Chris,

Current Insurance as of January 1, 2003:

Coverage:	All Risk Hull & Machinery
Insured Value:	$ 320,000,000
Deductible:	$10,000,000
NET ANNUAL PREMIUM:	$ 883,943
Coverage:	Primary Marine Protection & Indemnity
Deductible:	$10,000,000 per occurrence
NET ANNUAL COST:	$ 744,235*
Coverage:	Excess Liability
Insured Value:	$452,000,000
Deductible:	XS of Primary Marine P & I
NET ANNUAL PREMIUM:	$ 189,799
Coverage:	Oil Pollution
NET ANNUAL PREMIUM:	$ 16,820
U.S. Broker:	McGriff, Seibels & Williams, Inc
Annual Fee:	$ 40,024

* Based on Self Insured Accrual of $4,832 per person x 154 people assigned

(713) 232-7766 FAX (713) 232-7630 TEL BKELLY@HOUSTON.DEEPWATER.COM

Public Data Query

U. S. Department of Labor
Bureau of Labor Statistics
Bureau of Labor Statistics Data

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Data extracted on: January 31, 2003 (12:09:59 PM)

Producer Price Index-Commodities

Series Id: WPU119102
Not Seasonally Adjusted
Group: Machinery and equipment
Item: Oil field and gas field drilling machinery
Base Date: 8200

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
1992	110.1	110.1	110.1	110.1	110.2	110.4	110.6	110.6	110.6	110.8	112.4	112.5	110.7
1993	112.8	112.9	113.3	112.1	112.0	112.2	112.3	112.3	113.4	113.4	113.4	114.6	112.9
1994	114.6	114.6	114.6	114.6	114.7	114.9	115.4	115.4	115.9	117.8	117.8	117.8	115.7
1995	118.3	118.6	119.2	119.2	119.3	119.6	120.4	120.4	120.4	122.0	122.2	122.2	120.1
1996	124.0	124.0	124.0	124.3	124.2	124.8	125.3	125.3	125.3	126.2	126.6	127.1	125.1
1997	127.7	127.9	128.6	129.1	129.2	129.3	129.3	129.5	129.7	130.3	131.4	132.0	129.5
1998	133.1	132.9	133.1	133.0	133.0	133.0	132.9	132.9	132.9	133.6	133.6	133.6	133.1
1999	133.8	133.7	133.7	133.9	133.9	134.0	134.0	133.7	133.7	133.7	134.4	134.6	133.9
2000	134.9	136.3	136.3	136.3	136.5	136.5	136.5	136.6	136.7	138.7	138.7	138.7	136.9
2001	143.5	143.9	144.0	144.0	144.0	145.5	145.6	145.8	145.7	146.1	146.1	146.1	145.0
2002	146.2	146.2	146.6	146.6	146.4	146.4	146.4	146.4	146.8(P)	146.8(P)	146.8(P)	146.8(P)	146.5(P)

(P): Preliminary. All indexes are subject to revision four months after original publication.

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TRANSOCEAN OFFSHORE DEEPWATER DRILLING INC.
1311 BROADFIELD, SUITE 400
HOUSTON, TX 77084

CHRISTOPHER S. YOUNG
SR. MARKETING REPRESENTATIVE

March 3, 2003

BP America Production Company
501 WestLake Park Blvd.
Houston, TX 77079

Attn: Mr. Randy Rhoads

Re: **Drilling Contract No. 980249** dated December 9, 1998 by and between **R&B Falcon Drilling Company predecessor in interest to Transocean Holdings Inc.** ("Contractor") and **Vastar Resources, Inc. predecessor in interest to BP America Production Company** ("Company"), as amended for RBS-8D (now known as the **Deepwater Horizon**)

Subject: **Letter of Agreement for Rental of 6 5/8" HWDP**
CONTRACTOR-5121-2002-011

Dear Randy,

This letter is to reflect our agreement to purchase 23 joints of 6 5/8" drill pipe (per Smith's Quote No. D03-0557) and rent it to BP over the remaining term of the Contract referenced above. The total rental amount will be 1.27418155 times the cost of the pipe. The pipe cost $107,311.56 including inspection. Therefore, the total rental payment will be $136,734.40 over the remaining term of the contract. We received the pipe on March 3, 2003. Therefore, the rental rate will be **$242.01** per day starting March 4, 2003 and ending September 18, 2004. If the Contract should be terminated for any reason, BP agrees to pay the difference between $136,734.40 and the total rental paid up to that time. BP will be responsible for all inspections during the term of the rental. The pipe shall be treated as Contractor's in-hole equipment per Article 22 of the Contract.

Please indicate your agreement in the space provided below and return one fully executed copy of this letter to me for our files. If you have any questions, please contact John Keeton at (832) 587-8533 or me at (832) 587-8506. Thank you for the opportunity to be of service.

Sincerely,

/s/ Christopher S. Young
Christopher S. Young
Sr. Marketing Representative

AGREED AND ACCEPTED THIS 14th DAY OF APRIL, 2003
BP AMERICA PRODUCTION COMPANY

SIGNED ***/s/ Jerry R Rhoads***
PRINTED ***Jerry R Rhoads***
TITLE ***Contracts Specialist***

PHONE: (832) 587-8506 FAX: (832) 587-8754 EMAIL:cyoung@houston.deepwater.com

TRANSOCEAN OFFSHORE DEEPWATER DRILLING INC.
1311 BROADFIELD, SUITE 400
HOUSTON, TX 77084

CHRISTOPHER S. YOUNG
SR. MARKETING REPRESENTATIVE

March 20, 2003

BP America Production Company
501 WestLake Park Blvd.
Houston, TX 77079

Attn: Mr. Randy Rhoads

Re: **Drilling Contract No. 980249** dated December 9, 1998 by and between **R&B Falcon Drilling Company** ("Contractor") and **Vastar Resources, Inc. predecessor in interest to BP America Production Company** ("Company"), as amended for RBS-8D (now known as the **Deepwater Horizon**)

Subject: **Letter of Agreement for 6 5/8" Drill Pipe Rental dated November 1, 2002**
CONTRACTOR-5121-2002-011

Dear Randy,

This letter is to document the actual cost and daily rental rate for the 6 5/8" drill pipe referenced in our November 1, 2002 letter agreement.

According to the November 1, 2002 Agreement, the total rental amount will be 1.27418155 times the actual cost of the pipe. The pipe cost **$1,352,110.27** including trucking and inspection so the total rental payment will be **$1,722,833.96** over the remaining term of the contract. Therefore, the daily rental rate will be **$3,208.26** per day starting on April 1, 2003 and continuing through September 18, 2004 (537 days). If the contract is terminated for any reason prior to September 18, 2004, BP agrees to pay the difference between $1,722,833.96 and the total rental paid up to the time of termination.

BP will be responsible for all inspections during the term of the rental. The pipe shall be treated as Contractor's in-hole equipment per Article 22 of the Contract.

If you have any questions, please contact John Keeton at (832) 587-8533 or me at (832) 587-8506. Thank you for the opportunity to be of service.

Sincerely,

/s/ Christopher S. Young
Christopher S. Young
Sr. Marketing Representative
AGREED AND ACCEPTED THIS 14th DAY OF APRIL, 2003
BP AMERICA PRODUCTION COMPANY

SIGNED ***/s/ Jerry R Rhoads***
PRINTED ***Jerry R Rhoads***
TITLE ***Contracts Specialist***

PHONE: (832) 587-8506 FAX: (832) 587-8754 EMAIL:cyoung@houston.deepwater.com

TRANSOCEAN OFFSHORE DEEPWATER DRILLING INC.
1311 BROADFIELD, SUITE 400
HOUSTON, TX 77084

CHRISTOPHER S. YOUNG
SR. MARKETING REPRESENTATIVE

November 1, 2002

BP America Production Company
501 WestLake Park Blvd.
Houston, TX 77079

Attn: Mr. Randy Rhoads

Re: **Drilling Contract No. 980249** dated December 9, 1998 ("Contract") by and between **R&B Falcon Drilling Company predecessor in interest to Transocean Holdings, Inc,**("Contractor or TODDI") and **Vastar Resources, Inc. predecessor in interest to BP America Production Company** ("Company"), as amended for RBS-8D (now known as the **Deepwater Horizon**)

Subject: **Letter of Agreement for 6 5/8" Drill Pipe Rental**
CONTRACTOR-5121-2002-011

Dear Randy,

This letter is to document the agreement between Transocean Offshore Deepwater Drilling Inc. (TODDI) and Company for the rental of 18,000 feet of 6 5/8" R-3 drill pipe for use on the Deepwater Horizon.

Company and TODDI hereby agree to the following terms and conditions:

1. TODDI shall purchase the following pipe and rent it to Company over the remaining term of the Contract referenced above. Specifications of the pipe are as follows:

Footage	18,000	Joints	439
Pipe OD	6 5/8"	Connection	6 5/8 FH
Weight	34.01	OD	8 1/4"
Grade	S-135	ID	4 1/4"
Upset	IEU	Pin Tong	10"
Range	3	Box Tong	13"
Internal Coating	TK34 XT*	Hardfacing Pin	None
Inspection	Truscope AS	Hardfacing Box	Armacor M
Delivery	16 weeks*		
Make & Break & 95% wall included			

* Changes from Grant Prideco quote 30726

2. Tooljoints (Pin & Box) shall be manufactured long enough to provide for a minimum of two full recuts and still have sufficient tong space excluding proud hardbanded area. Company's coating, hardbanding and make & break specifications are attached and made a part of this Agreement.

PHONE: (832) 587-8506 FAX: (832) 587-8754 EMAIL:cyoung@houston.deepwater.com

3. The rental rate will be approximately $3,000/day assuming that 18 months will be remaining on the contract at time of pipe delivery and that the total cost of the pipe is approximately $1.29 million. The exact calculation will be made when the pipe is delivered and the total cost (based on good footage) and the remaining number of days in the term are known. The total rental amount to be recovered will be calculated at 1.27418155 times the total cost of the pipe. The total cost of the pipe will include inspection and transportation.

4. The rental rate shall begin upon delivery of the pipe to TODDI following acceptance in accordance with Company's QA/QC specifications and inspection criteria. These specifications and criteria are made a part of this Agreement. The rental rate shall cease when the total rental paid equals 1.27418155 times the final cost of the pipe. The rental agreement will continue as long the Contract is in force however the rental rate will be zero after the total rental paid equals 1.27418155 times the final cost of the pipe.

5. Contractor shall furnish all handling equipment required for this pipe during the term of the rental at no cost to Company.

6. Initial inspection is included in the cost of the pipe. Company reserves the right to re-inspect the pipe at Company's cost. Company will be responsible for all inspections during the term of the rental.

7. The pipe shall be treated as Contractor's in-hole equipment per Article 22.3 of the Contract except for the cost of inspections.

8. During the term of the rental, Company will have the option of moving the pipe to another Transocean Rig at Company's option and expense.

If you are in agreement with the above, please sign in the space provided below and return one fully executed copy of this letter to me for our files.

If you have any questions, please contact John Keeton at (832) 587-8533 or me at (832) 587-8506. Thank you for the opportunity to be of service.

Sincerely,

/s/ Christopher S. Young
Christopher S. Young
Sr. Marketing Representative

AGREED AND ACCEPTED THIS 3RD DAY OF FEBRUARY, 2003
BP AMERICA PRODUCTION COMPANY

SIGNED ***/s/ Jerry R Rhoads***
PRINTED ***Jerry R Rhoads***
TITLE ***Contracts Specialist***

TRANSOCEAN HOLDINGS INC.
1311 BROADFIELD, SUITE 400
HOUSTON, TX 77084

CHRISTOPHER S. YOUNG
SR. MARKETING REPRESENTATIVE

November 12, 2003

BP Deepwater Development Company
501 WestLake Park Blvd.
Houston, TX 77079

Attn: Mr. Jon Sprague – Atlantis Wells Delivery Leader

Re: **Drilling Contract No. 980249** dated December 9, 1998 by and between **R&B Falcon Drilling Company predecessor in interest to Transocean Holdings Inc.** ("Contractor") and **Vastar Resources, Inc. predecessor in interest to BP America Production Company** ("Company"), as amended for RBS-8D (now known as the **Deepwater Horizon)**

Subject: **Letter of Agreement for adding Tool Pusher in BP's Office**
CONTRACTOR-5121-2002-011

Dear Mr. Sprague:

Upon execution of this Letter Agreement by COMPANY, CONTRACTOR agrees to provide one (1) Tool Pusher to work in BP's offices in addition to those specified in Exhibit F-1 of the Contract as amended.

COMPANY has requested and CONTRACTOR agrees that CONTRACTOR will provide one (1) additional Sr. Toolpusher to work in COMPANY's offices during the Atlantis Project. The Sr. Toolpusher will be shore based and work at COMPANY's offices as required to support the Atlantis Project on an even rotating schedule. Work will commence on or about December 1, 2003.

CONTRACTOR shall invoice COMPANY at the rate of US$786 (Seven Hundred Eighty Six) per day worked and for all documented reasonable and necessary travel costs and living (room and board) expenses (at no mark-up to actual costs). The Sr. Toolpusher will be available for work seven days a week on 14 day on and 14 day off schedule and COMPANY shall be billed monthly for every day available for work during the month. CONTRACTOR will supply supporting documentation with each monthly invoice as evidence of days available for work.

COMPANY reserves the right to release the services of the Sr. Toolpusher at anytime upon thirty (30) days prior written notice to CONTRACTOR. COMPANY and CONTRACTOR will document when the Sr. Toolpusher is released from duty for services on this special Atlantis Project assignment, thus ending the applicability of this contract amendment.

Except as specifically provided herein, all other terms and conditions of the Contract shall remain in full force and effect. Please indicate your agreement in the space provided below and return one fully executed copy of this letter to me for our files.

If you have any questions, please contact John Keeton at (832) 587-8533 or me at (832) 587-8506. Thank you for the opportunity to be of service.

PHONE: (832) 587-8506 FAX: (832) 587-8754 EMAIL:cyoung@houston.deepwater.com

BP
Horizon – TP in BP's office
TSF File #01-063

Sincerely,

/s/ Christopher S. Young
Christopher S. Young
Sr. Marketing Representative
On Behalf of Transocean Holdings Inc.,

AGREED AND ACCEPTED THIS 1st DAY OF DECEMBER, 2003

BP DEEPWATER DEVELOPMENT COMPANY

SIGNED ***/s/ Jerry R Rhoads***
PRINTED ***Jerry R Rhoads***
TITLE ***Contracts Specialist***

TRANSOCEAN HOLDINGS INC.
4 GREENWAY PLAZA
HOUSTON, TX 77046

CHRISTOPHER S. YOUNG
SR. MARKETING REPRESENTATIVE

February 28, 2004

BP America Production Company
501 WestLake Park Blvd.
Houston, TX 77079

Attn: Mr. Randy Rhoads

Re: **Drilling Contract No. 980249** dated December 9, 1998 by and between **R&B Falcon Drilling Company predecessor in interest to Transocean Holdings Inc.** ("Contractor") and **Vastar Resources, Inc. predecessor in interest to BP America Production Company** ("Company"), as amended for RBS-8D (now known as the **Deepwater Horizon)**

Subject: **Letter of Agreement for Cost Escalation 2003**
Transocean Ref: 5121-2001063-027

Dear Randy,

We performed the "annual" cost analysis for the ***Deepwater Horizon*** as of January 1, 2004 in accordance with Article 2.3 "Adjustment in Dayrates" of the Contract referenced above. The following table summarizes the Baseline Cost changes detailed on the attached schedule "Basis for Cost Escalation":

Reference	2003 Baseline Costs plus Previous Agreements	Actual Baseline Costs @ Jan. 1, 2003	Increase/ (Decrease)	Dayrate Increase/ (Decrease)
2.3.2a Base Labor Costs	$ 36,008	$ 36,099	$ 91	*
2.3.2b Catering Costs	$ 2,780	$ 2,650	$ (130)	$ (130)
2.3.2c Maintenance Element	$ 13,851	$ 14,589	$ 738	$ 738
2.3.2d Insurance	$ 5,137	$ 5,137	0	
Total	$ 57,776/day	$ 58,475/day		$ 608day

* According to Article 2.3.2, rates for each item must vary by => 5% before they can be adjusted.

Notes:

2.3.2a Base Labor rates changed by the adjustment of the utilization bonus and pension accruals. The net result was a slight increase but not the 5% required to trigger an increase.

2.3.2b We have changed catering companies on the ***Horizon*** which has provided a decrease from $31.95 per man per day to $30.45, a decrease of 6.3%. Please note the catering cost shown on the accompanying schedule only reflects the crew complement in the contract (77 on board the rig) while we actually have 83.

PHONE: (832) 587-8506 FAX: (832) 587-8754 EMAIL:cyoung@houston.deepwater.com

BP
Horizon – Escalation 2004
TSF File #01-063

2.3.2c The Maintenance Element of the Baseline Cost increased $738 per day based on the change on the relevant Producer Price Index. The Index number for December 2003 increased to 153.8 from 145.8 in August of 2001, an increase of 5.33%. The Bureau of Labor Statistics Data for the Producer Price Index series ID: WPU119102 is attached.

2.3.2d Costs of insurance premiums have not changed due to the fact that our Risk Department negotiated a 14 month agreement for the previous increases. We will keep you advised of any increases regarding insurance.

The following documents are attached for reference: 1) "Basis for Cost Escalations" schedule; 2) "Adjusted Base Labor as of January 1, 2004"; and 3) the Bureau of Labor Statistics Data for the relevant Producer Price Index.

In summary, the following adjustments will be made:

Paragraph 2.3.2b		(130)	
Paragraph 2.3.2c		738	
Total Increase	$	608	net increase effective January 1, 2004

Except as specifically provided herein, all other terms and conditions of the Contract shall remain in full force and effect.

Please indicate your agreement in the space provided below and return one fully executed copy of this letter to me for our files. If you have any questions, please contact John Keeton at (832) 587-8533 or me at (832) 587-8506. Thank you for the opportunity to be of service.

Sincerely,

/s/ Christopher S. Young
Christopher S. Young
Sr. Marketing Representative
On Behalf of R & B Falcon Drilling Co.

AGREED AND ACCEPTED THIS 31 DAY OF MARCH, 2004

BP AMERICA PRODUCTION COMPANY

SIGNED ***/s/ Scott Sigurdson***
PRINTED ***Scott Sigurdson***
TITLE ***Wells Manager***

BASIS FOR COST ESCALATIONS
DEEPWATER HORIZON
January 1, 2004
$ Per Day

Clause No.:		January 2003 Actual Baseline Costs	January 2004 Actual Baseline Costs	Variance	Adjusted 2004 Baseline Costs
2.3.2a)	**Base Labor Cost:**				
	Labor & Burden (per schedule)	$ 25,476	$ 25,626	$ 150	$ 25,476
	Training & Transportation Costs	$ 2,820	$ 3,024	$ 204	$ 2,820
**	Labor & Burden (18 Addl Personnel - Onboard)	$ 6,852	$ 6,792	$ -59	$ 6,852
**	(Training & Transportation Costs (18 Addl Personnel - Onboard)	$ 860	$ 656	$ -204	$ 860
	Total Base Labor Cost	**$ 36,008**	**$ 36,099**	**$ 91**	**$ 36,008**
	Percentage Increase			**0.25%***	
2.3.2b)	**Base Catering Cost:**				
	59 Contractor Personnel	$ 1,885	$ 1,797	$ -88	$ 1,797
**	18 Additional Personnel	$ 576	$ 549	$ -27	$ 549
	10 Company Personnel	$ 320	$ 305	$ -15	$ 305
	Total Base Catering Costs	**$ 2,780**	**$ 2,650**	**$ -130**	**$ 2,650**
	Percentage Increase			**-6.3%**	
2.3.2c)	**Base Maintenance Element:**	**$ 13,851**	**$ 14,589**	**$ 738**	**$ 14,589**
	Percentage Increase			**5.33%**	
2.3.2d)	**Base Insurance Cost:**				
	Hull & Machinery	$ 2,422	$ 2,422	$ 0	$ 2,422
	Marine P&I	$ 2,039	$ 2,039	$ 0	$ 2,039
	Excess Liability	$ 520	$ 520	$ 0	$ 521
	Brokers Fee	$ 110	$ 110	$ 0	$ 110
	Oil Pollution	$ 46	$ 46	$ 0	$ 46
	Total Base Insurance Cost:	**$ 5,137**	**$ 5,137**	**$ 0**	**$ 5,137**
	Percentage Increase			**0.0%**	
Total Baseline Operating Costs		**$ 57,776**	**$ 58,475**	**$ 608**	**$ 58,384**
			Total Dayrate Increase =		**$ 608/day**

* Note: The Index did not vary by 5% so the baseline cost and index stays the same as in 2003
**Note: The 7 Addl Personnel are included as line items to identify that they were included in the previous escalation.
The 18 Addl Personnel includes all personnel added to the contract and these lines indicate the increases on all Addl Personnel.

DEEPWATER HORIZON
Adjusted Labor as of
January 1, 2004

No. of Personnel			A	B	C	D
			GOM Base Labor		GOM Overtime Rates	
On Board	Assigned To Rig	JOB CLASSIFICATION	Daily Rate per person (inc. TT&C)	Total Daily on Board Cost	Daily Overtime Rates	Hourly Overtime Rates
1	2	OIM	958.32	866.16	818.90	68.24
1	2	OSA - Horizon	868.26	776.10	728.84	60.74
3	6	Toolpusher	793.31	2,103.44	653.89	54.49
2	4	Driller	659.31	1,134.31	619.69	51.64
4	8	Assistant Driller	508.91	1,667.01	440.42	36.70
2	4	Pumpman	427.86	671.40	343.80	28.65
12	24	Floorman	383.58	3,886.55	340.75	28.40
14	28	Roustabouts	342.07	3,953.17	291.27	24.27
1	2	Welder	483.29	391.13	409.87	34.16
4	8	Crane Operator	499.66	1,630.00	429.39	35.78
2	4	Chief Mechanic	591.28	998.23	538.59	44.88
1	2	Mechanic	493.19	401.03	421.68	35.14
2	4	Motor Operator	397.26	675.10	357.04	29.75
1	2	Electrical Supervisor	659.31	567.15	519.90	43.32
2	4	Chief Electrician	589.72	995.12	536.74	44.73
1	2	Electrician	488.44	396.28	416.02	34.67
2	4	Chief Electronic Technician	597.91	1,011.50	546.50	45.54
1	2	Senior Sub Sea Sup	759.49	667.32	620.07	51.67
1	2	Assistant Subsea	559.02	466.86	500.14	41.68
2	4	Material Co-Ordinator	451.60	718.88	372.10	31.01
1	2	Master	852.37	760.21	712.95	59.41
1	2	Chief Mate	671.59	579.43	634.32	52.86
1	2	Chief Engineer	759.56	667.40	620.14	51.68
1	2	1st Assistant Engineer	658.33	566.17	618.52	51.54
2	4	2nd Assistant Engineer	653.50	1,122.68	612.76	51.06
2	4	DP Operator	561.07	937.81	502.58	41.88
2	4	Assistant Dp Operator	475.10	765.88	400.11	33.34
2	4	Deck Pusher	491.25	863.09	469.07	39.09
1	2	Bosun	480.83	388.67	406.94	33.91
3	6	AB Seaman	401.43	1,025.18	362.02	30.17
1	2	RSTT	475.10	382.94	400.11	33.34
1	2	Medic	475.10	382.94	400.11	33.34
0	0	-	—	—	—	—
0	0	-	—	—	—	—
0	0	-	—	—	—	—
0	0	-	—	—	—	—
0	0	-	—	—	—	—
0	0	-	—	—	—	—
0	0	-	—	—	—	—
77	**154**		**Total Labor Costs =**	**$ 32,419.17**		

The figures in column "A" are to be used as the basis for adding personnel to the permanent crew and for determining the credit for crew members short. This includes all Training, Transportation and Catering costs.

The figures in column "B" are the daily cost of all crew members <u>excluding</u> Training, Transportation and Catering costs.

The figures in column "C" are the daily cost of overtime <u>excluding</u> Training, Transportation and Catering costs (assuming a daily schedule of 12 hours)

The figures in column "D" are the hourly cost of overtime <u>excluding</u> Training, Transportation and Catering costs.

TRANSOCEAN HOLDINGS, INC.
1311 BROADFIELD, SUITE 400
HOUSTON, TX 77084

CHRISTOPHER S. YOUNG
SR. MARKETING REPRESENTATIVE

April 19, 2004

BP America Production Company
501 WestLake Park Blvd.
Houston, TX 77079

Attn: Mr. Randy Rhoads

Re: **Drilling Contract No. 980249** dated December 9, 1998 ("Contract") by and between **R&B Falcon Drilling Company predecessor in interest to Transocean Holdings Inc.** ("Contractor") and **Vastar Resources, Inc. predecessor in interest to BP America Production Company** ("Company"), as amended for RBS-8D (now known as the **Deepwater Horizon)**

Subject: **Contract Extension Agreement ("Agreement")**
CONTRACTOR-5121-2002-011

Dear Randy,

This letter will confirm our agreement to extend the Contract under the same terms and conditions except as modified herein:

1) Term:

a) The term of the extension (Extension Period) shall be one (1) year commencing September 18, 2004.

b) Article 1.1.2 of the Contract shall be amended so that there will be no further options to extend the Contract after this Extension Period.

2) Rates:

The dayrates specified in Exhibit "A" shall be amended to the following rates at commencement of the one (1) year Extension Period:

1.	Operating Rate	$165,000 /day
2.	Moving Rate	165,000
3.	Standby w/ crews	165,000
4.	Standby w/o crews	165,000, less documented cost savings
5.	Stack w/ crews	165,000, less documented cost savings
6.	Stack w/o crews	165,000, less documented cost savings
7.	Equipment Repair	165,000 subject to article 2.2.5 (A)
8.	Hurricane Evacuation	165,000 standby w/o crew plus documented expenses of evacuated crew.

The rates specified above are subject to the following conditions:

PHONE: (832) 587-8506 FAX: (832) 587-8754 EMAIL:cyoung@houston.deepwater.com

a) Revised Personnel Complement

Exhibit "F-1" of the Contract shall be amended effective at the commencement of the Extension Period to include the personnel complement attached as Exhibit 1 hereto, which recognizes Contractor's revised maintenance philosophy and optimized crewing plan. In addition, to provide both parties flexibility to adjust crewing levels as circumstances allow, Company and Contractor agree to the following:

As conditions warrant, Contractor, with Company representative's consent (which shall not be unreasonably withheld), may reduce the number of personnel (for those job classifications listed in the table below) assigned to the rig from the number listed in the table below as "Current Personnel Assigned to Rig" to the number listed in "Revised Personnel Assigned to Rig Per Exhibit 1". Adjustments within the ranges reflected in the table will not incur a corresponding adjustment in dayrates.

Job Classification	Revised Personnel Assigned to Rig Per Exhibit "1"	Current Personnel Assigned to Rig
Toolpusher	6	8
Derrickman/Floorman/Pumpman	24	28
Crane Operator	6	8
Roustabouts/Lead Roustabouts	22	28
OSA	0	2

At any time during the Extension Period, if Company determines that any previous reductions to personnel in the classifications listed above do not permit safe and efficient rig operations, Company's representative may require Contractor to increase the number of personnel assigned to the rig listed in the table above from any reduced level back up to the number listed in the table above as "Current Personnel Assigned to Rig". Adjustments within the ranges reflected in the table will not incur a corresponding adjustment in dayrates.

Should Company require extra permanent rig staff in addition to; 1) the "Current Personnel Assigned to Rig" for the job classifications listed in the table above, or 2) the other job classifications listed in the revised "Exhibit "F-1" Personnel Complement" attached hereto as Exhibit 1, the additional personnel will be added to the personnel complement and the dayrates specified in Attachment "A" of the Contract, as amended, will be adjusted for the increase in expense.

Contractor will be responsible, at its sole cost, for any additional personnel required for operation, repair or maintenance of the vessel and the dayrates will not be adjusted to reflect any such increases.

b) Operating Costs:

The rates specified in item (2) hereof are based on the "Basis for Cost Escalations dated January 1, 2004" documented in our February 28, 2004 "Letter of Agreement for Cost Escalation 2004"

as amended for the revised personnel complement set forth in the new Exhibit F-1 per Section 2 a) of this Agreement. The "Revised Basis for Cost Escalations" based on the revised personnel complement set forth in the new Exhibit F-1 per Section 2 a) of this Agreement is attached hcrcto as Exhibit 2. The "Revised Basis for Cost Escalations" in Exhibit 2 shall serve as the baseline for cost adjustments as of the commencement date of the Extension Period. At the commencement of the Extension Period, Article 2.3.2 of the Contract will be amended to read as follows:

Article 2.3.2 Amended:

2.3.2 The dayrates set forth in Exhibit A as amended shall be revised as of the commencement of the Extension Period as defined in the Contract Extension Agreement dated April 14, 2004 (the "Extension Agreement") to reflect the change in costs from the "Revised Basis for Cost Escalation dated January 1, 2004" (attached as Exhibit 2 to the Extension Agreement) if the costs of any of the items hereafter listed shall vary in an amount equal to or greater than three percent *(3%)* from the costs thereof.

a. Labor costs, including all benefits, of CONTRACTOR'S personnel listed in Exhibit F;
b. CONTRACTOR'S cost of catering;
c. CONTRACTOR'S cost of spare parts and supplies vary and that the parties shall use the United States Department of Labor's Producer Price Index Commodity Code No. 1191.02 . Oil Field and Gas Field Drilling Machinery to determine what extent a price variance has occurred in said spare parts and supplies.
d. Cost of insurance not based solely on CONTRACTOR'S loss or claim record.

CONTRACTOR must show documented proof for any dayrate adjustments due to changes in CONTRACTOR'S cost of labor, insurance or catering. After any adjustment, the adjusted costs shall be the new basis for cost escalation.

c) Amendments to the Contract:

The Contract contains numerous amendments related to the provision of equipment, personnel, supplies and activities. The Extension Period dayrates specified in 2 above reflect all such amendments except as otherwise noted herein.

i) Equipment Added during the Initial Term per Letter Agreements :

Certain letter amendments to the Contract provided for lump sum payments, rental payments, or formulaic and other increases to the operating rates to permit Contractor's recovery of certain costs within the Contract's initial term for purchasing additional equipment. The parties agree that the payment obligations arising under such amendments will expire at the end of the Contract's initial term as originally contemplated but that any maintenance or removal obligations will continue to the end of the Extension Period. Letter agreements regarding equipment are attached hereto as Exhibit 3.

ii) Amendments Adding Personnel:

The revised personnel complement referenced in item 2(a) of this Agreement incorporates all personnel added to the rig at Company's expense in previous amendments to the Contract so that there will be no additional rig based personnel billed in addition to the dayrate unless

added by Company as set forth in Item 2(a) of this Agreement. The costs related to the November 12, 2003 amendment adding a tool pusher to work in Company's office are not included in the rates specified in item (2) hereof and Company will remain responsible for the cost.

iii) Other Amendments to the Contract:

Rental equipment (other than the equipment covered in 2.c.i. above) and/or third party services provided by Contractor, if any, are not included in the extension dayrates. The Recycle the Gulf agreement dated January 7, 2003 will continue per the terms of that agreement and the cost is not included in the dayrates specified in item (2) hereof.

d) Drilling Riser

Contractor acknowledges that the Deepwater Horizon is equipped to drill in 10,000 feet of water with the sole exception of adequate length of drilling riser. Company and Contractor agree that during the term of this Agreement, Company may authorize Contractor to use excess riser from the Discoverer Enterprise (or any other Contractor rig that Company may have under contract in the Gulf of Mexico during the time of the requirement) on the Deepwater Horizon to enable the Deepwater Horizon to drill in water depths up to 10,000'. If Company authorizes Contractor to use the excess riser, Contractor shall obtain, a riser analysis confirming that the use of the excess riser in the water depth contemplated meets appropriate safety and operational standards. In the event Contractor is unable to obtain such a confirming analysis, the parties shall promptly meet in good faith to discuss and implement alternatives to meet Company's need for excess riser use. Once the confirming analysis has been obtained, or an alternative has been agreed to and implemented, Contractor agrees to order any adapters or crossovers required subject to Company's agreement to reimburse Contractor per Article 8.1.2 of the Contract. Company shall provide adequate written notice before the intended use of the excess riser, in order to enable timely delivery of the required crossovers. Company shall be responsible for all transportation of riser between the rigs.

Except as specifically set forth above, all other terms and conditions of the Contact, as amended to date, shall remain unchanged.

Please signify your agreement with this Agreement by signing both originals in the space provided below and return one (1) fully executed original to us for our records.

Sincerely,

/s/ Christopher S. Young
Christopher S. Young
Sr. Marketing Representative
On Behalf of Transocean Holdings, Inc.

ACCEPTED AND AGREED TO:

By: /s/ ILLEGIBLE Date: 4/26/04
On Behalf of BP America Production Company

EXHIBIT 1

PERSONNEL COMPLEMENT

DEEPWATER HORIZON

No. of Personnel			A	B	C	D
			GOM Base Labor		GOM Overtime Rates	
On Board	Assigned To Rig	JOB CLASSIFICATION	Daily Rate per person (inc. TT&C)	Total Daily on Board Cost	Daily Overtime Rates	Hourly Overtime Rates
1	2	OIM	958.34	866.18	818.92	68.24
3	6	Toolpusher	793.33	2,103.50	653.91	54.49
2	4	Driller	659.33	1,134.34	619.71	51.64
4	8	Assistant Driller	508.92	1,667.06	440.43	36.70
2	4	Derrickman	458.73	733.15	380.61	31.72
2	4	Pumpman	427.87	671.41	343.82	28.65
8	16	Floorman	383.59	2,591.11	340.76	28.40
1	2	Maintenance Supervisor	776.45	684.29	637.03	53.09
1	2	Mechanical Supervisor	659.33	567.17	519.91	43.33
2	4	Chief Mechanic	591.29	998.26	538.61	44.88
2	4	Mechanic	493.20	802.09	421.69	35.14
1	2	Senior Motor Operator	446.45	354.29	365.97	30.50
2	4	Motor Operator	397.26	675.12	357.05	29.75
1	2	Electrical Supervisor	659.33	567.17	519.91	43.33
1	2	Chief Electrician	589.74	497.58	536.75	44.73
1	2	Electrician	488.46	396.30	416.03	34.67
1	2	Chief Electronic Technician	597.92	505.76	546.51	45.54
1	2	Electronic Technician	492.55	400.39	420.91	35.08
1	2	Senior Sub Sea Sup Dp	759.51	667.34	620.09	51.67
1	2	Subsea Supervisor	634.77	542.61	590.43	49.20
1	2	Master	852.39	760.23	712.97	59.41
1	2	Chief Mate	671.61	579.45	634.35	52.86
1	2	Bosun	480.84	388.68	406.96	33.91
3	6	AB Seaman	401.44	1,025.21	362.03	30.17
2	4	DP Operator	561.08	937.84	502.60	41.88
2	4	Assistant Dp Operator	475.11	765.90	400.13	33.34
3	6	Crane Operator	499.67	1,222.54	429.40	35.78
1	2	Deck Pusher	491.26	431.55	469.09	39.09
2	4	Lead Roustabouts	355.34	591.28	307.09	25.59
9	18	Roustabouts	342.08	2,541.39	291.28	24.27
1	2	Welder	483.30	391.14	409.88	34.16
1	2	Senior Materials Co-Ordinator	524.24	432.08	384.82	32.07
1	2	Material Co-Ordinator	451.61	359.45	372.12	31.01
1	2	Medic	475.11	382.95	400.13	33.34
1	2	Radio Operator	419.84	327.68	334.25	27.85
1	2	RSTC	516.05	423.89	448.92	37.41
0	0	-	—	—	—	—
0	0	-	—	—	—	—
0	0	-	—	—	—	—
0	0	-	—	—	—	—
69	**138**		**Total Labor Costs =**	**$ 28,986.39**		

The figures in column "A" are to be used as the basis for adding personnel to the permanent crew and for determining the credit for crew members short. This includes all Training, Transportation and Catering costs.

The figures in column "B" are the daily cost of all crew members <u>excluding</u> Training, Transportation and Catering costs.

The figures in column "C" are the daily cost of overtime <u>excluding</u> Training, Transportation and Catering costs (assuming a daily schedule of 12 hours)

The figures in column "D" are the hourly cost of overtime <u>excluding</u> Training, Transportation and Catering costs.

EXHIBIT 2

REVISED BASIS FOR COST ESCALATIONS
DEEPWATER HORIZON
January 1, 2004
$ Per Day

Clause No.:		Adjusted 2004 Baseline Costs
2.3.2a) Base Labor Cost:		
Labor & Burden (per schedule)	$	28,986
Training & Transportation Costs	$	3,447
Total Base Labor Cost	**$**	**32,433**
2.3.2b) Base Catering Cost:		
69 Contractor Personnel	$	2,101
10 Company Personnel	$	305
Total Base Catering Costs	**$**	**2,406**
2.3.2c) Base Maintenance Element:	**$**	**14,589**
Percentage Increase		
2.3.2d) Base Insurance Cost:		
Hull & Machinery	$	2,422
Marine P&I	$	2,039
Excess Liability	$	521
Brokers Fee	$	110
Oil Pollution	$	46
Total Base Insurance Cost:	**$**	**5,137**
Total Baseline Operating Costs	**$**	**54,565**

EXHIBIT 3

2) c) i) Letter Agreements Regarding Equipment:

Date:	Description:	Amount:
Jan. 16, 2004	Riser, Removal, Transportation and Storage	NA
Apr. 15, 2002	Test Stump Change	Lump Sum
Apr. 15, 2002	Connector Modification	Lump Sum
Jun 12, 2004	Variable Bore Ram	$125/day
Nov. 1, 2002 & Mar 20, 2003	“Rental” of 18,000’ of 6 5/8” DP	$3,208.26/day
Mar 3, 2003	“Rental” of 6 5/8” HWDP	$2,42.01/day

TRANSOCEAN OFFSHORE DEEPWATER DRILLING INC.
1311 BROADFIELD, SUITE 400
HOUSTON, TX 77084

CHRISTOPHER S. YOUNG
SR. MARKETING REPRESENTATIVE

June 25, 2004

BP America Production Company
200 Westlake Park Blvd.
Houston, TX 77079

Attn: Mr. Randy Rhoads
Mail Code 1089 WL4

Re: **Drilling Contract No. 980249** dated December 9, 1998 by and between **R&B Falcon Drilling Company** ("Contractor") and **Vastar Resources, Inc. predecessor in interest to BP America Production Company** ("Company"), as amended for RBS-8D (now known as the **Deepwater Horizon)**

Subject: **Letter of Agreement for Cap Rock Communication Equipment**
CONTRACTOR-5121-2002-011

Dear Randy,

This letter is to document our agreement for Contractor to contract and install the communications equipment as detailed on the attached Quotation #3630-10100 from Cap Rock Communications dated June 2, 2004 and for Company to pay Contractor a monthly rental amount over the remaining term of the Contract as extended.

The rental payment will be $9,975 per month based on the prices shown on the attached quote. The first rental payment will be due and payable when the equipment has been installed. If the contract is terminated for any reason prior to September 18, 2005, Company agrees to pay the rental amount owed up to September 18, 2005 in the form of a lump sum payment.

If you have any questions, please contact John Keeton at (832) 587-8533 or me at (832) 587-8506. Thank you for the opportunity to be of service.

Sincerely.

/s/ Christopher S. Young
Christopher S. Young
Sr. Marketing Representative
AGREED AND ACCEPTED THIS, 28th DAY OF JUNE, 2004
BP AMERICA PRODUCTION COMPANY

SIGNED ***/s/ Jerry R Rhoads***
PRINTED ***Jerry R Rhoads***
TITLE ***Contract Specialist***

PHONE: (832) 587-8506 FAX: (832) 587-8754 EMAIL:cyoung@houston.deepwater.com

Quotation

CapRock COMMUNICATIONS
RELIABILITY TO THE EXTREME

4400 S. Sam Houston Parkway East
Houston, Texas 77048
832-668-2370
FAX832-668-2388

Customer: **Transocean**
Attn: **Niel Svendsen/John Keeton**
Address: **1311 Broadfield Blvd. suite 200**
City, State, Zip: **Houston, TX 77084**
Phone/Fax: **832-587-8759**

Quotation #: 3630-10100
Date: 6/2/04
Acct. Mgr. S. Newstead
Ref: HORIZON - VSAT
Revision b3

Item	Qty.	Description	each	ext	single ant.
		HARDWARE			
1.0		Single stabilized antenna system (dual band) Seatel Dual Band 9797 2.4m antenna (configured for Ku-band Linear for GOM) 144 in radome assembly Ku-band SSPA and Transceiver (16 Watt) 2nd Pwr Supply for C side balancing (No C band RF at this time. To be purchased when needed) Onshore Assembly, Integration, documentation, testing, and commissioning		**$ 149,500**	
2.0		Radome AC unit for Seatel 9797 (pro-longs equipment life) required on C-band systems with 40W or higher RF packages due to the high power and heat generated from the SSPA. AC unit requires a 220V feed at the antenna location		**$ 4,600**	
3.0		The above system is priced as a stand alone single antenna unit. This antenna can be integrated into a dual antenna system (using the Transocean owned 9797 antenna removed from the FI00). Therefore, the switching hardware, engineering, and integration for the dual antenna configuration will be additional to the above equipment cost prior to installation.		**$ 5,000**	
4.0		Delivery Delivery of this size system is typically 3-5 weeks. Depending on receipt of PO, production schedules, in stock availability, systems may be available on a much shorter scale.			

Customer Signature: _____

All prices stated are FOB factory
Prices do not include installation,

PHONE: (832) 587-8506 FAX: (832) 587-8754 EMAIL:cyoung@houston.deepwater.com

TRANSOCEAN HOLDINGS INC.
1311 BROADFIELD, SUITE 400
HOUSTON, TX 77084

CHRISTOPHER S. YOUNG
SR. MARKETING REPRESENTATIVE

October 11, 2004

BP America Production Company
200 Westlake Park Blvd.
Houston, TX 77079

Attn: Mr. Randy Rhoads
Mail Code 1089 WL4

Re: Drilling Contract No. 980249 dated December 9, 1998 (as previously amended, **"Contract"**) by and between R&B Falcon Drilling Company, predecessor in interest to Transocean Holdings Inc. **("Contractor")** and Vastar Resources, Inc., predecessor in interest to BP America Production Company **("Company"),** as amended for RBS-8D (now known as the **"Deepwater Horizon")**

Subject: Letter Agreement for Conversion of VBR to a Test Ram
CONTRACTOR-5121-2002-011

Dear Randy,

When executed by both parties below, this letter will document the agreement between Contractor and Company for Contractor's conversion (the "Conversion") of an existing variable bore ram ("VBR") into a "test ram" on the Deepwater Horizon's blowout preventer (the "BOP").

In accordance with Articles 5 and 7 of the Contract, Company shall reimburse Contractor for the cost associated with the Conversion, which is estimated to be $135,000 based on the attached quote/AFE including the five percent (5%) handling fee. Notwithstanding the foregoing, Contractor shall give Company written notice of any increase of more than ten percent (10%) in the above cost estimate and such increase shall be subject to Company's prior written approval. If installation should require out-of-service time, Company agrees to pay Contractor at the Standby Rate (as defined in the Contract) until operations can be recommenced; provided such out-of-service time shall not exceed a maximum of twenty-four (24) hours. Reimbursement for the Conversion shall be in the form of a lump sum payment due and payable within thirty (30) days of receipt of Contractor's invoice therefore, which invoice shall be sent after the "test ram" has been installed.

Company acknowledges that the Conversion will reduce the built-in redundancy of the BOP, thereby potentially increasing Contractor's risk profile and corresponding cost structure. Therefore, after the Conersion is completed, if one of the two remaining VBRs fails to "test" on any well for any mechanical reason (as opposed to abnormal wear or damage caused by operations) and the MMS requires that Contractor pull the BOP to replace the VBR, Company agrees to pay Contractor the Operating Rate (as defined in the Contract) for the time required to pull the BOP, replace the ram, and re-run the BOP; provided, however, if one of the two remaining VBRs fails to "test" a subsequent time on the same well for any mechanical reason, after initially testing subsea, (as opposed to abnormal wear and damage caused by operations) and the MMS requires that Contractor pull the BOP to replace the VBR, the time required to pull the BOP, replace the ram, and re-run the BOP shall be considered Mechanical Downtime (as defined in the Contract).

Except as specifically set forth above, all other terms and conditions of the Contract, as amended to date, shall remain unchanged.

PHONE: (832) 587-8506 FAX: (832) 587-8754 EMAIL:cyoung@houston.deepwater.com

Please indicate your agreement to the terms of this letter by signing in the space provided below and returning an executed copy to us for our files. If you have any further questions, please contact John Keetor. at (832) 587-8533 or me at (832) 587-8506. Thank you for the opportunity to be of service.

Sincerely,

/s/ Christopher S. Young
Christopher S. Young
Sr. Marketing Representative
Transocean Holdings, Inc.

AGREED AND ACCEPTED:
THIS 19th DAY OF October, 2004
BP AMERICA PRODUCTION COMPANY

SIGNED **/s/ Jeff Sjurseth**
PRINTED **Jeff Sjurseth**
TITLE **Contract Specialist**

TRANSOCEAN HOLDINGS, INC.
1311 BROADFIELD SUITE 400
HOUSTON, TX 77084

CHRISTOPHER S. YOUNG
SR. MARKETING REPRESENTATIVE

February 20, 2005

BP America Production Company
200 WestLake Park Blvd.
Houston, TX 77079

Attn: Mr. Jeff Sjurseth

Re: Drilling Contract No. 980249 dated December 9, 1998 (as previously amended, **"Contract")** by and between R&B Falcon Drilling Company, predecessor in interest to Transocean Holdings Inc. **("Contractor")** and Vastar Resources, Inc., predecessor in interest to BP America Production Company **("Company")**, as amended for RBS-8D (now known as the **"Deepwater Horizon")**

Subject: Letter of Agreement for adding Deck Pushers
CONTRACTOR-5121-2002-011

Dear Jeff,

This letter will serve as our agreement to add another Deck Pusher to the crew complement of the Deepwater Horizon. Upon execution of this Letter Agreement by Company, Contractor agrees to provide one (1) Deck Pusher onboard the **Deepwater Horizon** in addition to those specified to be provided in Exhibit F-2 of the Contract as amended. Exhibit F-1 of the Contract shall be amended, as of March 1, 2005 to provide for the following *additional* personnel:

Title	On Board	Assigned to Rig	Daily Rate per Person On Board w/ Burden	Hourly Overtime Rate w/Burden
Deck Pusher	1	2	$ 491.26	$ 39.09

Therefore, the amended crew complement shall show three (2) Deck Pushers "On Board" and four (4) "Assigned to Rig". The amended crew complement is attached. In summary, all rates in the Contract shall increase by **$491.26** per day effective March 1, 2005. Except as specifically provided herein, all other terms and conditions of the Contract shall remain in full force and effect. Please indicate your agreement in the space provided below and return one fully executed copy of this letter to me for our files.

If you have any questions, please contact John Keeton at (832) 587-8533 or me at (832) 587-8506. Thank you for the opportunity to be of service.

Sincerely,

/s/ Christopher S. Young
Christopher S. Young
Sr. Marketing Representative

PHONE: (832) 587-8506 FAX: (832) 587-8754 EMAIL:cyoung@houston.deepwater.com

BP
Horizon
TSF File #01-063

AGREED AND ACCEPTED THIS 4th DAY OF MARCH, 2005

BP AMERICA PRODUCTION COMPANY

SIGNED ***/s/ Jeff Sjurseth***
PRINTED ***Jeff Sjurseth***
TITLE ***Contract Specialist***

TRANSOCEAN HOLDINGS INC.
4 GREENWAY PLAZA
HOUSTON, TX 77046

CHRISTOPHER S. YOUNG
SR. MARKETING REPRESENTATIVE

March 31, 2005

BP America Production Company
501 WestLake Park Blvd.
Houston, TX 77079

Attn: Mr. Jeff Sjurseth

Re: **Drilling Contract No. 980249** dated December 9, 1998 by and between **R&B Falcon Drilling Company predecessor in interest to Transocean Holdings Inc.** ("Contractor") and **Vastar Resources, Inc. predecessor in interest to BP America Production Company** ("Company"), as amended for RBS-8D (now known as the **Deepwater Horizon)**

Subject: **Letter of Agreement for Cost Escalation 2005**
Transocean Ref: 5121-2001063-035

Dear Jeff,

We performed the "annual" cost analysis for the ***Deepwater Horizon*** as of January 1, 2005 in accordance with Article 2.3 "Adjustment in Dayrates" of the Contract referenced above. The following table summarizes the Baseline Cost changes detailed on the attached schedule "Basis for Cost Escalation":

Reference	Baseline Costs from Ext. Letter Dated April 19, 2004	Baseline Costs Jan. 1, 2005	Increase/ (Decrease)	Dayrate Increase/ (Decrease)
2.3.2a Base Labor Costs	$ 32,433	$ 33,832	$ 1,399	$ 1,399
2.3.2b Catering Costs	$ 2,406	$ 2,406	$ 0	*
2.3.2c Maintenance Element	$ 14,589	$ 15,338	$ 749	$ 749
2.3.2d Insurance	$ 5,137	$ 4,568	$ (149)	$ (149)
Correction to 4/19/04 Insurance**	$ (420)			
Corrected Total Baseline Costs	$ 54,145/day	$ 56,144/day		$ 1,999 / day
Total Dayrate Increase				**$ 1,999 / day**

* According to the Amended Article 2.3.2 from the Extension letter, rates for each item must vary by => 3% before they can be adjusted.

** The Insurance Base Rate set on April 19, 2004 was overstated by $420 per day. It was calculated based on the personnel complement before taking into account the decrease of personnel stipulated in the Extension Agreement. Current insurance costs reflect the current personnel complement.

PHONE: (832) 587-8506 FAX: (832) 587-8754 EMAIL:cyoung@houston.deepwater.com

BP
Horizon – Escalation 2005
TSF File #01-063

Notes:

2.3.2a Base Labor rates changed due to salary increases in October and November and by the adjustment of the utilization bonus and pension accruals. The net result is an increase of $1,399 which brings the total Base Labor Cost to $33,832.

2.3.2b Catering cost increased in March 2005 so it will not be included in this escalation.

2.3.2c The Maintenance Element of the Baseline Cost increased $749 per day based on the change on the relevant Producer Price Index. The Index number for January 2005 increased to 161.7 from 153.8 in December 2003, an increase of 5.14%. The Bureau of Labor Statistics Data for the Producer Price Index series ID: WPU119102 is attached

2.3.2d Insurance cost decreased by $149 (a 3.2% decrease). As stated previously, the April 19 Insurance cost was overstated by $420 per day.

The following documents are attached for reference: 1) "Basis for Cost Escalations" schedule; 2) "Adjusted Base Labor as of January 1, 2004"; and 3) the Bureau of Labor Statistics Data for the relevant Producer Price Index.

In summary, all of the dayrates will increase by $1,999 per day effective January 1, 2005

Paragraph 2.3.2a	$	1,399	
Paragraph 2.3.2c	$	749	
Paragraph 2.3.2d		(149)	
Total Increase	$	1,999	net increase effective January 1, 2005

Except as specifically provided herein, all other terms and conditions of the Contract shall remain in full force and effect.

Please indicate your agreement in the space provided below and return one fully executed copy of this letter to me for our files. If you have any questions, please contact me at (832) 587-8506. Thank you for the opportunity to be of service.

Sincerely,

/s/ Christopher S. Young
Christopher S. Young
Sr. Marketing Representative
On Behalf of R & B Falcon Drilling Co.

AGREED AND ACCEPTED THIS 23rd DAY OF MAY, 2005
BP AMERICA PRODUCTION COMPANY

SIGNED ***/s/ Jeff Sjurseth***
PRINTED ***Jeff Sjurseth***
TITLE ***Contract Specialist***

BASIS FOR COST ESCALATIONS
DEEPWATER HORIZON
January 1, 2005
$ Per Day

Clause No.:	Baseline Costs Apr 2004	Baseline Costs Jan. 1, 2005	Variance	Adjusted Baseline Costs Jan. 1, 2005
2.3.2a) Base Labor Cost:				
Labor & Burden (per schedule)	$ 28,986	$ 30,386	$ 1,400	$ 30,386
Training & Transportation Costs	$ 3,447	$ 3,447	$ 0	$ 3,447
Total Base Labor Cost	**$ 32,433**	**$ 33,832**	**$ 1,399**	**$ 33,832**
Percentage Increase			**4.31%**	
2.3.2b) Base Catering Cost:				
69 Contractor Personnel	$ 2,101	$ 2,101	$ 0	$ 2,101
10 Company Personnel	$ 305	$ 305	$ 0	$ 305
Total Base Catering Costs	**$ 2,406**	**$ 2,406**	**$ 0**	**$ 2,406**
Percentage Increase			**0%**	
2.3.2c) Base Maintenance Element:	**$ 14,589**	**$ 15,338**	**$ 749**	**$ 15,338**
Total Base Matinenance Costs			**$ 749**	
Percentage Increase			**5.14%**	
2.3.2d) Base Insurance Cost:				
Hull & Machinery	$ 2,422	$ 1,710	$ (712)	$ 1,710
Marine P&I	$ 1,619	$ 2,257	$ 639	$ 2,257
Excess Liability	$ 521	$ 464	$ (57)	$ 464
Brokers Fee	$ 110	$ 110	$ 0	$ 110
Oil Pollution	$ 46	$ 26	$ (20)	$ 26
Total Base Insurance Cost:	**$ 4,717**	**$ 4,568**	**$ (149)**	**$ 4,568**
Percentage Increase			**-3.2%**	
Total Baseline Operating Costs	**$ 54,145**	**$ 56,144**	**$ 1,999**	**$ 56,144**
	Dayrate Increase		**$ 1,999/day**	

DEEPWATER HORIZON
Adjusted Labor as of
January 1, 2005

No. of Personnel			A	B	C	D
			GOM Base Labor		GOM Overtime Rates	
On Board	Assigned To Rig	JOB CLASSIFICATION	Daily Rate per person (inc. TT&C)	Total Daily on Board Cost	Daily Overtime Rates	Hourly Overtime Rates
1	2	OIM	934.65	842.49	794.31	66.19
3	6	Toolpusher	804.26	2,136.30	663.92	55.33
2	4	Driller	667.33	1,150.34	628.15	52.35
4	8	Assistant Driller	555.14	1,851.91	494.42	41.20
2	4	Derrickhand	488.77	793.22	415.31	34.61
2	4	Pumphand	451.64	718.95	371.05	30.92
8	16	Floorhand	394.60	2,679.21	352.79	29.40
1	2	Maintenance Supervisor	787.12	694.96	646.78	53.90
1	2	Mechanical Supervisor	679.58	587.42	539.24	44.94
2	4	Chief Mechanic	617.56	1,050.79	568.82	47.40
2	4	Mechanic	555.14	925.96	494.42	41.20
1	2	Senior Motor Operator	451.64	359.48	371.05	30.92
2	4	Motor Operator	419.89	720.37	382.92	31.91
1	2	Electrical Supervisor	679.58	587.42	539.24	44.94
1	2	Chief Electrician	617.56	525.40	568.82	47.40
1	2	Electrician	555.14	462.98	494.42	41.20
1	2	Chief Electronic Technician	617.56	525.40	568.82	47.40
1	2	Electronic Technician	555.14	462.98	494.42	41.20
1	2	Senior Sub Sea Sup Dp	768.16	676.00	627.82	52.32
1	2	Subsea Supervisor	679.58	587.42	642.74	53.56
1	2	Master	864.24	772.08	723.90	60.32
1	2	Chief Mate	696.17	604.01	662.52	55.21
1	2	Bosun	505.36	413.20	435.09	36.26
3	6	AB Seaman	428.18	1,105.44	392.81	32.73
2	4	DP Operator	580.03	975.73	524.08	43.67
2	4	Assistant Dp Operator	507.73	831.14	437.91	36.49
3	6	Crane Operator	505.36	1,239.61	435.09	36.26
1	2	Deck Pusher	511.14	451.44	491.69	40.97
2	4	Lead Roustabouts	365.77	612.12	318.41	26.53
9	18	Roustabouts	355.49	2,662.12	306.17	25.51
1	2	Welder	488.77	396.61	415.31	34.61
1	2	Senior Materials Coordinator	530.25	438.09	389.91	32.49
1	2	Material Coordinator	480.47	388.31	405.42	33.79
1	2	Medic	480.47	388.31	405.42	33.79
1	2	Radio Operator	430.70	338.54	346.09	28.84
1	2	RSTC	521.95	429.79	454.86	37.91
0	0	—	—	—	—	—
0	0	—	—	—	—	—
0	0	—	—	—	—	—
0	0	—	—	—	—	—
69	**138**		**Total Labor Costs =**	**$ 30,385.52**		

The figures in column "A" are to be used as the basis for adding personnel to the permanent crew and for determining the credit for crew members short. This includes all Training, Transportation and Catering costs.

The figures in column "B" are the daily cost of all crew members <u>excluding</u> Training, Transportation and Catering costs.

The figures in column "C" are the daily cost of overtime <u>excluding</u> Training, Transportation and Catering costs (assuming a daily schedule of 12 hours)

The figures in column "D" are the hourly cost of overtime <u>excluding</u> Training, Transportation and Catering costs.

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include graphs **NEW!** **More Formatting Options**

Data extracted on: March 17, 2005 (2:32:06 PM)

Producer Price Index-Commodities

Series Id: WPU119102
Not Seasonally Adjusted
Group: Machinery and equipment
Item: Oil field and gas field drilling machinery
Base Date: 8200

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
1995	118.3	118.6	119.2	119.2	119.3	119.6	120.4	120.4	120.4	122.0	122.2	122.2	120.1
1996	124.0	124.0	124.0	124.3	124.2	124.8	125.3	125.3	125.3	126.2	126.6	127.1	125.1
1997	127.7	127.9	128.6	129.1	129.2	129.3	129.3	129.5	129.7	130.3	131.4	132.0	129.5
1998	133.1	132.9	133.1	133.0	133.0	133.0	132.9	132.9	132.9	133.6	133.6	133.6	133.1
1999	133.8	133.7	133.7	133.9	133.9	134.0	134.0	133.7	133.7	133.7	134.4	134.6	133.9
2000	134.9	136.3	136.3	136.3	136.5	136.5	136.5	136.6	136.7	138.7	138.7	138.7	136.9
2001	143.5	143.9	144.0	144.0	144.0	145.5	145.6	145.8	145.7	146.1	146.1	146.1	145.0
2002	146.2	146.2	146.6	146.6	146.4	146.4	146.4	146.4	146.7	146.7	146.7	146.5	146.5
2003	149.8	149.8	149.8	151.7	152.3	152.5	152.5	152.5	153.1	153.1	153.1	153.5	152.0
2004	153.8	153.9	154.8	156.4	157.1	157.1	156.6	156.7	156.8	156.4(P)	157.9(P)	159.3(P)	156.4(P)
2005	161.7(P)												

(P) : Preliminary. All indexes are subject to revision four months after original publication.

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U.S. Bureau of Labor Statistics
Postal Square Building
2 Massachusetts Ave., NE
Washington, DC 20212-0001

Phone: (202) 691-5200
Fax-on-demand: (202) 691-6325
Data questions: **blsdata staff@bls.gov**
Technical (web) questions: **webmaster@bls.gov**
Other comments: **feedback@bgls.gov**

TRANSOCEAN OFFSHORE DEEPWATER DRILLING INC.
4 GREENWAY PLAZA
HOUSTON, TX 77046

BETSY KELLY
MANAGER-INSURANCE

Kim Schutts
Transocean Offshore Deepwater Drilling Inc.
1311 Broadfield
Houston, TX 77083

Re: Annual Premiums
Deepwater Horizon

These costs and limits reflect the coverage provided at this time and are subject to change upon renewal.

Effective March 1, 2004

Coverage:	All Risk Hull & Machinery
Carrier:	various Underwriters @ Lloyds, led by Limit and Wellington Syndicates
Insured Value:	$ 255,000,000
Deductible:	$ 10,000,000
NET ANNUAL PREMIUM:	**$ 624,098**

Effective December 31, 2004

Coverage:	Primary Marine Protection & Indemnity
Carrier:	various Underwriters @ Lloyds, led by
Self Insured Retention:	$10,000,000 per occurrence
DEDUCTIBLE ACCRUAL:	**$ 823,860**

Effective March 1, 2004

Coverage:	Excess Liability
Carriers:	various Underwriters @ Lloyds, led by Limit and Wellington Syndicates
Limits:	$500,000,000
NET ANNUAL PREMIUM:	**$ 169,347**

Effective October 1, 2004

Coverage:	Oil Pollution
Carrier:	Surety coverage – backed by Underwriters @Lloyds
NET ANNUAL PREMIUM:	**$ 9,598**

Effective December 31, 2004

U.S. Broker:	McGriff, Seibels & Williams, Inc
Annual Fee:	**$ 40,180**

* Includes the War risk buyback – the deductible is $10,000,000 each occurrence with a one time $40,000,000 additional aggregate deductible.
** Based on SIR accrual of $ 16.36 per person per day assigned to the rig.

Best Regards,

Betsy Kelly, CPCU, ARe
Manager- Insurance

(713) 232-7766 FAX (713) 232-7630 TEL BKELLY@HOUSTON.DEEPWATER.COM

Amendment No. 24
to
Drilling Contract No. 980249

This Amendment No. 24 is entered into effective as of the 20th day of April, 2005, by and between BP America Production Company (hereinafter referred to as "COMPANY") and Transocean Holdings, Inc. (hereinafter referred to as "CONTRACTOR") with a place of business at 1311 Broadfield, Suite 400, Houston, Texas 77084.

W I T N E S S E T H:

WHEREAS, by Drilling Contract No. 980249 made and effective the 9th day of December, 1998, COMPANY and CONTRACTOR entered into that certain Contract for the "Deepwater Horizon" (hereinafter referred to as "CONTRACT"), as previously amended by twenty-three (23) letters of agreement/amendment; and

WHEREAS, COMPANY and CONTRACTOR desire to amend the CONTRACT as more particularly set forth herein.

NOW THEREFORE, for and in consideration of the mutual covenants and agreements hereinafter provided, COMPANY and CONTRACTOR agree to amend the CONTRACT as follows:

1. Article 1, TERM shall be revised as follows:

   The term of this CONTRACT shall be extended for a period of five (5) years commencing on September 18, 2005.

2. A new Article 1.3.3 shall be added to Article 1.3, COMPLETION OF CONTRACT as follows:

   1.3.3 Subject to CONTRACTOR's reasonable approval, COMPANY shall have the right to utilize the drilling services of the Drilling Unit outside of the Gulf of Mexico for subsidiaries, affiliates, or third parties, provided dayrates shall be adjusted to reflect any increases supported by documentation in CONTRACTOR's cost of operations including but not limited to all operating costs, associated taxes assessed or levied, import/exportation duties and fees, and shorebase and logistical costs as a result of such foreign operation. A separate contract based on this CONTRACT will be executed with country specific provisions relative to the operations in that country. If the Drilling Unit should be outside of the Gulf of Mexico at the end of the term of this CONTRACT, COMPANY shall be responsible for mobilizing the Drilling Unit back to Galveston, Texas, or a point no further distant at the end of the term of the CONTRACT in accordance with 1.3.1 of the CONTRACT.

3. The Operating Rate (and, consequently, all other dayrates except the Equipment Repair Rate) specified in EXHIBIT A, DAYRATES, shall be revised to the amount, and periodically adjusted in accordance with the terms, set forth below.

   An Operating Rate of **$275,000** per day shall be payable to CONTRACTOR commencing September 18, 2005, through the end of the initial 2 year term of the CONTRACT extension. The rate specified is based on wage scales and current operating expenses as of March 1, 2005. CONTRACTOR shall have the right to adjust the rate for documented changes, if any, in its base operating costs no sooner than the commencement of the first year and then no more often than annually thereafter during the initial 2 year term of the CONTRACT extension.

   The Operating Rate shall be adjusted to a "Market Rate" at the commencement of year 3 of the CONTRACT extension (i.e., on September 18, 2007) and then at the beginning of every 3 months thereafter, until the end of the term of the CONTRACT. The Market Rate for the 3 month period shall be the average of the actual contracted dayrates, excluding incentive components, then being earned by all Transocean DP 5th generation rigs, including escalations per the contracts, in the US Gulf of Mexico (USGOM) as calculated on the last Friday prior to the commencement of the 3 month period (subject to 3rd party audit). Current Transocean DP 5th generation rigs in the USGOM are:

1. DISCOVERER ENTERPRISE*
2. DISCOVERER SPIRIT
3. DISCOVERER DEEP SEAS
4. DEEPWATER MILLENNIUM
5. CAJUN EXPRESS

Other DP 5th generation rigs that are to be included in the calculation of the Market Rate if they are then drilling in the USGOM are the following:

DEEPWATER PATHFINDER
DEEPWATER FRONTIER
SEDCO ENERGY
SEDCO EXPRESS
DEEPWATER EXPEDITION
DEEPWATER DISCOVERY

- Idle rigs or idle time shall not be counted in the Market Rate calculation unless the idle rig is under contract in the GOM for a contract to begin within the 3 month period covered by the rate calculation. Then the Operating Rate of that contract shall be used. A zero rate shall never be used.

- A rig under USGOM contract which is nevertheless idle for the convenience of the Operator or otherwise shall be included in the rate calculation using the Operating Rate of that contract.

- Transocean rigs contracted in the USGOM but which are outside the USGOM for a period of time shall be counted in the average using their GOM dayrate.

- If there are fewer than 4 Transocean Rigs in the average calculation, then the following rigs will be added (when contracted to COMPANY in the USGOM), in the order listed, to bring the total up to 4 rigs for the calculation***:

  a. DEVELOPMENT DRILLER II**
  b. DEVELOPMENT DRILLER I
  c. GSF JACK RYAN
  d. GSF C.R. LUIGS
  e. OCEAN CONFIDENCE (outfitted to 10,000')***

- If there are fewer than 4 rigs using the COMPANY contracted rigs on the list above, then the average shall be calculated using 3 rigs.

- If there are fewer than 3 rigs in the pool for calculating the average, the dayrate shall stay at the last calculated rate until the pool increases to at least 3 rigs. COMPANY shall have the right to terminate the CONTRACT by giving 90 days written notice if there are fewer than three rigs in the pool for one continuous year from the first time there were fewer than 3 rigs available for the pool for the average calculation.

---

*The DISCOVERER ENTERPRISE dayrate shall not be included in the average until it concludes its current contract with COMPANY.

**The DEVELOPMENT DRILLER II dayrate shall not be included in the average until it concludes its initial three (3) year term contract with COMPANY. The Development Driller II shall continue to be excluded from the calculations if any exercised option(s) after the initial three (3) year term limits or caps the dayrate paid during the option period. However, any exercised option period(s) after the initial three (3) year term in which the dayrates are obtained by mutual agreement based on current market rates shall be included in the Market Rate calculation.

*** If COMPANY reimburses Diamond Offshore Company for the 10,000' upgrade on a "lump sum" basis, then the lump sum paid for the upgrade will be divided out over the firm term of the contract to arrive at a daily sum to be added to the Operating Rate for purposes of calculating the Market Rate. If the Ocean Confidence's

rate (on any day the average calculation is made) is set by a stipulated or limited rate in an option attached to its current contract, then its rate shall not be included in the average calculation.

Upon reasonable notification, any given Market Rate calculation shall be subject to audit by third party auditors contracted by COMPANY. Errors in any given Market Rate calculation inconsistent with the above shall be adjusted promptly following the issuance of the relevant audit report.

4. Article 27.1, TERMINATION BY COMPANY shall be revised as follows:

   Article 27.1.1 which contains provisions for "termination for convenience" shall be deleted in its entirety.

5. A new Item 1.42 shall be added under Category I, Furnished by CONTRACTOR, paid by CONTRACTOR to EXHIBIT B-3, MATERIAL, SUPPLIES AND SERVICES as follows:

   1.42 CONTRACTOR shall provide up to an additional 2,000' of Vetco type "F" or "H" riser for the DEEPWATER HORIZON upon at least six month's written notice from COMPANY. The additional riser must be available by a mutually agreed date, provided such date shall not be later than September 17, 2007. CONTRACTOR shall have the right to use the riser on other rigs when not in use on the Horizon so long as it is available to COMPANY upon six months written notice as stated above.

Except as changed by this Amendment No. 24, the CONTRACT as previously amended shall remain in full force and effect.

IN WITNESS WHEREOF, the authorized representatives of the parties hereto have executed this Amendment No. 24 in duplicate originals as of the day and year first above written.

BP America Production Company
COMPANY

By: /s/ David G. Eyton
David G. Eyton

Title: Vice President

Transocean Holdings, Inc.
CONTRACTOR

By: /s/ Christopher S. Young
Christopher S. Young
Printed Name
Title: Sr. MKTG. Rep.

BP America Production Company
501 WestLake Park Boulevard
Houston, Texas 77079

June 7, 2005

Transocean Holdings, Inc.
1311 Broadfield, Suite 400
Houston, Texas 77084

Attention: Mr. Chris Young

Subject: Drilling Contract No. 980249
Work Order No. BPR-05-01127

Dear Mr. Young,

Enclosed for execution by Transocean Holdings, Inc. ("Transocean") are two (2) originals of revised Work Order No. BPR-05-01127 under Drilling Contract No. 980249. This Work Order was revised to indicate that BP will reimburse Transocean for all work required for the provision of a Riser Tensioner Parking System on the "Deepwater Horizon" at actual documented costs plus the 5% handling fee.

This revised Work Order supersedes and replaces the original Work Order that was previously sent to you. Therefore, please rescind and destroy the original Work Order dated May 27, 2005.

Please have an authorized representative of Transocean sign both originals of the Work Order at the designated signature block and return one (1) original to the attention of M. Mike Jones at the following address:

BP America Production Company
501 WestLake Park Boulevard
Houston, Texas 77079

Attention: Mr. M. Mike Jones
Mail Code 25.138, WL1

If you have any questions concerning the above, please contact M. Mike Jones 281-366-7696.

Best Regards,

/s/ Belinda Erdelt
Belinda Erdelt
PSCM Manager — GoM Drilling and Wells

Enclosures

WORK ORDER

Date: June 7, 2005

Work Order requested by: George Coltrin

This Work Order is subject to the terms and conditions of Drilling Contract No. 980249 between BP America Production Company ("COMPANY") and Transocean Holdings, Inc. ("CONTRACTOR"), made and effective the 9th day of December, 1998. EXCEPT AS EXPRESSLY PROVIDED HEREIN, NOTHING CONTAINED IN THIS WORK ORDER SHALL BE CONSTRUED AS AN AMENDMENT TO THE TERMS OF THE REFERENCED CONTRACT.

CONTRACTOR: Transocean Holdings, Inc.
1311 Broadfield, Suite 400
Houston, Texas 77084

Work Order No.: BPR-05-01127

SAP Code: X2-000P7:RIGUPGRADE

Paykey No.: ZNAXO4UPGR

Project Identification: Transocean "Deepwater Horizon" Upgrades/Modifications, including:
Riser Tensioner Parking System

Estimated Value of Work Order: Not to Exceed $60,000

Expected Start Date: June 1, 2005

Expected Completion Date: June 14, 2005

Description/Scope of Work/Additional Terms and Conditions:

Article 5.1.1 of Drilling Contract No. 980249 ("CONTRACT") stipulates that any modifications to the Drilling Unit after the Commencement Date shall be as agreed in a separate written agreement. In respects of these guidelines, the separate written agreement will hereinafter be referred to as a "Work Order" and implementation of the requirements delineated in the Work Order shall be in accordance with the terms and conditions of the CONTRACT.

Under this Work Order COMPANY is requesting and CONTRACTOR has agreed to furnish certain personnel, equipment and materials to perform the services described herein below as required for supporting COMPANY's drilling operations in the Gulf of Mexico.

The scope of work includes the provision of a **Riser Tensioner Parking System** on the Drilling Unit "Deepwater Horizon." CONTRACTOR will furnish the materials and perform the labor necessary for fabrication of the said System as per Drawing No. O-IP 1000, Sheets 1 through 3, which are attached hereto and made a part of this Work Order. Also attached to this Work Order are four (4) photographs which show the prescribed location where the System is to be installed on the Drilling Unit.

COMPANY shall reimburse CONTRACTOR for all **actual documented costs** as specified herein plus a **5% handling fee.** A breakdown of the costs comprising the Estimated Value of Work Order is as follows:

Description	Estimated Costs
Labor and Materials to Fabricate	$ 24,042
Sandblast and Paint	3,608
Installation on Drilling Unit (includes Labor and Equipment)	26,520
Survey Charge	1,080
Subtotal	$ 55,250
Handling Fee @ 5%	2,763
TOTAL ESTIMATED VALUE	$ 58,013
or, say,	**$ 60,000**

Note: CONTRACTOR expects that a few miscellaneous charges will be incurred during performance of the Work. In such event, all miscellaneous charges shall be billed to COMPANY at actual documented cost plus the 5% handling fee. Therefore, for the purpose of preparing this Work Order, the TOTAL costs derived above have been rounded-off to the amount shown.

In addition to the costs identified above, COMPANY and CONTRACTOR agree to share payment of the Dayrate for the Drilling Unit on a 50/50 basis for the first fourteen (14) days of the Work. After fourteen (14) days, CONTRACTOR shall bear all costs of the Drilling Unit.

For Example:
If the Work takes 10 days ... COMPANY pays for 5 days of rig time.
If the Work takes 14 days ... COMPANY pays for 7 days of rig time. After 14 days, CONTRACTOR pays for all rig time.
Thus, COMPANY's maximum exposure to paying for rig time is 7 days.

Payment of the Dayrate for the Drilling Unit shall also be rotated between the parties on a day-by-day basis. In other words, COMPANY will pay for the first day, CONTRACTOR will pay for the second day, COMPANY will pay for the third day, and so forth.

The Estimated Value of Work Order set forth in the heading of this document is based only on the Work as presently defined. CONTRACTOR agrees to keep COMPANY informed on the progress of the Work and to notify COMPANY if the Estimated Value of the Work Order exceeds the specified amount.

All of the Work shall be performed in accordance with the terms and conditions of this Work Order and the CONTRACT. Any terms and conditions appearing in other documents furnished by CONTRACTOR shall be of no effect except to confirm the type and quantity of personnel, equipment, materials and whatever else is to be furnished by CONTRACTOR.

Forward invoices/statements to: BP America Production Company
Attention: Scanning Dept. S646
P.O. Box 22024
Tulsa, OK 74121-2024
Work Order No.: BPR-05-01127
SAP Code: X2-000P7:RIGUPGRADE
Paykey No.: ZNAX04UPGR

ACCEPTED BY: /s/ Christopher S. Young
CONTRACTOR

Christopher S. Young
Printed Name

Date: 6/13/05

APPROVED BY: /s/ Belinda Erdelt
COMPANY

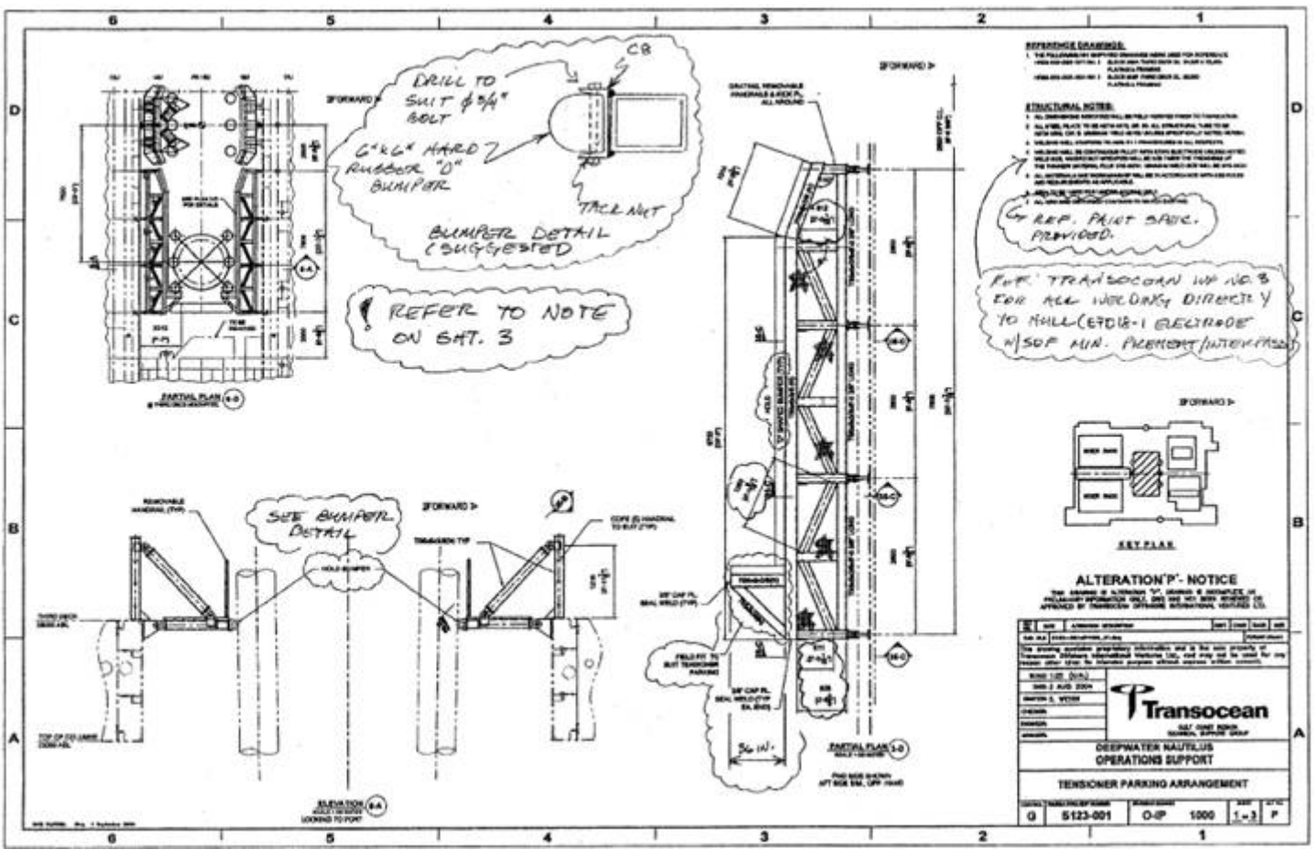
Belinda Erdelt
Printed Name

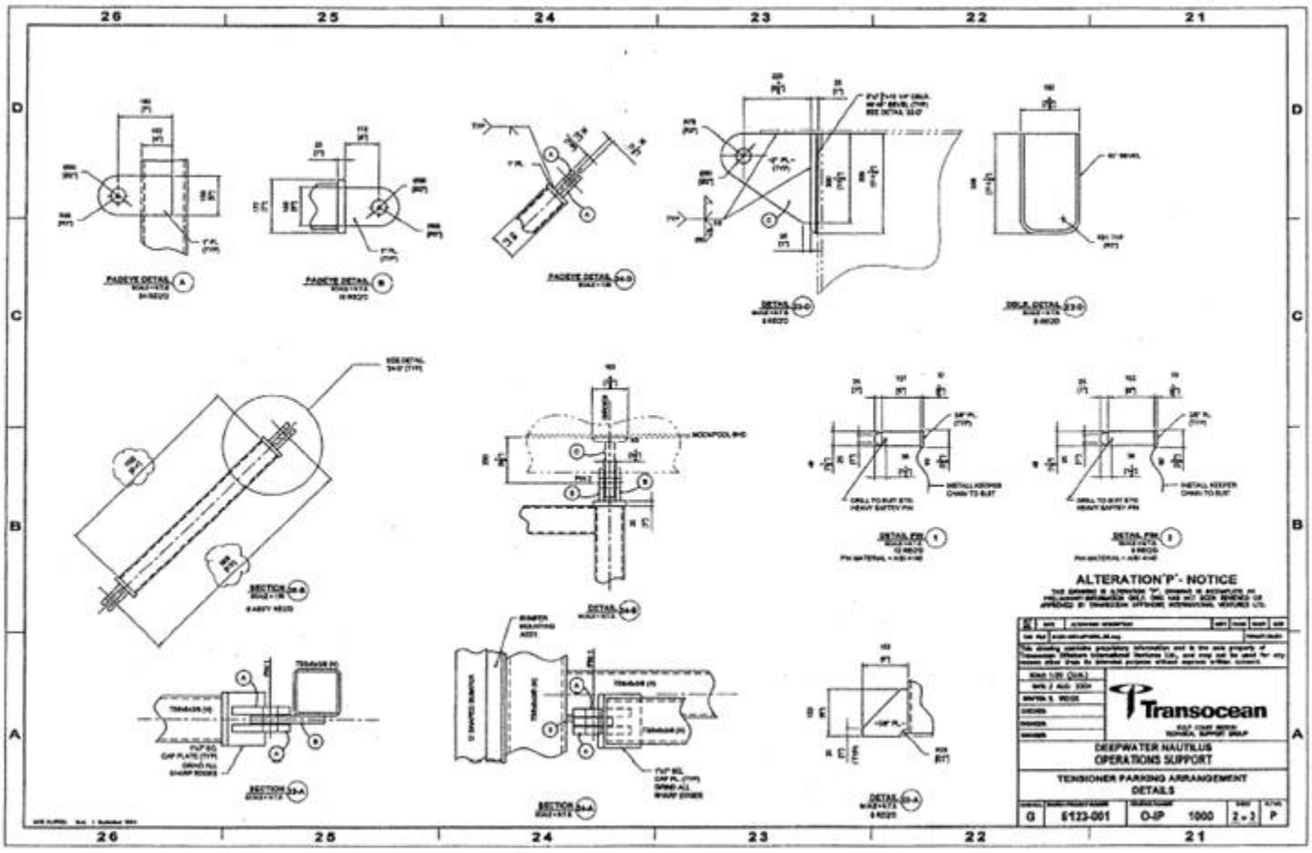
Date: 7-June-05

Notices:

Transocean Holdings, Inc.
1311 Broadfield, Suite 400
Houston, Texas 77084
Attention: Chris Young
Phone: 832-587-8506
Fax: 832-587-8754
E-Mail: cyoung@houston.deepwater.com

BP America Production Company
501 Westlake Park Boulevard
Houston, Texas 77079
Attention: Belinda Erdelt
Mail Code: 25.136, WL1
Phone: 281-366-7334
Fax: 281-366-4697
E-Mail: Belinda.Erdelt@bp.com


DRILL TO SUIT ϕ3/4" BOLT
6"x6" HARD RUBBER "D" BUMPER
TACK NUT
BUMPER DETAIL (SUGGESTED
REFER TO NOTE ON SHT. 3
SEE BUMPER DETAIL
REF. TRANSOCEAN WP NO. 8 FOR ALL WELDING DIRECTLY TO HULL (E7018-1 ELECTRODE W/50F MIN. PREHEAT/INTERPASS)
KEY PLAN
ALTERATION "P" - NOTICE
Transocean
DEEPWATER NAUTILUS
OPERATIONS SUPPORT
TENSIONER PARKING ARRANGEMENT
G
5123-001
O-IP
1000
1 - 3
P


ALTERATION 'P' - NOTICE
Transocean
DEEPWATER NAUTILUS
OPERATIONS SUPPORT
TENSIONER PARKING ARRANGEMENT
DETAILS
G
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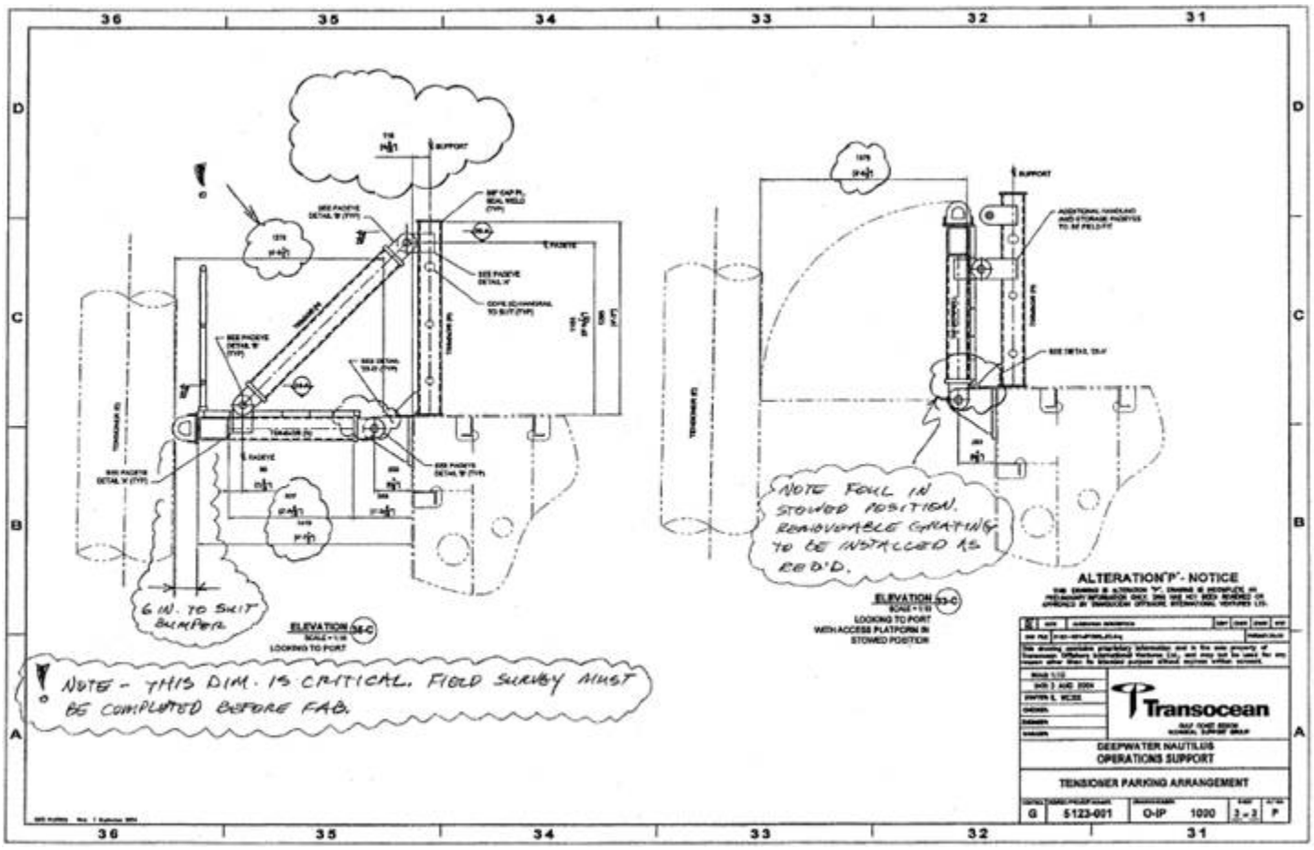
2 - 3
P


6 IN. TO SKIT BUMPER.
ELEVATION 34-C
LOOKING TO PORT
NOTE - THIS DIM. IS CRITICAL. FIELD SURVEY MUST BE COMPLETED BEFORE FAB.
NOTE FOUL IN STOWED POSITION. REMOVABLE GRATING TO BE INSTALLED AS REQ'D.
ELEVATION 33-C
LOOKING TO PORT WITH ACCESS PLATFORM IN STOWED POSITION
ALTERATION "P" - NOTICE
Transocean
DEEPWATER NAUTILUS
OPERATIONS SUPPORT
TENSIONER PARKING ARRANGEMENT
G
5123-001
O-IP
1000
2 - 2
P

BP America Production Company
501 WestLake Park Boulevard
Houston, Texas 77079

June 7, 2005

Transocean Holdings, Inc.
1311 Broadfield, Suite 400
Houston, Texas 77084

Attention: Mr. Chris Young

Subject: Drilling Contract No. 980249
Revised Work Order No. BPR-05-01120

Dear Mr. Young,

Enclosed for execution by Transocean Holdings, Inc. ("Transocean") are two (2) originals of revised Work Order No. BPR-05-01120 under Drilling Contract No. 980249. This Work Order was revised to indicate that the cost of welding provided by Transocean for the Fingerboard Upgrade on the "Deepwater Horizon" will be paid separately at actual documented costs plus the 5% handling fee.

This revised Work Order supersedes and replaces the original Work Order that was previously sent to you. Therefore, please rescind and destroy the original Work Order dated June 2, 2005.

Please have an authorized representative of Transocean sign both originals of the Work Order at the designated signature block and return one (1) original to the attention of M. Mike Jones at the following address:

BP America Production Company
501 WestLake Park Boulevard
Houston, Texas 77079

Attention: Mr. M. Mike Jones
Mail Code 25.138, WL1

If you have any questions concerning the above, please contact M. Mike Jones 281-366-7696.

Best regards,

/s/ Belinda Erdelt
Belinda Erdelt
PSCM Manager — GoM Drilling and Wells

Enclosures

WORK ORDER

Date: June 7, 2005

Work Order requested by: George Coltrin

This Work Order is subject to the terms and conditions of Drilling Contract No. 980249 between BP America Production Company ("COMPANY") and Transocean Holdings, Inc. ("CONTRACTOR"), made and effective the 9th day of December, 1998. EXCEPT AS EXPRESSLY PROVIDED HEREIN, NOTHING CONTAINED IN THIS WORK ORDER SHALL BE CONSTRUED AS AN AMENDMENT TO THE TERMS OF THE REFERENCED CONTRACT.

CONTRACTOR: Transocean Holdings, Inc.
1311 Broadfield, Suite 400
Houston, Texas 77084

Work Order No.: BPR-05-01120

SAP Code: X2-000M6-C:PRSPUD

Paykey No.: ZNAX04KIDA

Project Identification: Kaskida Prospect Exploration Well
OCS-G-25792, Keathley Canyon Blk. 292 #1
Fingerboard Upgrade — Deepwater Horizon

Estimated Value of Work Order:

For the Work	Actual Documented Cost plus 5% Handling Fee to be $230,659
Hoses, Bolts, Nuts, Etc.	Actual Documented Cost plus 5% Handling Fee (per **Note 1** on Page 2)
Travel Expenses	Actual Documented Cost plus 5% Handling Fee (per **Note 2** on Page 2)
Welding by CONTRACTOR	Actual Documented Cost plus 5% Handling Fee (per **Note 3** on Page 2)

Expected Start Date: February 1, 2005

Expected Completion Date: September 1, 2005

Description/Scope of Work/Additional Terms and Conditions:

Article 5.1.1 of Drilling Contract No. 980249 ("CONTRACT") stipulates that any modifications to the Drilling Unit after the Commencement Date shall be as agreed in a separate written agreement. In respects of these guidelines, the separate written agreement will hereinafter be referred to as a "Work Order" and implementation of the requirements delineated in the Work Order shall be in accordance with the terms and conditions of the CONTRACT.

Under this Work Order COMPANY is requesting and CONTRACTOR has agreed to furnish certain personnel, equipment and materials to perform the services described herein below as required for supporting COMPANY's drilling operations on the Kaskida KC 229 #1 Project.

The scope of work involves the **Fingerboard Upgrade** on the Drilling Unit "Deepwater Horizon." CONTRACTOR will increase the fingerboard on the Drilling Unit by 5 rows in accordance with Varco Quotation No. 27469 Rev 6, dated 08-Feb-05, which is made a part of this Work Order by reference only. This will increase the racking ability by approximately 8,500 ft. The upgrade will benefit COMPANY in several ways as it will allow CONTRACTOR to rack more pipe plus help the Drilling Unit in derrick management of different strings. The

upgrade will also free up casing fingers on the deep wells that CONTRACTOR will drill. Other features of the fingerboard upgrade include, but are not necessarily limited to, the following:

- System will provide individual, heavy duty (extended) latches for each stand of pipe.
- Latches are sequenced open and closed by an electronic/pneumatic controller mounted in control manifold enclosures at fingerboard level.
- Fingerboard utilizes (IEC/CENELEC) Ex electrical components and is constructed to IEC standards for marine applications.
- All hazardous area equipment is certified for Zone 1.
- All exterior mounted safe area equipment is designed for marine application.
- All hardware is rated for IP 56 min and -20°C to 45°C.
- Existing control system will be upgraded to include all necessary pneumatic/hydraulic controls, electrical and communication hardware.
- System is equipped with a Control Tower that includes an all electronic/pneumatic discreet controller mounted in a control manifold enclosure at fingerboard level.
- Engineering of System will include software upgrade for 2 PRS/Fingerboard interfaces to include interfacing with the Hitech Cyberbase control system.

COMPANY shall reimburse CONTRACTOR for all **actual documented costs** as specified herein plus a **5% handling fee.** A breakdown of the costs comprising the Estimated Value of Work Order is as follows:

Description		Costs
Cost of Varco Quotation No. 27469 Rev 6:		
Fingerboard	$	165,111
Tower, Control, Fingerboard		38,564
Engineering and ***Installation**		16,000
Subtotal	$	219,675
Handling Fee @ 5%		10,984
TOTAL ESTIMATED VALUE	**$**	**230,659**

***Note 1:** Not included with installation are all necessary hoses, bolts, nuts and fittings for interfacing with CONTRACTOR supplied Derrick/Mast Fingerboard mounting structure and derrick piping. Therefore, the cost of all such items shall be separately billed to COMPANY and charged at actual documented costs plus the 5% handling fee.

***Note 2:** If a Varco Service Engineer is required for installation, then Travel Expenses for the Engineer shall be separately billed to COMPANY and charged at actual documented costs plus the 5% handling fee.

Note 3: In addition to the Work delineated in the Varco Quotation, it is estimated that some welding will be required by CONTRACTOR. Therefore, the cost of all welding by CONTRACTOR shall be separately billed to COMPANY and charged at actual documented costs plus the 5% handling fee.

The Value of Work Order set forth in the heading of this document is based only on the Work as presently defined. CONTRACTOR agrees to keep COMPANY informed on the progress of the Work and to notify COMPANY if the Value of the Work Order exceeds the specified amount.

All of the Work shall be performed in accordance with the terms and conditions of this Work Order and the CONTRACT. Any terms and conditions appearing in other documents furnished by CONTRACTOR shall be of no

effect except to confirm the type and quantity of personnel, equipment, materials and whatever else is to be furnished by CONTRACTOR.

Forward invoices/statements to: BP America Production Company
Attention: Scanning Dept. S646
P.O. Box 22024
Tulsa, OK 74121-2024
Work Order No.: BPR-05-01120
SAP Code: X2-000M6-C:PRSPUD
Paykey No.: ZNAX04KIDA

ACCEPTED BY:	/s/ Christopher S. Young *CONTRACTOR*	**APPROVED BY:**	/s/ Belinda Erdelt *COMPANY*
	Christopher S. Young *Printed Name*		Belinda Erdelt *Printed Name*
Date:	6/13/05	Date:	7-June-05

Notices:

Transocean Holdings, Inc.
1311 Broadfield, Suite 400
Houston, Texas 77084
Attention: Chris Young
Phone: 832-587-8506
Fax: 832-587-8754
E-Mail: cyoung@houston.deepwater.com

BP America Production Company
501 Westlake Park Boulevard
Houston, Texas 77079
Attention: Belinda Erdelt
Mail Code: 25.136, WL1
Phone: 281-366-7334
Fax: 281-366-4697
E-Mail: Belinda.Erdelt@bp.com

BP America Production Company
501 WestLake Park Boulevard
Houston, Texas 77079

June 7, 2005

Transocean Holdings, Inc.
1311 Broadfield, Suite 400
Houston, Texas 77084

Attention: Mr. Chris Young

Subject: Drilling Contract No. 980249
Work Order No. BPR-05-01102

Dear Mr. Young,

Enclosed for execution by Transocean Holdings, Inc. ("Transocean") are two (2) originals of revised Work Order No. BPR-05-01102 under Drilling Contract No. 980249. This Work Order was revised to indicate that BP will reimburse Transocean for all work required for the Removal of Pelican Hooks on the "Deepwater Horizon" at actual documented costs plus the 5% handling fee.

This revised Work Order supersedes and replaces the original Work Order that was previously sent to you. Therefore, please rescind and destroy the original Work Order dated May 25, 2005.

Please have an authorized representative of Transocean sign both originals of the Work Order at the designated signature block and return one (1) original to the attention of M. Mike Jones at the following address:

BP America Production Company
501 WestLake Park Boulevard
Houston, Texas 77079

Attention: Mr. M. Mike Jones
Mail Code 25.138, WL1

If you have any questions concerning the above, please contact M. Mike Jones 281-366-7696.

Best regards,

/s/ Belinda Erdelt
Belinda Erdelt
PSCM Manager — GoM Drilling and Wells

Enclosures

WORK ORDER

Date: June 7, 2005

Work Order requested by: George Coltrin

This Work Order is subject to the terms and conditions of Drilling Contract No. 980249 between BP America Production Company ("COMPANY") and Transocean Holdings, Inc. ("CONTRACTOR"), made and effective the 9th day of December, 1998. EXCEPT AS EXPRESSLY PROVIDED HEREIN, NOTHING CONTAINED IN THIS WORK ORDER SHALL BE CONSTRUED AS AN AMENDMENT TO THE TERMS OF THE REFERENCED CONTRACT.

CONTRACTOR: Transocean Holdings, Inc.
1311 Broadfield, Suite 400
Houston, Texas 77084

Work Order No.: BPR-05-01102

SAP Code: X2-000H5-E: MOORING

Paykey No.: ZNAX04BLUE

Project Identification: Blues Image Prospect, MC587#1 — P&A
OCS-G-16625
Removal of Pelican Hooks

Estimated Value of Work Order: Not to Exceed $600,000

Expected Start Date: May 11, 2005

Expected Completion Date: June 18, 2005

Description/Scope of Work/Additional Terms and Conditions:

Article 5.1.1 of Drilling Contract No. 980249 ("CONTRACT") stipulates that any modifications to the Drilling Unit after the Commencement Date shall be as agreed in a separate written agreement. In respects of these guidelines, the separate written agreement will hereinafter be referred to as a "Work Order" and implementation of the requirements delineated in the Work Order shall be in accordance with the terms and conditions of the CONTRACT.

Under this Work Order COMPANY is requesting and CONTRACTOR has agreed to furnish certain personnel, equipment and materials to perform the services described herein below as required for supporting COMPANY's drilling operations on the Blues Image Project, OCS-G-16625, Mississippi Canyon Block 587 Well No. 1, Plug and Abandonment.

The scope of work involves the **Removal of Pelican Hooks** on the Drilling Unit "Deepwater Horizon." A description of work requirements, schedule and estimated costs based upon installation of the Pelican Hooks is set forth in the INTERMOOR letter, dated May 9, 2005, which is attached hereto and made a part of this Work Order. The estimated cost for the Work described in the said letter is **$422,560** but, it is important to point out that such amount does not include the cost of the vessel charter.

All costs for the vessel charter are set forth in the INTERMOOR letter, dated May 18, 2005, which is also attached hereto and made a part of this Work Order. Charges for the vessel shall be **$8,650 per day** during actual performance of the Work, which is inclusive of mobilization and demobilization of the vessel, **plus expenses for fuel, lube and commissaries** that will be at actual documented costs. INTERMOOR will require a three (3) day minimum notice to secure the vessel prior to its need. It is tentatively planned that the vessel will be used for sixteen (16) days.

COMPANY shall reimburse CONTRACTOR for all **actual documented costs** as specified herein plus a **5% handling fee.** A breakdown of the costs comprising the Estimated Value of Work Order is as follows:

Description		Estimated Costs
Cost of the Work (except for Vessel Charter)	$	422,560
Cost of Vessel Charter (16 Days @ $8,650/Day)		138,400
* Cost of Fuel, Lube and Commissaries (16 Days @ $600/Day)		9,600
Subtotal	$	570,560
Handling Fee @ 5%		28,528
TOTAL ESTIMATED VALUE	$	599,088
or, say,	**$**	**600,000**

* **Note:** Fuel, Lube and Commissaries will be provided at actual documented costs plus 5%. However, for the purpose of preparing this Work Order, it is estimated that the cost of all such items will be $600/Day.

The Estimated Value of Work Order set forth in the heading of this document is based only on the Work as presently defined. CONTRACTOR agrees to keep COMPANY informed on the progress of the Work and to notify COMPANY if the Estimated Value of the Work Order exceeds the specified amount.

All of the Work shall be performed in accordance with the terms and conditions of this Work Order and the CONTRACT. Any terms and conditions appearing in other documents furnished by CONTRACTOR shall be of no effect except to confirm the type and quantity of personnel, equipment, materials and whatever else is to be furnished by CONTRACTOR.

Forward invoices/statements to: BP America Production Company
Attention: Scanning Dept. S646
P.O. Box 22024
Tulsa, OK 74121-2024
Work Order No.: BPR-05-0l102
SAP Code: X2-000H5-E:MOORING
Paykey No.: ZNAX04BLUE

ACCEPTED BY: /s/ Christopher S. Young
CONTRACTOR

Christopher S. Young
Printed Name

Date: 13-June-2005

APPROVED BY: /s/ Belinda Erdelt
COMPANY

Belinda Erdelt
Printed Name

Date: 7-June-05

Notices:

Transocean Holdings, Inc.
1311 Broadfield, Suite 400
Houston, Texas 77084
Attention: Chris Young
Phone: 832-587-8506
Fax: 832-587-8754
E-Mail: cyoung@houston.deepwater.com

BP America Production Company
501 Westlake Park Boulevard
Houston, Texas 77079
Attention: Belinda Erdelt
Mail Code: 25.136, WL1
Phone: 281-366-7334
Fax: 281-366-4697
E-Mail: Belinda.Erdelt@bp.com

InterMoor Inc.
382 DeGravelle Road
P.O. Box 1599
Amelia, Louisiana 70340

T: 985.385.3083
TF: 800.451.8106
F: 985.631.2015
E: info@intermoor.com
W: www.intermoor.com

May 9, 2005

Ms. Katy Hoist
Transocean Offshore Deepwater Drilling
1311 Broadfield Blvd. Suite 400
Houston, TX 77084
832-587-8902

Via Email: kholst@houston.deepwater.com

Subject: Deepwater Horizon — Pelican Hook Removal
LA Bid No. 05-05-002

Dear Ms. Holst:

As per our conversation, following you will find a description of work requirements, schedule and estimated cost based upon the installation of the Pelican Hooks on the Deepwater Horizon.

The cantilever work platforms and appurtenances for the spider baskets will have to be fabricated. Upon completion of fabrication a vessel will need to be chartered to carry the equipment and crew from our Amelia facility to the Deepwater Horizon. The vessel will need to be offloaded to the Deepwater Horizon and the equipment will need to be staged at the appropriate location for the removal of the hooks. The rig will need to be deballasted to the point that the pontoons are near the surface. The hooks will be removed by means of arc gouging, and the area will be inspected using magnetic particle for any defects and/or cracks and repair if necessary. The area will be buffed and coated to the Transocean coating specifications. Any other inspection requirements by Transocean will be supplied by Transocean.

The above will apply until all hooks have been removed and all inspections and coatings have been completed.

Also, there will be a need to remove some of the handrails and stairs to accommodate the cantilever platforms. Any items removed will be reinstalled to its correct location and condition.

Additional appurtenances above the hooks and at the deck level will need to be removed and will be done with the same process as above.

Accommodations for the crew will be supplied by the vessel standing by. Meals for the personnel will need to be supplied by the rig. You will see a listing of the personnel on the following cost breakdown. The total will be two (2) crews, to work rotating twelve (12) hour shifts comprised of 34 total people.

Upon completion of the job, all areas will be cleaned and all equipment and appurtenances will be loaded on the vessel and returned to InterMoor Inc.'s Amelia Facility.

As you will see on the following schedule of work, in order for the work to be completed in the prescribed time frame, we will need to begin preparations for fabrication as soon as possible, ideally May 11th.

InterMoor Inc. thanks you for the opportunity to quote on your Deepwater Horizon job needs. If you have any questions regarding this matter, or if I can be of further assistance, please feel free to contact me at the above numbers or email me at cminton@intermoor.com.

Thank you,

Chuck Minton
President
InterMoor Inc.

Enclosures: Cost Breakdown
Schedule of Work

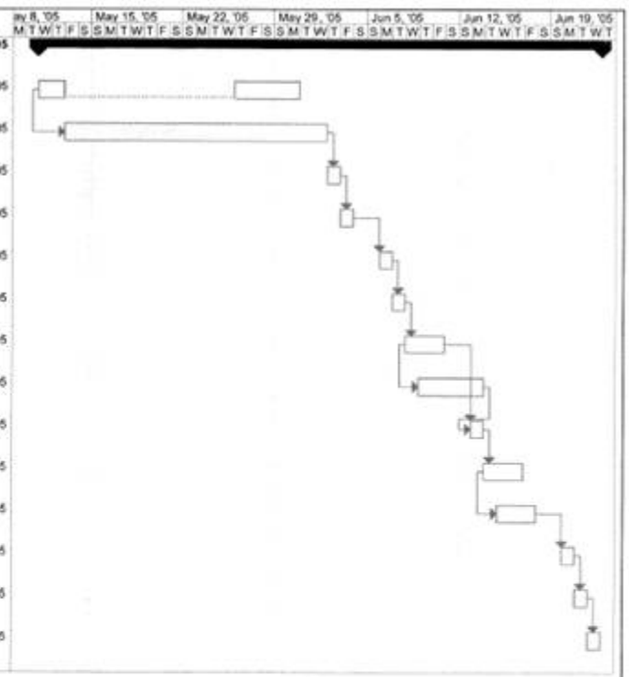
CM/ca

Description	Qty.	Unit Cost	Estimated Total Cost Based on 12 Day Operation
Fabrication Cantilever Platforms	2	$31,500.00 Ea.	$63,000.00
Rental Equipment	1 Lot	$6,000.00 Day	$72,000.00
Project Superintendent	1	$1,800.00 Day	$21,600.00
Crew Superintendent	2	$1,440.00 Day Ea.	$17,280.00
Offshore Fitter/Welders	12	$780.00 Day Ea.	$112,320.00
Welder Helpers	8	$480.00 Day Ea.	$46,080.00
Fire Watch Persons	8	$480.00 Day Ea.	$46,080.00
Inspector Level II	1	$660.00 Day	$7,920.00
Safety Coordinator	2	$720.00 Day Ea.	$17,280.00
Vessel Charter	1	Availability Rates	Availability Rates
Vessel Mobe and De-Mobe	1	$19,000.00	$19,000.00

Total* Estimated Cost of the Project $ 422,560.00

*This total does not include the cost of the vessel charter.

ID	Task Name	Duration	Start	Finish
1	**DEMOBE MOORING HOOKS (HORIZON)**	**31 days**	**Wed 5/11/05**	**Wed 6/22/05**
2	PROCUREMENT MATERIALS/RENTAL EQUP.	5 days	Wed 5/11/05	Mon 5/30/05
3	FABRICATE 2 EA. CANTALEVER PLATFORMS	14 days	Fri 5/13/05	Wed 6/1/05
4	MOBILIZE VESSEL AT AMELIA BASE	1 day	Thu 6/2/05	Thu 6/2/05
5	TRAVEL TO HORIZON LOCATION	1 day	Fri 6/3/05	Fri 6/3/05
6	OFFLOAD EQUIPMENT FROM VESSEL TO RIG	1 day	Mon 6/6/05	Mon 6/6/05
7	STAGE AND SECURE EQUIPMENT ON RIG	1 day	Tue 6/7/05	Tue 6/7/05
8	REMOVAL OF MOORING HOOK (LEG#1)	3 days	Wed 6/8/05	Fri 6/10/05
9	REMOVAL OF MOORING HOOK (LEG#2)	3 days	Thu 6/9/05	Mon 6/13/05
10	STAGE AND SECURE EQUIPMENT ON RIG (LEG 2&:	1 day	Mon 6/13/05	Mon 6/13/05
11	REMOVAL OF MOORING HOOK (LEG#3)	3 days	Tue 6/14/05	Thu 6/16/05
12	REMOVAL OF MOORING HOOK (LEG#4)	3 days	Wed 6/15/05	Fri 6/17/05
13	OFFLOAD EQUIPMENT FROM RIG TO VESSEL	1 day	Mon 6/20/05	Mon 6/20/05
14	TRAVEL TO INTERMOOR AMELIA BASE	1 day	Tue 6/21/05	Tue 6/21/05
15	DEMOBE VESSEL AND RETURN RENTAL EQUIP.	1 day	Wed 6/22/05	Wed 6/22/05



Project: Project1
Date: Fri 5/6/05

Task | Split | Progress | Milestone | Summary | Project Summary | External Tasks | External Milestone | Deadline

InterMoor Inc.
382 DeGravelle Road
P.O. Box 1599
Amelia, Louisiana 70340

T: 985.385.3083
TF: 800.451.8106
F: 985.631.2015
E: info@intermoor.com
W: www.intermoor.com

May 18, 2005

Katy Holst
Transocean Offshore
Houston, TX
Phone: 832-587-8902
Via Email: kholst@houston.deepwater.com

Subject: Supply Vessel for Horizon Project
LA Bid No. 05-05-011

Dear Ms. Holst:

InterMoor Inc. is pleased to provide at quote per your request on one (1) Supply Vessel to assist in the removal of the Pelican Hooks from the Horizon as follows:

1. 185' Supply Vessel $8,650.00 per day
   Note: This price does not include fuel, lube and commissaries.

2. Qualifications:
   - Above quote is based on price and availability of vessel.
   - InterMoor Inc. will require a three (3) day minimum notice to secure the vessel prior to the start/need for the vessel.
   - This quote is good for thirty (30) days from the date of this letter.

InterMoor Inc. thanks you for the opportunity to quote on the above. If you have any questions regarding this matter or if I can be of further assistance, please feel free to contact me at the above numbers or email at apalmature@intermoor.com.

Thank you,

Anthony 'TP' Palmature
Operations
InterMoor Inc.

Cc: J. Keaton

WORK ORDER

Date: June 17, 2005

Work Order requested by: George Coltrin

This Work Order is subject to the terms and conditions of Drilling Contract No. 980249 between BP America Production Company ("COMPANY") and Transocean Holdings, Inc. ("CONTRACTOR"), made and effective the 9th day of December, 1998, as amended. EXCEPT AS EXPRESSLY PROVIDED HEREIN, NOTHING CONTAINED IN THIS WORK ORDER SHALL BE CONSTRUED AS AN AMENDMENT TO THE TERMS OF THE REFERENCED CONTRACT.

CONTRACTOR: Transocean Holdings, Inc.
1311 Broadfield, Suite 400
Houston, Texas 77084

Work Order No.: BPR-05-01560

Paykey No.: ZNAX04BONS

Project Identification: Bonsai Well
Additional Drill Pipe

Estimated Value of Work Order: $60,000

Expected Start Date: June 17, 2005

Expected Completion Date: October 17, 2005

Description/Scope of Work/Additional Terms and Conditions:

Article 5.1.1 of Drilling Contract No. 980249 ("CONTRACT") stipulates that any modifications to the Drilling Unit after the Commencement Date shall be as agreed in a separate written agreement. In respects of this, the separate written agreement will be referred to as a "Work Order" and implementation of the requirements delineated in the Work Order shall be in accordance with the terms and conditions of the CONTRACT.

Under this Work Order COMPANY is requesting and CONTRACTOR has agreed to furnish certain additional equipment and materials described herein below as required for supporting COMPANY's drilling operations on the Bonsai Well located in the Gulf of Mexico.

The Work Order includes the provision of **Additional Drill Pipe** for the Drilling Unit "Deepwater Horizon". An additional 1,000' (23 joints) of 6-5/8" premium grade drill pipe will be furnished by CONTRACTOR in accordance with the following technical specifications:

> 6 5/8" X 40.5# .625 WALL, 5.375"ID., 95% WALL, RIII S-135 (44.5 +/- 6") W/6 5/8"FH API + 4" LTS (12 PIN X 14" BOX) (8 1/2" OD X 4 1/4" ID) TOOL JOINT TK34 INTERNAL PLASTIC COATING, ARMACOR M HARDBANDING APPLIED 3/32" PROUD ON 3" OF BOX OD BEGINING 1/4" TO 3/8" ABOVE ELEVATOR SHOULDER

COMPANY shall pay CONTRACTOR a "Fee" which shall hereinafter be defined as **$500/day** for the drill pipe. The drill pipe will be required for the duration of the Bonsai Well which is expected to last for a four (4) month time period. Thus, the Estimated Value of Work Order is calculated as follows:

($500/day) (4 months) (30 days/month) = $60,000

The Estimated Value of this Work Order as set forth in the heading of this document is based only on the Work as presently defined. If the duration of the Bonsai Well should exceed the estimated four (4) month time period, then COMPANY will provide an extension to this Work Order in the form of a "Change Order." Regardless of the duration of the Bonsai Well the agreed Fee will be paid until the drill pipe is returned and offloaded at COMPANY's shore base facility.

The Fee shall commence at 00:00 on June 17, 2005, and shall end after the drill pipe has been returned and offloaded at COMPANY's shore base facility at Fourchon, Louisiana.

COMPANY shall also reimburse CONTRACTOR for all costs associated to re-inspect the drill pipe to DS1 Level 5 standards and return to CONTRACTOR's yard in Amelia, Louisiana, after the Bonsai Well is completed. All inspection, repair and transportation costs, including freight and handling charges associated with movement of the drill pipe, will be for COMPANY's account regardless of the Estimated Value of Work Order noted hereinabove.

The pricing information presented herein shall be firm and fixed for the duration of this Work Order and will serve as the basis of any subsequent price adjustments, if deemed necessary.

Forward invoices/statements to: BP America Production Company
Attention: Scanning Dept. S646
P.O. Box 22024
Tulsa, OK 74121-2024
Work Order No.: BPR-05-01560
Paykey No.: ZNAX04BONS

All of the Work shall be performed in accordance with the terms and conditions of this Work Order and the CONTRACT as amended.

ACCEPTED BY:	/s/ W. Brad James *CONTRACTOR*	**APPROVED BY:**	/s/ Belinda Erdelt *COMPANY*
	Marketing Manager - North America *Printed Name*		Belinda Erdelt *Printed Name*
Date:	9/7/05	Date:	31 Aug 05

Notices:

Transocean Holdings, Inc.
1311 Broadfield, Suite 400
Houston, Texas 77084
Attention: Brad James
Phone: 832-587-8537
Fax: 832-587-8754
E-Mail: bjames@houston.deepwater.com

BP America Production Company
200 Westlake Park Boulevard
Houston, Texas 77079
Attention: Belinda Erdelt
Mail Code: 624A, WL4
Phone: 281-366-7334
Fax: 281-366-4697
E-Mail: Belinda.Erdelt@bp.com

Amendment No. 26
to
Drilling Contract No. 980249

This Amendment No. 26 is entered into effective as of the 18th day of September, 2005, by and between BP America Production Company (hereinafter referred to as "COMPANY") and Transocean Holdings, Inc. (hereinafter referred to as "CONTRACTOR") with a place of business at 1311 Broadfield, Suite 400, Houston, Texas 77084.

W I T N E S S E T H:

WHEREAS, by Drilling Contract No. 980249 made and effective the 9th day of December, 1998, COMPANY and CONTRACTOR entered into that certain Contract for the "Deepwater Horizon" (hereinafter referred to as "CONTRACT"), as previously amended by twenty-three (23) letters of agreement/amendments and Amendments No. 24 and Letter of Agreement for Cost Escalation 2005 dated March 31, 2005 (sometimes also known as Amendment No. 25); and

WHEREAS, COMPANY and CONTRACTOR desire to amend the CONTRACT in accordance with Article 2.3.2 of said CONTRACT, which Article has been amended per Contract Extension Agreement letter dated April 19, 2004, and subsequently amended per Amendment No. 24 to adjust the dayrates to reflect the change in costs for labor, catering, insurance, spare parts and supplies if the costs of any of the aforesaid items vary by three percent (3%) from the costs thereof.

NOW THEREFORE, for and in consideration of the mutual covenants and agreements hereinafter provided, COMPANY and CONTRACTOR agree to amend the CONTRACT as follows:

1. **EXHIBIT A, DAYRATES,** shall be revised as follows to indicate a **$2,526/day** increase in the dayrates:

EXHIBIT A

DAYRATES

RATES PER 24 HOUR DAY

Operating Rate	$277,526.00 per day
Moving Rate	$277,526.00 per day
Standby Rate With Crews	$277,526.00 per day
Standby Rate Without Crews	$277,526.00 per day less documented cost savings
Stack Rate With Crews	$277,526.00 per day less documented cost savings
Stack Rate Without Crews	$277,526.00 per day less documented cost savings
Equipment Repair Rate	$ -0- per day
Hurricane Evacuation Rate	Standby Rates Without Crews plus documented expenses of evacuated crew

Note

The following documentation which supports all of the increases reflected above is attached hereto and made a part of this Amendment No. 26:

- BASIS FOR COST ESCALATIONS, DEEPWATER HORIZON, September 18, 2005
- DEEPWATER HORIZON, Adjusted Labor as of September 18, 2005
- U.S. Department of Labor, Bureau of Labor Statistics, Data extracted on: December 8, 2005, Producer Price Index - Commodities, Series Id: WPU119102, Group: Machinery and equipment, Item: Oil field and gas field drilling machinery
- Transocean letter from Betsy Kelly, CPCU, ARe, Manager-Insurance, to Kim Schutts, Re: Annual Premiums, Deepwater Horizon

Except as changed by this Amendment No. 26, the CONTRACT as previously amended shall remain in full force and effect.

IN WITNESS WHEREOF, the authorized representatives of the parties hereto have executed this Amendment No. 26 in duplicate originals as of the day and year first above written.

BP America Production Company
COMPANY

By: /s/ David R. Mottashed

David R. Mottashed
Printed Name

Title: PSCM Manager – Offshore GoM

Transocean Holdings, Inc.
CONTRACTOR

By: /s/ Anton Dibowitz

Anton Dibowitz
Printed Name

Title: Sr. Marketing Representative
5/15/06

BP
Horizon – Escalation Sept. 2005
TSF File #01-063

BASIS FOR COST ESCALATIONS
DEEPWATER HORIZON
September 18, 2005
$ Per Day

	March 1, 2005 Baseline Costs	September 18, 2005 Baseline Costs	Variance	Adjusted Sept. 2005 Baseline Costs
Clause No.:				
2.3.2a) Base Labor Cost:				
Labor & Burden (per schedule)	$ 30,385	$ 33,168	$ 2,783	$ 33,168
Training & Transportation Costs	$ 3,447	$ 2,327	$ -1,120	$ 2,327
Total Base Labor Cost	**$ 33,832**	**$ 35,495**	**$ 1,663**	**$ 35,495**
Percentage Increase			**5%**	
2.3.2b) Base Catering Cost:				
69 Contractor Personnel	$ 2,101	$ 2,146	$ 45	$ 2,101
10 Company Personnel	$ 305	$ 311	$ 6	$ 305
Total Base Catering Costs	**$ 2,406**	**$ 2,457**	**$ 51**	**$ 2,406**
Percentage Increase			**2%**	
2.3.2c) Base Maintenance Element:	**$ 16,030**	**$ 16,495**	**$ 465**	**$ 16,030**
Total Base Matinenance Costs			**$ 465**	
Percentage Increase			**3%**	
2.3.2d) Base Insurance Cost:				
Hull & Machinery	$ 1,710	$ 2,555	$ 844	$ 2,555
Marine P&I	$ 2,257	$ 2,257	$ 0	$ 2,257
Excess Liability	$ 464	$ 483	$ 19	$ 483
Brokers Fee	$ 110	$ 110	$ 0	$ 110
Oil Pollution	$ 26	$ 26	$ 0	$ 26
Total Base Insurance Cost:	**$ 4,568**	**$ 5,431**	**$ 863**	**$ 5,431**
Percentage Increase			**19%**	
Total Baseline Operating Costs	**$ 56,836**	**$ 59,878**	**$ 2,526**	**$ 59,362**
		Total Dayrate Increase =		**$ 2,526/day**

DEEPWATER HORIZON
Adjusted Labor as of
September 18, 2005

No. of Personnel			A	B	C	D
			GOM Base Labor		GOM Overtime Rates	
On Board	Assigned To Rig	JOB CLASSIFICATION	Daily Rate per person (inc. TT&C)	Total Daily on Board Cost	Daily Overtime Rates	Hourly Overtime Rates
1	2	OIM	995.17	923.15	878.96	73.25
3	6	Toolpusher	849.75	2,333.20	733.54	61.13
2	4	Driller	700.54	1,257.03	696.48	58.04
4	8	Assistant Driller	576.25	2,016.94	548.34	45.70
2	4	Derrickhand	502.47	860.91	460.40	38.37
2	4	Pumphand	461.44	778.84	411.49	34.29
8	16	Floorhand	414.26	2,896.81	389.73	32.48
1	2	Maintenance Supervisor	831.01	758.99	714.80	59.57
1	2	Mechanical Supervisor	714.02	642.00	597.81	49.82
2	4	Chief Mechanic	645.30	1,146.56	630.64	52.55
2	4	Mechanic	576.25	1,008.47	548.34	45.70
1	2	Senior Motor Operator	461.44	389.42	411.49	34.29
2	4	Motor Operator	442.27	780.23	423.12	35.26
1	2	Electrical Supervisor	714.02	642.00	597.81	49.82
1	2	Chief Electrician	645.30	573.28	630.64	52.55
1	2	Electrician	576.25	504.23	548.34	45.70
1	2	Chief Electronic Technician	645.30	573.28	630.64	52.55
1	2	Electronic Technician	576.25	504.23	548.34	45.70
1	2	Senior Sub Sea Sup Dp	809.81	737.79	693.59	57.80
1	2	Subsea Supervisor	714.02	642.00	712.55	59.38
1	2	Master	916.59	844.57	800.37	66.70
1	2	Chief Mate	731.23	659.21	733.07	61.09
1	2	Bosun	521.02	449.00	482.51	40.21
3	6	AB Seaman	451.35	1,197.57	433.93	36.16
2	4	DP Operator	603.87	1,063.70	581.26	48.44
2	4	Assistant Dp Operator	523.78	903.52	485.80	40.48
3	6	Crane Operator	521.02	1,346.99	482.51	40.21
1	2	Deck Pusher	543.28	491.12	543.51	45.29
2	4	Lead Roustabouts	382.30	660.29	351.64	29.30
9	18	Roustabouts	382.30	2,971.29	351.64	29.30
1	2	Welder	502.47	430.45	460.40	38.37
1	2	Senior Materials Coordinator	576.25	504.23	460.04	38.34
1	2	Material Coordinator	493.40	421.38	449.59	37.47
1	2	Medic	493.40	421.38	449.59	37.47
1	2	Radio Operator	438.16	366.14	383.75	31.98
1	2	RSTC	539.56	467.54	504.61	42.05
0	0	—	—	—	—	—
0	0	—	—	—	—	—
0	0	—	—	—	—	—
0	0	—	—	—	—	—
69	**138**		**Total Labor Costs =**	**$ 33,167.73**		

The figures in column "A" are to be used as the basis for adding personnel to the permanent crew and for determining the credit for crew members short. This includes all Training, Transportation and Catering costs.

The figures in column "B" are the daily cost of all crew members <u>excluding</u> Training, Transportation and Catering costs.

The figures in column "C" are the daily cost of overtime <u>excluding</u> Training, Transportation and Catering costs (assuming a daily schedule of 12 hours)

The figures in column "D" are the hourly cost of overtime <u>excluding</u> Training, Transportation and Catering costs.

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Data extracted on: December 8, 2005 (11:24:10 AM)

Producer Price Index-Commodities

Series Id: WPU119102
Not Seasonally Adjusted
Group: Machinery and equipment
Item: Oil field and gas field drilling machinery
Base Date: 8200

year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
1995	118.3	118.6	119.2	119.2	119.3	119.6	120.4	120.4	120.4	122.0	122.2	122.2	120.1
1996	124.0	124.0	124.0	124.3	124.2	124.8	125.3	125.3	125.3	126.2	126.6	127.1	125.1
1997	127.7	127.9	128.6	129.1	129.2	129.3	129.3	129.5	129.7	130 3	131.4	132.0	129.5
1998	133.1	132.9	133.1	133.0	133.0	133.0	132.9	132.9	132.9	133.6	133.6	133.6	133.1
1999	133.8	133.7	133.7	133.9	133.9	134.0	134.0	133.7	133.7	133.7	134.4	134.6	133.9
2000	134.9	136.3	136.3	136.3	136.5	136.5	136.5	136.6	136.7	138.7	138.7	138.7	136.9
2001	143.5	143.9	144.0	144.0	144.0	145.5	145.6	145.8	145.7	146.1	146.1	146.1	145.0
2002	146.2	146.2	146.6	146.6	146.4	146.4	146.4	146.4	146.7	146.7	146.7	146.7	146.5
2003	149.8	149.8	149.8	151.7	152.3	152.5	152.5	152.5	153.1	153.1	153.1	153.5	152.0
2004	153.8	153.9	154.8	156.4	157.1	157.1	156.6	156.7	156.8	157.0	157.9	160.1	156.5
2005	162.0	163.7	169.0	169.8	171.3	172.0	172.9(P)	172.9(P)	173.9(P)	174.1(P)			

(P) : Preliminary. All indexes are subject to revision four months after original publication.

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TRANSOCEAN OFFSHORE DEEPWATER DRILLING INC.

4 GREENWAY PLAZA

HOUSTON, TX 77046

BETSY KELLY
MANAGER-INSURANCE

Kim Schutts
Transocean Offshore Deepwater Drilling Inc.
1311 Broadfield
Houston, TX 77083

Re: Annual Premiums
Deepwater Horizon

These costs and limits reflect the coverage provided at this time and are subject to change upon renewal.

Effective May 1, 2005	
Coverage:	All Risk Hull & Machinery
Carrier:	various Underwriters @ Lloyds, led by Limit and Wellington Syndicates
Insured Value:	$ 360,000,000
Deductible:	$ 10,000,000
NET ANNUAL PREMIUM:	**$ 932,292**
Effective December 31, 2004	
Coverage:	Primary Marine Protection & Indemnity
Carrier:	various Underwriters @ Lloyds, led by
Self Insured Retention:	$10,000,000 per occurrence
DEDUCTIBLE ACCRUAL:	**$ 823,860**
Effective May 1, 2005	
Coverage:	Excess Liability
Carriers:	various Underwriters @ Lloyds, led by Limit and Wellington Syndicates
Limits:	$500,000,000
NET ANNUAL PREMIUM:	**$ 176,374**
Effective October 1, 2004	
Coverage:	Oil Pollution
Carrier:	Surety coverage – backed by Underwriters @Lloyds
NET ANNUAL PREMIUM:	**$ 9,598**
Effective December 31, 2004	
U.S. Broker:	McGriff, Seibels & Williams, Inc
Annual Fee:	**$ 40,180**

* Includes the War risk buyback – the deductible is $10,000,000 each occurrence with a one time $40,000,000 additional aggregate deductible.
** Based on SIR accrual of $ 16.36 per person per day assigned to the rig.

Best Regards,

Signed electronically
Betsy Kelly, CPCU, ARe
Manager- Insurance

(713) 232-7766 FAX (713) 232-7630 TEL BKELLY@HOUSTON.DEEPWATER.COM

CHANGE ORDER

NOTHING CONTAINED IN THIS CHANGE ORDER SHALL BE CONSTRUED AS AN AMENDMENT TO THE TERMS OF THE REFERENCED CONTRACT.

CHANGE ORDER Number:	1
WORK ORDER Number:	BPR-05-01560
CONTRACT Number:	980249
Project Code/Identification (if applicable):	Bonsai Well
	Additional Drill Pipe
Date:	October 10, 2005
WORK ORDER requested by:	George Coltrin
	(Name)

1. **DESCRIPTION OF CHANGE OF WORK:**

Extend the term of Work Order No. BPR-05-01560 to November 30, 2005, to cover drilling operations that are still being performed by Transocean's "Deepwater Horizon" on the Bonsai Well.

2. **COMPENSATION:**

Value of this Change Order No. 1 is $22,500.

CONTRACTOR will continue to be compensated for provision of the additional drill pipe in accordance with the Fee of $500/day as specified in Work Order No. BPR-05-01560.

3. **COMPLETION DATE:**

Expected Completion Date for the Work will now be November 30, 2005.

4.	**ORIGINAL WORK RELEASE VALUE**	$	60,000
	VALUE OF APPROVED CHANGE ORDERS TO DATE		0
	THIS CHANGE ORDER VALUE	$	22,500
	TOTAL CURRENT WORK RELEASE VALUE	$	82,500

BP America Production Company		**Transocean Holdings, Inc.**	
/s/ Belinda Erdelt	13-OCT-05	/s/ W. Brad James	10/18/05
COMPANY APPROVAL	*DATE*	*CONTRACTOR ACCEPTANCE*	*DATE*
Belinda Erdelt		W. Brad James	
Printed Name		*Printed Name*	
PSCM Manager - GoM Drilling & Wells		Marketing Manager - North America District	
Title		*Title*	

WORK ORDER

Date: December 13, 2005

Work Order requested by: George Coltrin

This Work Order is subject to the terms and conditions of Drilling Contract No. 980249 between BP America Production Company ("COMPANY") and Transocean Holdings, Inc. ("CONTRACTOR"), made and effective the 9th day of December, 1998, as amended. EXCEPT AS EXPRESSLY PROVIDED HEREIN, NOTHING CONTAINED IN THIS WORK ORDER SHALL BE CONSTRUED AS AN AMENDMENT TO THE TERMS OF THE REFERENCED CONTRACT.

CONTRACTOR: Transocean Holdings, Inc.
1311 Broadfield, Suite 400
Houston, Texas 77084

Work Order No.: BPR-05-02811

Paykey No.: ZNAX04KIDA

Project Identification: Kaskida Well
Additional Drill Pipe

Estimated Value of Work Order: $300,000

Expected Start Date: January 1, 2006

Expected Completion Date: July 15, 2006

Description/Scope of Work/Additional Terms and Conditions:

Article 5.1.1 of Drilling Contract No. 980249 ("CONTRACT") stipulates that any modifications to the Drilling Unit after the Commencement Date shall be as agreed in a separate written agreement. In respects of this, the separate written agreement will be referred to as a "Work Order" and implementation of the requirements delineated in the Work Order shall be in accordance with the terms and conditions of the CONTRACT.

Under this Work Order COMPANY is requesting and CONTRACTOR has agreed to furnish certain additional equipment and materials described herein below as required for supporting COMPANY's drilling operations on the Kaskida Well located in the Gulf of Mexico.

The Work Order includes the provision of **Additional Drill Pipe** for the Drilling Unit "Deepwater Horizon". An additional 3,000' (69 joints) of 6-5/8" premium grade drill pipe will be furnished by CONTRACTOR in accordance with the following technical specifications:

> 6 5/8" X 40.5# .625 WALL, 5.375"ID., 95% WALL, RIII S-135 (44.5 +/- 6") W/6 5/8"FH API + 4" LTS (12 PIN X 14" BOX) (8 1/2" OD X 4 1/4" ID) TOOL JOINT TK34 INTERNAL PLASTIC COATING, ARMACOR M HARDBANDING APPLIED 3/32" PROUD ON 3" OF BOX OD BEGINING 1/4" TO 3/8" ABOVE ELEVATOR SHOULDER

COMPANY shall pay CONTRACTOR a "Fee" which shall hereinafter be defined as **$1,500/day** for the drill pipe. The drill pipe will be required for the duration of the Kaskida Well which is expected to last for a two hundred (200) day time period. Thus, the Estimated Value of Work Order is calculated as follows:

($1,500/day) (200 days) = $300,000

The Estimated Value of this Work Order as set forth in the heading of this document is based only on the Work as presently defined. If the duration of the Kaskida Well should exceed the estimated two hundred (200) day time period, then COMPANY will provide an extension to this Work Order in the form of a "Change Order." Regardless of the duration of the Kaskida Well the agreed Fee will be paid until the drill pipe is returned and offloaded at COMPANY's shore base facility.

The Fee shall commence at 00:00 on January 1, 2006, and shall end after the drill pipe has been returned and offloaded at COMPANY's shore base facility at Fourchon, Louisiana.

COMPANY shall also reimburse CONTRACTOR for all costs associated to re-inspect the drill pipe to DS1 Level 5 standards and return to CONTRACTOR's yard in Amelia, Louisiana, after the Kaskida Well is completed. All inspection, repair and transportation costs, including freight and handling charges associated with movement of the drill pipe, will be for COMPANY's account regardless of the Estimated Value of Work Order noted hereinabove.

The pricing information presented herein shall be firm and fixed for the duration of this Work Order and will serve as the basis of any subsequent price adjustments, if deemed necessary.

Forward invoices/statements to:

BP America Production Company
Attention: Scanning Dept. S646
P.O. Box 22024
Tulsa, OK 74121-2024
Work Order No.: BPR-05-02811
Paykey No.: ZNAX04KIDA

All of the Work shall be performed in accordance with the terms and conditions of this Work Order and the CONTRACT as amended.

ACCEPTED BY:	/s/ Anton Dibowitz	**APPROVED BY:**	/s/ Belinda Erdelt
	CONTRACTOR		*COMPANY*
	Anton Dibowitz		Belinda Erdelt
	Printed Name		*Printed Name*
Title:	Sr. Marketing Representative	Title:	PSCM Mgr – GoM Drilling & Wells
Date:	12/21/05	Date:	15-Dec-05

Notices:

Transocean Holdings, Inc.
1311 Broadfield, Suite 400
Houston, Texas 77084
Attention: Anton Dibowitz
Phone: 832-587-8500
Fax: 832-587-8754

BP America Production Company
200 Westlake Park Boulevard
Houston, Texas 77079
Attention: Belinda Erdelt
Mail Code: 624A, WL4
Phone: 281-366-7334
Fax: 281-366-4697
E-Mail: Belinda.Erdelt@bp.com

WORK ORDER

Date: August 12, 2006

Work Order requested by: George Coltrin

This Work Order is subject to the terms and conditions of Drilling Contract No. 980249 between BP America Production Company ("COMPANY") and Transocean Holdings, Inc. ("CONTRACTOR"), made and effective the 9th day of December, 1998, as amended. EXCEPT AS EXPRESSLY PROVIDED HEREIN, NOTHING CONTAINED IN THIS WORK ORDER SHALL BE CONSTRUED AS AN AMENDMENT TO THE TERMS OF THE REFERENCED CONTRACT.

CONTRACTOR: Transocean Holdings, Inc.
1311 Broadfield, Suite 400
Houston, Texas 77084

Work Order No.: BPR-06-02376

Paykey No.: ZNAXTAMARA

Project Identification: Tamara Well
Additional Drill Pipe

Estimated Value of Work Order: $234,000

Expected Start Date: August 12, 2006

Expected Completion Date: January 15, 2007

Description/Scope of Work/Additional Terms and Conditions:

Article 5.1.1 of Drilling Contract No. 980249 ("CONTRACT") stipulates that any modifications to the Drilling Unit after the Commencement Date shall be as agreed in a separate written agreement. In respects of this, the separate written agreement will be referred to as a "Work Order" and implementation of the requirements delineated in the Work Order shall be in accordance with the terms and conditions of the CONTRACT.

Under this Work Order COMPANY is requesting and CONTRACTOR has agreed to furnish certain additional equipment and materials described herein below as required for supporting COMPANY's drilling operations on the Tamara Well located in the Gulf of Mexico.

The Work Order includes the provision of **Additional Drill Pipe** for the Drilling Unit "Deepwater Horizon". An additional 3,000' (69 joints) of 6-5/8" premium grade drill pipe will be furnished by CONTRACTOR in accordance with the following technical specifications:

> 6 5/8" X 40.5# .625 WALL, 5.375"ID., 95% WALL, RIII S-135 (44.5 +/- 6") W/6 5/8"FH API + 4" LTS (12 PIN X 14" BOX) (8 1/2" OD X 4 1/4" ID) TOOL JOINT TK34 INTERNAL PLASTIC COATING, ARMACOR M HARDBANDING APPLIED 3/32" PROUD ON 3" OF BOX OD BEGINING 1/4" TO 3/8" ABOVE ELEVATOR SHOULDER

COMPANY shall pay CONTRACTOR a "Fee" which shall hereinafter be defined as **$1,500/day** for the drill pipe. The drill pipe will be required for the duration of the Tamara Well which is expected to last for a one hundred and fifty six (156) day time period. Thus, the Estimated Value of Work Order is calculated as follows:

($1,500/day) (156 days) = $234,000

The Estimated Value of this Work Order as set forth in the heading of this document is based only on the Work as presently defined. If the duration of the Tamara Well should exceed the estimated one hundred and fifty six (156) day time period, then COMPANY will provide an extension to this Work Order in the form of a "Change Order." Regardless of the duration of the Tamara Well the agreed Fee will be paid until the drill pipe is returned and offloaded at COMPANY's shore base facility.

The Fee shall commence at 00:00 on August 12, 2006, and shall end after the drill pipe has been returned and offloaded at COMPANY's shore base facility at Fourchon, Louisiana.

COMPANY shall also reimburse CONTRACTOR for all costs associated to re-inspect the drill pipe to DS1 Level 5 standards and return to CONTRACTOR's yard in Amelia, Louisiana, after the Tamara Well is completed. All inspection, repair and transportation costs, including freight and handling charges associated with movement of the drill pipe, will be for COMPANY's account regardless of the Estimated Value of Work Order noted hereinabove.

The pricing information presented herein shall be firm and fixed for the duration of this Work Order and will serve as the basis of any subsequent price adjustments, if deemed necessary.

Forward invoices/statements to: BP America Production Company
Attention: Scanning Dept. S646
P.O. Box 22024
Tulsa, OK 74121-2024
Work Order No.: BPR-06-02376
Paykey No.: ZNAXTAMARA

All of the Work shall be performed in accordance with the terms and conditions of this Work Order and the CONTRACT as amended.

ACCEPTED BY:	/s/ Anton Dibowitz	**APPROVED BY:**	/s/ Ben Steven Smith
	CONTRACTOR		*COMPANY*
	Anton Dibowitz		Ben Steven Smith
	Printed Name		*Printed Name*
Title:	Marketing Manager, North America	Title:	Sr. PSCM Specialist, Drilling Rigs
Date:		Date:	10/4/06

Notices:

Transocean Holdings, Inc.
1311 Broadfield, Suite 400
Houston, Texas 77084
Attention: Anton Dibowitz
Phone: 832-587-8500
Fax: 832-587-8754

BP America Production Company
200 Westlake Park Boulevard
Houston, Texas 77079
Attention: Steve Smith
Mail Code: 646C, WL4
Phone: 281-366-2041
Fax: 281-366-7130
E-Mail: Steve.Smith3@bp.com

Amendment No. 27
to
Drilling Contract No. 980249

This Amendment No. 27 is entered into effective as of the 18th day of September, 2006, by BP America Production Company (hereinafter referred to as "COMPANY") with a place of business at 501 WestLake Park Boulevard, Houston, Texas 77079, and Transocean Holdings Inc. (hereinafter referred to as "CONTRACTOR") with a place of business at 1311 Broadfield, Suite 400, Houston, Texas 77084.

W I T N E S S E T H:

WHEREAS, by Drilling Contract No. 980249 made and effective the 9th day of December, 1998, COMPANY and CONTRACTOR entered into that certain Contract for the "Deepwater Horizon" (hereinafter referred to as "CONTRACT"), as previously amended; and

WHEREAS, COMPANY and CONTRACTOR desire to amend the CONTRACT as more particularly set forth herein;

NOW THEREFORE, for and in consideration of the mutual covenants and agreements hereinafter provided, COMPANY and CONTRACTOR agree to amend the CONTRACT as follows:

1. **EXHIBIT A**, **DAYRATES,** shall be revised as follows to indicate a **$14,175/day** increase in the dayrates in accordance with Article 2.3.2 of said CONTRACT, which Article has been amended per Contract Extension Agreement letter dated April 19, 2004, and subsequently amended per Amendment No. 24 to adjust the dayrates to reflect the change in costs for labor, catering, insurance, spare parts and supplies if the costs of any of the aforesaid items vary by three percent (3%) from the costs thereof.

EXHIBIT A
DAYRATES
RATES PER 24 HOUR DAY

Operating Rate	$291,701.00 per day
Moving Rate	$291,701.00 per day
Standby Rate With Crews	$291,701.00 per day
Standby Rate Without Crews	$291,701.00 per day less documented cost savings
Stack Rate With Crews	$291,701.00 per day less documented cost savings
Stack Rate Without Crews	$291,701.00 per day less documented cost savings
Equipment Repair Rate	$ -0- per day
Hurricane Evacuation Rate	Standby Rates Without Crews plus documented expenses of evacuated crew
Additional Personnel (as described in Exhibit F-2, attached)	$650.00 per day

Note

The following documentation which supports all of the increases reflected above is attached hereto and made a part of this Amendment No. 27:

- BASIS FOR COST ESCALATIONS, DEEPWATER HORIZON, September 18, 2006
- DEEPWATER HORIZON, Exhibit F-l: Personnel to be Provided, Adjusted Labor as of September 18, 2006
- DEEPWATER HORIZON, Exhibit F-2: Additional Personnel to be Provided, Adjusted Labor as of September 18, 2006
- U.S. Department of Labor, Bureau of Labor Statistics, Data extracted on: October 24, 2006, Producer Price Index – Commodities, Series Id: WPU119102, Group: Machinery and equipment, Item: Oil field and gas field drilling machinery
- Transocean letter from Betsy Kelly, CPCU, ARe, Manager-Insurance, to Kim Schutts, Re: Annual Premiums, Deepwater Horizon
- Memorandum dated April 11, 2006 regarding April 2006 Base Pay Compensation Adjustment
- Letter between Transocean Holdings Inc. and Delta Catering Management LLC regarding catering adjustment.

Except as changed by this Amendment No. 27 the CONTRACT as previously amended shall remain in full force and effect.

IN WITNESS WHEREOF, the authorized representatives of the parties hereto have executed this Amendment No. 27 in duplicate originals as of the day and year first above written.

BP AMERICA PRODUCTION COMPANY
COMPANY

By: /s/ Wilbert Long Jr. 1/16/08

Wilbert Long Jr.
Printed Name

Title: Head of PSCM (GOM)

TRANSOCEAN HOLDINGS INC.
CONTRACTOR

By: /s/ Terry Bonno

Terry Bonno
Printed Name

Title: Marketing Director, Americas Business Unit

BASIS FOR COST ESCALATIONS
DEEPWATER HORIZON
September 18, 2006
$ Per Day

Clause No.:		Sept. 18, 2005 Baseline Costs	Sept. 18, 2006 Baseline Costs	Variance	Adjusted Sept. 2006 Baseline Costs
2.3.2a)	**Base Labor Cost:**	$ 33,168	$ 35,110	$ 1,942	$ 35,110
	Labor & Burden (per schedule)	$ 828	$ 1,715	$ 887	$ 1,715
	Training Costs	$ 1,499	$ 2,125	$ 626	$ 2,125
	Transportation Costs	**$ 35,495**	**$ 38,950**	**$ 3,455**	**$ 38,950**
	Total Base Labor Cost			**10%**	
	Percentage Increase				
2.3.2b)	**Base Catering Cost:**				
	69 Contractor Personnel	$ 2,101	$ 2,464	$ 363	$ 2,464
	10 Company Personnel	$ 305	$ 357	$ 52	$ 357
	Total Base Catering Costs	**$ 2,406**	**$ 2,821**	**$ 415**	**$ 2,821**
	Percentage Increase			**17%**	
2.3.2c)	**Base Maintenance Element:**	**$ 16,030**	**$ 18,241**	**$ 2,211**	**$ 18,241**
	Total Base Matinenance Costs			**$ 2,211**	
	Percentage Increase			**14%**	
2.3.2d)	**Base Insurance Cost:**				
	Hull & Machinery	$ 2,555	$ 10,305	$ 7,750	$ 10,305
	Marine P&I	$ 2,257	$ 1,916	$ -341	$ 1,916
	Excess Liability	$ 483	$ 1,032	$ 549	$ 1,032
	Brokers Fee	$ 110	$ 244	$ 134	$ 244
	Oil Pollution	$ 26	$ 29	$ 3	$ 29
	Total Base Insurance Cost:	**$ 5,431**	**$ 13,525**	**$ 8,094**	**$ 13,525**
	Percentage Increase			**149%**	
Total Baseline Operating Costs		**$ 59,362**	**$ 73,537**	**$ 14,175**	**$ 73,537**
			Total Dayrate Increase =		**$ 14,175/day**
ADDITIONAL PERSONNEL					
	Labor & Burden (addtl personnel)	$ 432	$ 519	$ 87	$ 519
	Training & Transportation Costs (addtl personnel)	$ 29	$ 67	$ 38	$ 67
	Catering (Additional Personnel)	$ 30	$ 36	$ 6	$ 36
	Insurance: Marine P&I	$ 0	$ 28	$ 28	$ 28
	Total Additional Personnel Cost:	**$ 491**	**$ 650**	**$ 159**	**$ 650**
	Percentage Increase			**32.4%**	
				Total Additional Personnel Increase =	**$ 159/day**

Exhibit F-1: Personnel to be Provided
DEEPWATER HORIZON
Adjusted Labor as of
September 18, 2006

No. of Personnel			A	B	C	D
			GOM Base Labor		GOM Overtime Rates	
On Board	Assigned To Rig	JOB CLASSIFICATION	Daily Rate per person (inc. TT&C & P&I)	Total Daily on Board Cost	Daily Overtime Rates	Hourly Overtime Rates
1	2	OIM	1,107.22	976.51	926.20	77.18
3	6	Toolpusher	951.44	2,462.20	770.42	64.20
2	4	Driller	794.54	1,327.66	731.28	60.94
4	8	Assistant Driller	664.34	2,134.52	576.09	48.01
2	4	Derrickhand	586.61	911.81	483.45	40.29
2	4	Pumphand	510.98	827.18	443.81	36.98
8	16	Floorhand	481.79	3,075.16	409.01	34.08
1	2	Maintenance Supervisor	931.47	800.76	750.45	62.54
1	2	Mechanical Supervisor	808.69	677.98	627.67	52.31
2	4	Chief Mechanic	736.54	1,211.66	662.15	55.18
2	4	Mechanic	664.34	1,067.26	576.09	48.01
1	2	Senior Motor Operator	543.61	412.90	432.19	36.02
2	4	Motor Operator	543.61	825.80	432.19	36.02
1	2	Electrical Supervisor	808.69	677.98	627.67	52.31
1	2	Chief Electrician	736.54	605.83	662.15	55.18
1	2	Electrician	664.34	533.63	576.09	48.01
1	2	Chief Electronic Technician	736.54	605.83	662.15	55.18
1	2	Electronic Technician	664.34	533.63	576.09	48.01
1	2	Senior Sub Sea Sup Dp	909.34	778.63	868.12	72.34
1	2	Subsea Supervisor	808.69	677.98	748.15	62.35
1	2	Master	1,021.54	890.82	840.52	70.04
1	2	Chief Mate	827.02	696.31	770.00	64.17
1	2	Bosun	606.34	475.63	506.96	42.25
3	6	AB Seaman	520.45	1,269.18	455.10	37.92
2	4	DP Operator	693.14	1,124.86	610.42	50.87
2	4	Assistant Dp Operator	609.10	956.79	510.25	42.52
3	6	Crane Operator	606.34	1,426.89	506.96	42.25
1	2	Deck Pusher	649.74	519.03	558.69	46.56
2	4	Lead Roustabouts	448.25	701.72	369.04	30.75
9	18	Roustabouts	448.25	3,157.72	369.04	30.75
1	2	Welder	586.61	455.90	483.45	40.29
1	2	Senior Materials Coordinator	664.34	533.63	483.32	40.28
1	2	Material Coordinator	577.15	446.43	472.16	39.35
1	2	Medic (RSTT)	577.15	446.43	472.16	39.35
1	2	Radio Operator	519.15	388.44	403.03	33.59
1	2	RSTC	625.67	494.96	444.65	37.05
0	0	—	—	—	—	—
0	0	—	—	—	—	—
0	0	—	—	—	—	—
0	0	—	—	—	—	—
69	**138**		**Total Labor Costs =**	**$ 35,109.66**		

The figures in column "A" are to be used as the basis for adding personnel to the permanent crew and for determining the credit for crew members short. This includes all Training, Transportation, Catering and Marine P&I costs.

The figures in column "B" are the daily cost of all crew members excluding Training, Transportation, Catering and Marine P&I costs.

The figures in column "C" are the daily cost of overtime excluding Training, Transportation, Catering and Marine P&I costs (assuming a daily schedule of 12 hours)

The figures in column "D" are the hourly cost of overtime excluding Training, Transportation, Catering and Marine P&I costs.

Exhibit F-2: Additional Personnel to be Provided
DEEPWATER HORIZON
Adjusted Labor as of
September 18, 2006

No. of Personnel			A	B	C	D
			GOM Base Labor		GOM Overtime Rates	
On Board	Assigned To Rig	JOB CLASSIFICATION	Daily Rate per person (inc. TT&C & P&I)	Total Daily on Board Cost	Daily Overtime Rates	Hourly Overtime Rates
1	2	Deck Pusher	649.74	519.03	558.69	46.56
0	0	—	—	—	—	—
0	0	—	—	—	—	—
0	0	—	—	—	—	—
0	0	—	—	—	—	—
1	**2**		**Total Labor Costs =**	**$ 519.03**		
		Total Addtl Labor Costs including TTC & P&I =	**649.74**			

The figures in column "A" are to be used as the basis for adding personnel to the permanent crew and for determining the credit for crew members short. This includes all Training, Transportation, Catering and Marine P&I costs.

The figures in column "B" are the daily cost of all crew members excluding Training, Transportation, Catering and Marine P&I costs.

The figures in column "C" are the daily cost of overtime excluding Training, Transportation, Catering and Marine P&I costs (assuming a daily schedule of 12 hours)

The figures in column "D" are the hourly cost of overtime excluding Training, Transportation, Catering and Marine P&I costs.

U.S. Department of Labor
Bureau of Labor Statistics
Bureau of Labor Statistics Data

Data extracted on: October 24, 2006 (11:24:35 AM)

Producer Price Index-Commodities

Series Id: WPU119102
Not Seasonally Adjusted
Group: Machinery and equipment
Item: Oil field and gas field drilling machinery
Base Date: 8200

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
1996	124.0	124.0	124.0	124.3	124.2	124.8	125.3	125.3	125.3	126.2	126.6	127.1	125.1
1997	127.7	127.9	128.6	129.1	129.2	129.3	129.3	129.5	129.7	130.3	131.4	132.0	129.5
1998	133.1	132.9	133.1	133.0	133.0	133.0	132.9	132.9	132.9	133.6	133.6	133.6	133.1
1999	133.8	133.7	133.7	133.9	133.9	134.0	134.0	133.7	133.7	133.7	134.4	134.6	133.9
2000	134.9	136.3	136.3	136.3	136.5	136.5	136.5	136.6	136.7	138.7	138.7	138.7	136.9
2001	143.5	143.9	144.0	144.0	144.0	145.5	145.6	145.8	145.7	146.1	146.1	146.1	145.0
2002	146.2	146.2	146.6	146.6	146.4	146.4	146.4	146.4	146.7	146.7	146.7	146.7	146.5
2003	149.8	149.8	149.8	151.7	152.3	152.5	152.5	152.5	153.1	153.1	153.1	153.5	152.0
2004	153.8	153.9	154.8	156.4	157.1	157.1	156.6	156.7	156.8	157.0	157.9	160.1	156.5
2005	162.0	163.7	169.0	169.8	171.3	172.0	172.5	172.5	172.7	173.9	178.7	180.0	171.5
2006	179.7	182.9	183.6	184.1	188.2	190.5(P)	190.6(P)	192.6(P)	192.3(P)				

(P) : Preliminary. All indexes are subject to revision four months after original publication.

U.S. Bureau of Labor Statistics
Postal Square Building
2 Massachusetts Ave., NE
Washington, DC 20212-0001

Phone: (202) 691-5200
Fax-on-demand: (202) 691-6325
Data questions: **blsdata staff@bls.gov**
Technical (web) questions: **webmaster@bls.gov**
Other comments: **feedback@bls.gov**

BETSY KELLY
MANAGER-INSURANCE

TRANSOCEAN OFFSHORE DEEPWATER DRILLING INC.

4 GREENWAY PLAZA

HOUSTON, TX77046

Kim Schutts
Transocean Offshore Deepwater Drilling Inc.
1311 Broadfield
Houston, TX 77084

Re: Annual Premiums
Deepwater Horizon

These costs and limits reflect the coverage provided at this time and are subject to change upon renewal.

Effective May 1,2006	
Coverage:	All Risk Hull & Machinery
Carrier:	various Underwriters @ Lloyds, led by Limit and Wellington Syndicates
Insured Value:	$ 370,000,000
Deductible:	$ 10,000,000
NET ANNUAL PREMIUM:	**$ 3,761,055**
Effective December 31, 2006	
Coverage:	Primary Marine Protection & Indemnity
Carrier	various Underwriters @ Lloyds, led by Limit and XL Syndicates
Self Insured Retention:	$10,000,000 per occurrence
DEDUCTIBLE ACCRUAL:	**$ 709,380****
Effective May 1, 2006	Excess Liability
Coverage:	various Underwriters @ Lloyds, led by Limit and Wellington Syndicates
Carriers:	$930,000,000
Limits:	**$ 376,623**
NET ANNUAL PREMIUM:	
Effective October 1, 2005	
Coverage:	Oil Pollution
Carrier:	Surety coverage – backed by Underwriters @Lloyds
NET ANNUAL PREMIUM:	**$ 10,558**
Effective December 31, 2005	
U.S. Broker:	McGriff, Seibels & Williams, Inc
Annual Fee:	**$ 40,841**
Effective July 1, 2006	
London Broker:	Lloyd & Partners Ltd.
Annual Fee:	**$ 48,313**

** Based on SIR accrual of $ 13.88 per person per day assigned to the rig.

Best Regards,

Signed electronically
Betsy Kelly, CPCU, ARe
Manager- Insurance

(713) 232-7766 FAX (713) 232-7630 TEL BKELLY@HOUSTON.DEEPWATER.COM

INTEROFFICE MEMORANDUM

North America Region
April 11, 2006

TO: All GOM Rig Based Employees

SUBJECT: BASE PAY COMPENSATION ADJUSTMENT

FROM: Amy Smith

Transocean is committed to providing a competitive salary, as well as a comprehensive benefit package, training, and long term career development opportunities for all employees.

Therefore, effective 1 April 2006, a 5% Across-the-Board increase in base pay has been approved for all US Gulf Coast full time regular rig-based positions. This increase will be retroactive for all work performed on or after 1 April 2006, and will be reflected on your regular scheduled pay check beginning 14 April 2006.

If you have any questions or comments, please feel free to contact myself at 832-587-8551, or Donna Schaaf at 832-587-8699.

TRANSOCEAN HOLDINGS INC

1311 BROADFIELD BLVD SUITE 400

HOUSTON, TEXAS 77084

TIM JURAN
DIVISION MANAGER NORTH AMERICA

April 20, 2006

Delta Catering Management, LLC
5749 Sustina Drive, #300
Harahan, LA 70123

Attn: **Mrs. Marcia Marney**

Ref: Cost Increases Catering Agreement – "Deepwater Horizon"

Dear Mrs. Marney,

Reference is made for all purposes to the certain *Catering Agreement* dated June 24, 2005 by and between **Transocean Holdings Inc.** ("Company") and **Delta Catering Management, LLC** ("Caterer") for the Drilling Unit, the **"Deepwater Horizon"** ("Agreement")

Company requested an adjustment to rates for the **"Deepwater Horizon"** which would allow for the annual increase and a change to Schedule C. We have received and reviewed the new rates as requested and return the attached revised Schedule C as an attachment to this letter.

Schedule C will now include the new catering crew Labor Rate Schedule which was formerly provided in Schedule A-l Item 2.0 - Manning. And, the references will be deemed changed accordingly.

This revised Schedule C will qualify as the annual escalation as provided in Schedule A-l Item 6.0 and will be effective March 1, 2006. These rates will remain valid and will not be adjusted for one year. At that time the rates can be adjusted again at a mutually agreed rate.

If you are in agreement with this adjustment, please indicate your acceptance in the space provided below and return one original copy of this letter to us for our files.

Regards,

/s/ Tim Juran_

Tim Juran
Division Manager, North America

/ks

AGREED AND ACCEPTED THIS 26 DAY OF April, 2006
CATERING MANAGEMENT, LLC
SIGNED Marcia Marney
TITLE President + General Manager
DATED April 26, 2006

PHONE: (832) 587-8596 FAX: (832) 587-8754 E-MAIL: tjuran@houston.deepwater.com

REVISED SCHEDULE C - MARCH 1, 2006
CATERING SERVICE RATES
FOR THE DEEPWATER HORIZON

The Caterer's catering service manday rates for this Drilling Unit shall be based on the following information:

Average Total POB	150
Average Daily Casual Meals	2
Catering Crew Complement	18

Fixed Daily Rate	**$**	**3,031**
Cost per Man Per day - Groceries & Supplies	**$**	**15.50**

LABOR RATE SCHEDULE

		Costs for Incremental Personnel					
Catering Position	**On Board**	**Range**	**Max. Employee Hourly Wage**	**Daily Cost (Incl. burden)**	**Total Daily On Board Costs**	**Hourly Overtime Rate**	**Cost/Hour Standby Rate**
Executive Steward	1	$13.00 -$15.00	$ 15.00	$ 375.10	$ 375.10	$ 37.50	$ 31.25
Day Cook	1	$9.50 -$11.00	$ 11.00	$ 271.85	$ 271.85	$ 27.20	$ 22.65
Night Cook	1	$8.25 -$9.00	$ 9.00	$ 225.35	$ 225.35	$ 22.55	$ 18.80
Baker	1	$8.50 -$9.25	$ 9.25	$ 231.30	$ 231.30	$ 23.15	$ 19.30
Prep. Cook	2	$7.45 -$8.45	$ 8.45	$ 211.50	$ 423.00	$ 21.15	$ 17.65
Senior Orderly	4	$7.50 -$8.25	$ 8.25	$ 206.30	$ 825.20	$ 20.65	$ 17.20
Utility / Galleyhand	8	$6.25 -$7.45	$ 7.45	$ 186.25	$ 1,490.00	$ 18.60	$ 15.50
Total On Board	18				$ 3,841.80		

Delta Rate Adjustment - Horizon

WORK ORDER

Date: January 24, 2007

Work Order requested by: George Coltrin

This Work Order is subject to the terms and conditions of Drilling Contract No. 980249 between BP America Production Company ("COMPANY") and Transocean Holdings, Inc. ("CONTRACTOR"), made and effective the 9th day of December, 1998, as amended. EXCEPT AS EXPRESSLY PROVIDED HEREIN, NOTHING CONTAINED IN THIS WORK ORDER SHALL BE CONSTRUED AS AN AMENDMENT TO THE TERMS OF THE REFERENCED CONTRACT.

CONTRACTOR: Transocean Holdings, Inc.
1311 Broadfield, Suite 400
Houston, Texas 77084

Work Order No.: BPR-07-00223

Paykey No.: ZGMXKAHUNA

Project Identification: Big Kahuna Well
Additional 6-5/8" Drill Pipe

Estimated Value of Work Order: $200,000

Expected Start Date: January 10, 2007

Expected Completion Date: May 15, 2007

Description/Scope of Work/Additional Terms and Conditions:

Article 5.1.1 of Drilling Contract No. 980249 ("CONTRACT") stipulates that any modifications to the Drilling Unit after the Commencement Date shall be as agreed in a separate written agreement. In respects of this, the separate written agreement will be referred to as a "Work Order" and implementation of the requirements delineated in the Work Order shall be in accordance with the terms and conditions of the CONTRACT.

Under this Work Order COMPANY is requesting and CONTRACTOR has agreed to furnish certain additional equipment and materials described herein below as required for supporting COMPANY's drilling operations on the Big Kahuna Well located in the Gulf of Mexico. For the avoidance of doubt, all such items shall be considered as CONTRACTOR's equipment.

The Work Order includes the provision of **Additional 6-5/8" Drill Pipe** for the Drilling Unit "Deepwater Horizon". An additional 3,000' (69 joints) of 6-5/8" premium grade drill pipe will be furnished by CONTRACTOR in accordance with the following technical specifications:

> 6 5/8" X 40.5# .625 WALL, 5.375"ID., 95% WALL, RIII S-135 (44.5 +/- 6") W/6 5/8"FH API + 4" LTS (12 PIN X 14" BOX) (8 1/2" OD X 4 1/4" ID) TOOL JOINT TK34 INTERNAL PLASTIC COATING, ARMACOR M HARDBANDING APPLIED 3/32" PROUD ON 3" OF BOX OD BEGINING 1/4" TO 3/8" ABOVE ELEVATOR SHOULDER

COMPANY shall pay CONTRACTOR a "Fee" which shall hereinafter be defined as **$1,500/day** for the drill pipe. The drill pipe will be required for the duration of the Big Kahuna Well which is expected to last for a one hundred and twenty-five (125) day time period. Thus, the Estimated Value of Work Order is calculated as follows:

($1,500/day) (125 days) = $187,500
or, rounded off is **$200,000**

The Estimated Value of this Work Order as set forth in the heading of this document is based only on the Work as presently defined. If the duration of the Big Kahuna Well should exceed the estimated one hundred and twenty-five (125) day time period, then COMPANY will provide an extension to this Work Order in the form of a "Change Order." Regardless of the duration of the Big Kahuna Well the agreed Fee will be paid until the drill pipe is returned and offloaded at COMPANY's shore base facility.

The Fee shall commence at 00:00 on January 10, 2007, and shall end after the drill pipe has been returned and offloaded at COMPANY's shore base facility at Fourchon, Louisiana.

COMPANY shall also reimburse CONTRACTOR for all costs associated to re-inspect the drill pipe to DS1 Level 5 standards and return to CONTRACTOR's yard in Amelia, Louisiana, after the Big Kahuna Well is completed. All inspection, repair and transportation costs, including freight and handling charges associated with movement of the drill pipe, will be for COMPANY's account regardless of the Estimated Value of Work Order noted hereinabove.

The pricing information presented herein shall be firm and fixed for the duration of this Work Order and will serve as the basis of any subsequent price adjustments, if deemed necessary.

Forward invoices/statements to: BP America Production Company
Attention: Scanning Dept. S646
P.O. Box 22024
Tulsa, OK 74121-2024
Work Order No.: BPR-07-00223
Paykey No.: ZGMXKAHUNA

All of the Work shall be performed in accordance with the terms and conditions of this Work Order and the CONTRACT as amended.

ACCEPTED BY:	/s/ Anton Dibowitz *CONTRACTOR*	**APPROVED BY:**	/s/ Ben Steven Smith *COMPANY*
	Anton Dibowitz *Printed Name*		Ben Steven Smith *Printed Name*
Title:	Marketing Manager	Title:	Sr. PSCM Sourcing Specialist
Date:	2/22/07	Date:	Feb. 14, 2007

Notices:

Transocean Holdings, Inc.
1311 Broadfield, Suite 400
Houston, Texas 77084
Attention: Anton Dibowitz
Phone: 832-587-8500
Fax: 832-587-8754
E-Mail: adibowitz@houston.deepwater.com

BP America Production Company
200 Westlake Park Boulevard
Houston, Texas 77079
Attention: Steve Smith
Mail Code: 646C, WL4
Phone: 281-366-2041
Fax: 281-366-7130
E-Mail: Steve.Smith3@bp.com

WORK ORDER

Date: March 1, 2007

Work Order requested by: George Coltrin

This Work Order is subject to the terms and conditions of Drilling Contract No. 980249 between BP America Production Company ("COMPANY") and Transocean Holdings, Inc. ("CONTRACTOR"), made and effective the 9th day of December, 1998, as amended. EXCEPT AS EXPRESSLY PROVIDED HEREIN, NOTHING CONTAINED IN THIS WORK ORDER SHALL BE CONSTRUED AS AN AMENDMENT TO THE TERMS OF THE REFERENCED CONTRACT.

CONTRACTOR: Transocean Holdings, Inc.
1311 Broadfield, Suite 400
Houston, Texas 77084

Work Order No.: BPR-07-00678

Paykey No.: (To be advised on a per well basis)

Project Identification: Transocean "Deepwater Horizon"
Additional 6-5/8" Drill Pipe

Estimated Value of Work Order: $1,950,000

Expected Start Date: February 25, 2007

Expected Completion Date: September 17, 2010

Description/Scope of Work/Additional Terms and Conditions:

Article 5.1.1 of Drilling Contract No. 980249 ("CONTRACT") stipulates that any modifications to the Drilling Unit after the Commencement Date shall be as agreed in a separate written agreement. In respects of this, the separate written agreement will be referred to as a "Work Order" and implementation of the requirements delineated in the Work Order shall be in accordance with the terms and conditions of the CONTRACT.

Under this Work Order COMPANY is requesting and CONTRACTOR has agreed to furnish certain additional equipment and materials described herein below as required for supporting COMPANY's drilling operations on various deep water projects located in the Gulf of Mexico. For the avoidance of doubt, all such items shall be considered as CONTRACTOR's equipment.

The Work Order includes the provision of **Additional 6-5/8" Drill Pipe** for the Drilling Unit "Deepwater Horizon". An additional 3,000' (69 joints) of 6-5/8" premium grade drill pipe will be furnished by CONTRACTOR in accordance with the following technical specifications:

> 6 5/8" X 40.5# .625 WALL, 5.375"ID., 95% WALL, RIII S-135 (44.5 +/- 6") W/6 5/8"FH API + 4" LTS (12 PIN X 14" BOX) (8 1/2" OD X 4 1/4" ID) TOOL JOINT TK34 INTERNAL PLASTIC COATING, ARMACOR M HARDBANDING APPLIED 3/32" PROUD ON 3" OF BOX OD BEGINING 1/4" TO 3/8" ABOVE ELEVATOR SHOULDER

COMPANY shall pay CONTRACTOR a "Fee" which shall hereinafter be defined as **$1,500/day** for the drill pipe. The drill pipe will be required for the remaining term of the CONTRACT. The Estimated Value of Work Order is calculated as follows:

($1,500/day) (1,300 days) = $1,950,000

The Estimated Value of this Work Order as set forth in the heading of this document is based only on the Work as presently defined. If the duration of the last deep water project should exceed the estimated one thousand, three hundred (1,300) day time period, then COMPANY will provide an extension to this Work Order in the form of a "Change Order." Regardless of the duration of the deep water projects, the agreed Fee will be paid until the drill pipe is returned and offloaded at COMPANY's shore base facility.

The Fee shall commence whenever the drill pipe has been delivered to the Drilling Unit, and shall end after the drill pipe has been returned and offloaded at COMPANY's shore base facility at Fourchon, Louisiana.

COMPANY shall also reimburse CONTRACTOR for all costs associated to re-inspect the drill pipe to DS1 Level 5 standards and return to CONTRACTOR's yard in Amelia, Louisiana, after the last deep water project is completed. All inspection, repair and transportation costs, including freight and handling charges associated with movement of the drill pipe, will be for COMPANY's account regardless of the Estimated Value of Work Order noted hereinabove.

COMPANY, at its sole option, may terminate this Work Order at any time short of its one thousand, three hundred (1,300) day time period by providing notice in writing thirty (30) days in advance to CONTRACTOR along with inspection and redelivery as above.

The pricing information presented herein shall be firm and fixed for the duration of this Work Order and will serve as the basis of any subsequent price adjustments, if deemed necessary.

Forward invoices/statements to: BP America Production Company
Attention: Scanning Dept. S646
P.O. Box 22024
Tulsa, OK 74121-2024
Work Order No.: BPR-07-00678
Paykey No.: To be advised on a per well basis

ACCEPTED BY:	/s/ Terry Poonno *CONTRACTOR*	**APPROVED BY:**	/s/ Ben Steven Smith *COMPANY*
	Terry Poonno *Printed Name*		Ben Steven Smith *Printed Name*
Title:	Marketing Mgr, North America Div.	Title:	Sr. PSCM Specialist
Date:	April 20, 2007	Date:	April 10, 2007

Notices:

Transocean Holdings, Inc.
1311 Broadfield, Suite 400
Houston, Texas 77084
Attention: Anton Dibowitz
Phone: 832-587-8500
Fax: 832-587-8754
E-Mail: adibowitz@houston.deepwater.com

BP America Production Company
200 Westlake Park Boulevard
Houston, Texas 77079
Attention: Steve Smith
Mail Code: WL4-1995C
Phone: 281-366-2041
Fax: 281-366-4697
E-Mail: Steve.Smith3@bp.com

Amendment No. 28
to
Drilling Contract No. 980249

This Amendment No. 28 is made and entered into as of the 18th day of May, 2007, by and between BP America Production Company (hereinafter referred to as "COMPANY") and Transocean Holdings, Inc. (hereinafter referred to as "CONTRACTOR') with a place of business at 1311 Broadfield, Suite 400, Houston, Texas 77084.

W I T N E S S E T H:

WHEREAS, by Drilling Contract No. 980249 made and effective the 9th day of December, 1998, COMPANY and CONTRACTOR entered into that certain Contract for the "Deepwater Horizon", (hereinafter referred to as "CONTRACT") as previously amended ; and

WHEREAS, COMPANY and CONTRACTOR desire to amend the CONTRACT to provide for the procurement, transportation, and maintenance of six (6) pup joints for use on the "Deepwater Horizon" (hereinafter referred to as "Drilling Unit").

WHEREAS, CONTRACTOR agrees to purchase, transport to the Drilling Unit, and own six (6) pup joints and;

WHEREAS, the delivery of such equipment is estimated circa June 15, 2007; CONTRACTOR will make all reasonable effort to have such equipment delivered to the Drilling Unit in a timely manner; however, CONTRACTOR shall not be responsible for any late delivery and/or associated downtime and;

NOW THEREFORE for and in consideration of the foregoing agreed provisions as well as the mutual covenants and agreements hereinafter provided. COMPANY and CONTRACTOR agree to amend the CONTRACT as follows:

A new line item shall be added to EXHIBIT A, DAYRATES, to indicate that effective June 15, 2007, COMPANY will pay CONTRACTOR an additional day rate in the amount of $73.00 per day for the purchase and use of the six (6) pup joints until the end of the day September 18, 2010.

This additional day rate shall be payable regardless of any other day rate in effect at any time. In the event the CONTRACT is terminated for any reason before the end of the CONTRACT term as now known, COMPANY shall pay CONTRACTOR a lump sum determined by the product of the additional day rate multiplied by the number of days remaining up to and including the end of the day September 18, 2010.

If the current term of the CONTRACT goes beyond September 18, 2010, under Article I, paragraph 1.1.5, the parties agree that COMPANY's and CONTRACTOR's obligations arising under this Amendment will expire at the end of the day September 18, 2010.

Except as changed by this Amendment No. 28, the CONTRACT as amended shall remain in full force and effect between the parties.

IN WITNESS WHEREOF, the authorized representatives of the parties hereto have executed this Amendment No. 28 in duplicate originals as of the day and year first above written.

BP America Production Company *COMPANY*	Transocean Holdings, Inc. *CONTRACTOR*
By: /s/ Ben Steven Smith	By: /s/ Andrew Tietz
Ben Steven Smith *Printed Name*	Andrew Tietz *Printed Name*
Title: Sr. PSCM Specialist	Title: Marketing Manager

Notice No. 29
to
Drilling Contract No. 980249

This notice is effective as of the 18th day of September 2007, and is issued to BP America Production Company (hereinafter referred to as "COMPANY") with a place of business at 200 Westlake Park Blvd, Houston, Texas 77079.

W I T N E S S E T H:

WHEREAS, COMPANY and Transocean Holdings Inc. (hereinafter referred to as "CONTRACTOR") entered into Drilling Contract No. 980249 made and effective the 9th day of December, 1998, for the "Deepwater Horizon" (hereinafter referred to as "CONTRACT"), which has been previously amended; and

WHEREAS, COMPANY and CONTRACTOR desire to set forth a notice as to the current application to dayrates of Amendment 24 of the CONTRACT as more particularly set forth therein;

NOW THEREFORE, CONTRACTOR advises as follows:

CONTRACTOR'S name change: CONTRACTOR'S name is hereby changed from Transocean Holdings Inc. to Transocean Holdings LLC.

The Operating Rate (and, consequently, all other dayrates except the Equipment Repair Rate) specified in **EXHIBIT A, DAYRATES** shall be adjusted as per Item 3 of Amendment No. 24 to the CONTRACT.

Accordingly, CONTRACTOR hereby advises COMPANY that the Operating Rate on the Deepwater Horizon shall be $377,594.00 beginning September 18, 2007 and ending December 17, 2007. Additional rates are set forth in the attached Exhibit A along with support information for the average dayrate calculation. These rates are auditable as per Amendment 24 of the CONTRACT.

Except as changed by this notice, No. 29, the CONTRACT as amended shall remain in full force and effect between the Parties.

IN WITNESS WHEREOF, the authorized representatives of the Parties have executed this Amendment No. 29 in duplicate originals as of the day and year first above written.

BP America Production Company *COMPANY*	Transocean Holdings LLC (formerly known as Transocean Holdings Inc.) *CONTRACTOR*
By: /s/ Ben Steven Smith 06/07/08 Ben Steven Smith *Printed Name*	By: /s/ Michael D. Acuff Michael D. Acuff *Printed Name*

EXHIBIT A

DAYRATES

	RATES PER 24 HOUR DAY
Operating Rate	$377,594 per day
Moving Rate	$377,594 per day
Standby Rate With Crews	$377,594 per day
Standby Rate Without Crews	$377,594 per day less documented cost savings
Stack Rate With Crews	$377,594 per day less documented cost savings
Stack Rate Without Crews	$377,594 per day less documented cost savings
Equipment Repair Rate	$ -0- Per Day subject to Article 2.2.5(a)
Hurricane Evacuation Rate	Standby Rates Without Crews plus documented expenses of evacuated crew

Average Dayrates Calculation

The rigs used for the calculation of the average dayrates are

Discoverer Spirit
Discoverer Deep Seas
Discoverer Millennium
Cajun Express

The table below identifies the dayrates used in the calculation average for the Deepwater Horizon's Operating Rate for the period detailed herein:

Rig	Actual contracted day rates as calculated on Sept. 14, 2007
	$ 475,739
	$ 444,688
	$ 296,204
	$ 293,746
Average Actual Daily Rate	**$ 377,594**

WORK ORDER

Date: November 29, 2007

Work Order requested by: David Sims

This Work Order is subject to the terms and conditions of Drilling Contract No. 980249 between BP America Production Company ("COMPANY") and Transocean Holdings, Inc. ("CONTRACTOR"), made and effective the 9th day of December, 1998, as amended. EXCEPT AS EXPRESSLY PROVIDED HEREIN, NOTHING CONTAINED IN THIS WORK ORDER SHALL BE CONSTRUED AS AN AMENDMENT TO THE TERMS OF THE REFERENCED CONTRACT.

CONTRACTOR: Transocean Holdings, Inc.
1311 Broadfield, Suite 400
Houston, Texas 77084

Work Order No.: BPR-07-02873

Paykey No.: COMPANY will advise for each well

Project Identification: Additional 6-5/8" Drill Pipe

Estimated Value of Work Order: $4,500,000.00

Expected Start Date: October 01, 2008

Expected Completion Date: September 18, 2010

Description/Scope of Work/Additional Terms and Conditions:

Article 5.1.1 of Drilling Contract No. 980249 ("CONTRACT") stipulates that any modifications to the Drilling Unit after the Commencement Date shall be as agreed in a separate written agreement. In respects of this, the separate written agreement will be referred to herein as a "Work Order" and implementation of the requirements delineated in the Work Order shall be in accordance with the terms and conditions of the CONTRACT.

Under this Work Order COMPANY is requesting and CONTRACTOR has agreed to acquire and rent to COMPANY certain additional equipment and materials described herein below ("Equipment") as required for supporting COMPANY's drilling operations from the Deepwater Horizon ("Drilling Unit"). The term of the rental shall be from the time of the delivery of such Equipment, throughout the remaining term of the CONTRACT, until the scheduled ending on September 18, 2010. For the avoidance of doubt, throughout and upon the completion of the CONTRACT, such items shall be considered as CONTRACTOR's equipment.

The Work Order is for the rental of the Equipment, hereinafter more specifically described as Additional 6-5/8" Drill Pipe for the Drilling Unit "Deepwater Horizon". An additional string of 6-5/8" premium grade drill pipe consisting of approximately 15,000' with .522" wall and approximately 10,300' with .640" wall will be acquired by CONTRACTOR and rented to COMPANY in accordance with the following technical specifications:

- 15,450ft (+0%,-3%) Pipe, Drill 6-5/8", Grade V150 (.522" wall) 95% minimum body wall, 6-5/8" FH connection - Range 3, lengths (44.5ft, +/-6") 8-1/2" OD x 4-1/4" ID tool joints, 12" pin tong space, 15" box tong space, with SmoothEdge feature on pins and boxes (i.e. both ends), pin end tool joint marking as per modified ISO 10407, 1993 tool joint identification specification detailed in Figure 3 & 4 of Transocean's Technical Information Bulletin HQS-OPT-TIB-516-02 (New Drill Pipe Manufacturing Specification) except with an added second ring groove to be centered through the milled flat as per Grant Prideco sketch 1H051 Rev 2, pre-torqued connections, 3" band of TCSTi high performance casing friendly hardbanding applied 3/32" proud (+1/32", -0") to pins and boxes (i.e. both

ends) beginning 1/4” to 3/8” from elevator shoulder, TK34XT internal plastic coating, additional specifications as per Transocean Technical Information Bulletin HQS-OPS-TIB-516-02 (New Drill Pipe Manufacturing Specification) and NS1. Rust-Veto AS or equivalent long term storage compound on threads with high density polyethylene non-metallic composite reinforced thread protectors applied wrench tight. Either Plusco 372 or Oil Center Research 1122 NFP Protekto-Coat black water based varnish on pipe OD.

- 10,300ft (+0%,-3%) Pipe, Drill 6-5/8”, Grade V150 (.640” wall) 95% minimum body wall, 6-5/8” FH connection - Range 3, lengths (44.5ft, +/-6”) 8-1/2” OD x 4-1/4” ID tool joints, 12” pin tong space, 15” box tong space, with SmoothEdge feature on pins and boxes (i.e. both ends), pin end tool joint marking as per modified ISO 10407, 1993 tool joint identification specification detailed in Figure 3 & 4 of Transocean’s Technical Information Bulletin HQS-OPT-TIB-516-02 (New Drill Pipe Manufacturing Specification) except with an added second ring groove to be centered through the milled flat as per Grant Prideco sketch 1H051 Rev 2, pre-torqued connections, 3” band of TCSTi high performance casing friendly hardbanding applied 3/32” proud (+1/32”, -0”) to pins and boxes (i.e. both ends) beginning 1/4” to 3/8” from elevator shoulder, TK34XT internal plastic coating, additional specifications as per Transocean Technical Information Bulletin HQS-OPS-TIB-516-02 (New Drill Pipe Manufacturing Specification) and NS1. Rust-Veto AS or equivalent long term storage compound on threads with high density polyethylene non-metallic composite reinforced thread protectors applied wrench tight. Either Plusco 372 or Oil Center Research 1122 NFP Protekto-Coat black water based varnish on pipe OD.

For the provision of the Equipment, the total cost of this pipe ($3,621,173) multiplied by 1.1, to account for 10% capital asset tax, shall be amortized at 12% interest for the term starting at the delivery of the Equipment and ending on September 18, 2010 (“Rental Period”). COMPANY shall pay this calculated daily rental payment (“Daily Payment”) to CONTRACTOR within thirty (30) days after receipt of monthly invoice and shall be payable regardless of whether there is any other day rate in effect at any time.

The Daily Payment shall be calculated by the Excel payment function shown below, where RP symbolizes the Rental Period in days.

(A) = - PMT ((1+12%)^(1/365)-1,[RP],3621173*1.1) ⇨Daily Payment .

For example, if CONTRACTOR delivers the Equipment on October 1, 2008, the Rental Period would be 717 days through September 18, 2010. Using the Excel payment function above, the Daily Payment would be calculated as follows:

(Example) = - PMT ((1+12%)^(1/365)-1,717,3621173*1.1)= $6,198

If the current term of the CONTRACT goes beyond September 18, 2010, under Article I, paragraph 1.1.5, the parties agree that COMPANY’s payment obligations arising under this Work Order will expire at the end of the day September 18, 2010. For clarification, the Equipment will continue to be provided by CONTRACTOR and COMPANY’s liability and obligations as described in this Work Order (with exception of the payment of the Daily Payment) will continue through the completion of the well in progress on September 18, 2010.

If COMPANY elects to extend the CONTRACT, other than to complete the well in progress, CONTRACTOR’s provision of the Equipment will be discussed during the negotiation of the extension.

If the CONTRACT is terminated prior to September 18, 2010, for any reason, COMPANY shall pay CONTRACTOR, within thirty (30) working days after receipt of invoice, a lump sum determined by the difference between (i) the product of the Daily Payment as calculated in **(A)** above multiplied by the number of days from the delivery of the Equipment until the termination date (“Termination Period”) and (ii) the revised value of the daily amount as calculated by the Excel function in **(B)** below (“Revised Daily Payment”) multiplied by the Termination Period, shown as TP below.

(B) = - PMT ((1+12%)^(1/365)-1,[TP],3621173*1.1) ⇨ Revised Daily Payment .

For clarity, the lump sum payment is calculated as follows: **((B)** x TP) **-** (**(A)** x TP)

All inspection, repair, replacement and transportation costs, including freight and handling charges associated with movement of the Equipment, will be for COMPANY's account regardless of the Estimated Value of Work Order noted hereinabove, however when the Equipment is no longer required for COMPANY's requirements, COMPANY will have no obligation to inspect repair or replace, the Equipment and CONTRACTOR will have no obligation to provide the Equipment.

The pricing information presented herein shall be firm and fixed for the duration of this Work Order and will serve as the basis of any subsequent price adjustments, if deemed necessary.

COMPANY as lessee accept full responsibility for the Equipment during the rental period and agrees to return the Equipment to CONTRACTOR as lessor at or before the end of the rental period in as good condition as when received, ordinary wear and tear excepted, which condition shall be determined by a third party inspection at COMPANY's cost.

CONTRACTOR makes no warranty of quality, merchantability or fitness for any purpose or any other warranty of any kind, express or implied, with respect to the equipment.

Forward invoices/statements to: BP America Production Company
Attention: Scanning Dept. S646
P.O. Box 22024
Tulsa, OK 74121-2024
Work Order No.: BPR-07-02873
Paykey No.: COMPANY will advise for each well

This Work Order shall be otherwise performed in accordance with the terms and conditions of this CONTRACT as amended.

APPROVED BY:	/s/ Ben Steven Smith *COMPANY*	**ACCEPTED BY:**	/s/ A. M. Polhamus *CONTRACTOR*
	Ben Steven Smith *Printed Name*		A. M. Polhamus *Printed Name*
Title:	Sr. PSCM Specialist	Title:	North America Division Manager
Date:	12/03/07	Date:	November 29, 2007
Notices:	BP America Production Company 200 Westlake Park Boulevard Houston, Texas 77079 Attention: Steve Smith Mail Code: 646C, WL4-1995C Phone: 281-366-2041 Fax: 281-366-7130 E-Mail: steve.smith3@bp.com	**Notices:**	Transocean Holdings, Inc. 1311 Broadfield, Suite 400 Houston, Texas 77084 Attention: Mac Polhamus Phone: 832-587-8597 Fax: 832-587-8754 E-Mail: mpolhamus@mail.deepwater.com

Amendment No. 30
to
Drilling Contract No. 980249

This Amendment is effective as of the 18th day of December 2007, and is issued to BP America Production Company (hereinafter referred to as "COMPANY") with a place of business at 200 Westlake Park Blvd, Houston, Texas 77079.

W I T N E S S E T H:

WHEREAS, COMPANY and Transocean Holdings Inc. (hereinafter referred to as "CONTRACTOR") entered into Drilling Contract No. 980249 made and effective the 9th day of December, 1998, for the "Deepwater Horizon" (hereinafter referred to as "CONTRACT"), which has been previously amended; and

WHEREAS, COMPANY and CONTRACTOR desire to set forth a notice as to the current application to dayrates of Amendment 24 of the CONTRACT as more particularly set forth therein;

NOW THEREFORE, CONTRACTOR advises as follows:

The Operating Rate (and, consequently, all other dayrates except the Equipment Repair Rate) specified in **EXHIBIT A, DAYRATES** shall be adjusted as per Article 3 of Amendment No. 24 to the CONTRACT.

Accordingly, CONTRACTOR hereby advises COMPANY that the Operating Rate on the Deepwater Horizon shall be $444,165.00 beginning December 18, 2007 and ending March 17, 2008. Additional rates are set forth in the attached EXHIBIT A along with support information for the average dayrate calculation. These rates are auditable as per Amendment 24 of the CONTRACT.

CONTRACTOR'S personnel labor rates set forth in the attached EXHIBIT F-l supersedes Exhibit F-l in Amendment 27.

Article 3 of Amendment 24 to Drilling Contract No. 980249 is replaced in its entirety with the following Article 3:

3. The Operating Rate (and, consequently, all other dayrates except the Equipment Repair Rate) specified in **EXHIBIT A, DAYRATES** shall be revised to the amount, and periodically adjusted in accordance with terms, set forth below.

An Operating Rate of **$275,000** per day shall be payable to CONTRACTOR commending September 18, 2005, through the end of the initial 2 year term of the CONTRACT extension. The rate specified is based on wage scales and current operating expenses as of March 1, 2005. CONTRACTOR shall have the right to adjust the rate for documented changes, if any, in the base operating costs no sooner than the commencement of the first year and then no more often than annually thereafter during the initial 2 year term of the CONTRACT extension.

The Operating Rate shall be adjusted to a "Market Rate" at the commencement of year three (3) of the CONTRACT extension (i.e., on September 18, 2007) and then at the beginning of every three (3) months thereafter, until the end of the term of the CONTRACT. The Market Rate will be calculated only using Transocean legacy rigs, i.e. rigs that Transocean owned prior to Transocean's merger with GlobalSantaFe. The Market Rate for the three (3) month period shall be the average of the actual contracted dayrates, excluding incentive components, then being earned by the following Transocean fifth (5th) generation DP rigs when they are operating in the USGOM:

1. DISCOVERER ENTERPRISE*
2. DISCOVERER SPIRIT
3. DISCOVERER DEEP SEAS
4. DEEPWATER MILLENIUM
5. CAJUN EXPRESS

6. DEEPWATER PATHFINDER
7. DEEPWATER FRONTIER
8. SEDCO ENERGY
9. SEDCO EXPRESS
10. DEEPWATER EXPEDITION
11. DEEPWATER DISCOVERY

For avoidance of doubt, legacy GlobalSantaFe drilling units (i.e. CR Luigs, GSF Explorer, Jack Ryan, GSF Development Driller I, GSF Development Driller II and GSF Development Driller III) and new build Transocean sixth (6th) generation rigs (e.g. Discoverer Inspiration, Discoverer Clear Leader and Discoverer Americas) shall not be included in the list of "Transocean DP fifth (5th) generation rigs" for the purpose of computing the Market Rate for the Deepwater Horizon.

- Idle rigs or idle time shall not be counted in the Market Rate calculation unless the idle rig is under contract in the USGOM for a contract to begin within the three (3) month period covered by the rate calculation. Then the operating Rate of that contract shall be used. A zero rate shall never be used.

- A rig under USGOM contract which is nevertheless idle for the convenience of the Operator or otherwise shall be included in the rate calculation using the Operating Rate of that contract.

- Transocean legacy rigs contracted in the USGOM but which are outside the USGOM for a period of time shall be counted in the average using their GOM dayrate.

- If there are fewer that four (4) rigs in the list above operating in the USGOM, then the following rigs will be added (when contracted to COMPANY in the USGOM) in the order listed, to bring the total up to four (4) rigs for the calculation***.

  a. DEVELOPMENT DRILLER II**
  b. DEVELOPMENT DRILLER I
  c. GSF JACK RYAN
  d. GSF C.R. LUGIS
  e. OCEAN CONFIDENCE (outfitted to 10,000')***

- If there are fewer than four (4) rigs using the COMPANY contracted rigs on the list above, then the average shall be calculated using three (3) rigs.

- If there are fewer than three (3) rigs in the pool for calculating the average, the dayrate shall stay at the last calculated rate until the pool increases to at least three (3) rigs. COMPANY shall have the right to terminate the CONTRACT by giving ninety (90) days written notice if there are fewer that three (3) rigs in the pool for one (1) continuous year from the first time there were fewer than three (3) rigs available for the pool used in the Market Rate average calculation.

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* The DISCOVERE ENTERPRISE dayrate shall not be included in the average until the commencement of Contract BPM-06-02155, December 11, 2007.

**The DEVELOPMENT DRILLER II dayrate shall not be included in the average until it concludes its initial three (3) year term contract with COMPANY. The Development Driller II shall continue to be excluded from the calculations if any exercised option(s) after the initial three (3) year term limits or caps the dayrate paid during the option period. However, any exercised option period(s) after the initial three (3) year term in which the dayrates are obtained by mutual agreement based on current market rates shall be included in the Market Rate calculation.

*** If COMPANY reimburses Diamond Offshore Company for the 10,000' upgrade on a "lump sum" basis, then the lump sum paid for the upgrade will be divided out over the firm term of the contract to arrive at a daily sum to be added to the Operating Rate for purposes of calculating the Market Rate. If the Ocean Confidence's rate (on any day

the average calculation is made) is set by a stipulated or limited rate in an option attached to its current contract, then its rate shall not be included in the average calculation.

Upon reasonable notification, any given Market Rate calculation shall be subject to audit by third party auditors contracted by COMPANY. Errors in any given Market Rate calculation inconsistent with the above shall be adjusted promptly following the issuance of the relevant audit report.

Except as changed by this Amendment, No. 30, the CONTRACT as previously amended shall remain in full force and effect between the Parties.

IN WITNESS WHEREOF, the authorized representatives of the Parties have executed this Amendment No. 30 in duplicate originals as of the day and year first above written.

BP America Production Company	Transocean Holdings Inc
COMPANY	*CONTRACTOR*
By: /s/ Wilbert Long, Jr.	By: /s/ Jess M. Richards
Wilbert Long, Jr.	Jess M. Richards
Printed Name	*Printed Name*
Title: Head of GoM PSCM	Title: Marketing Manager – North America
Date: 8/10/09	Date: 8/10/09

EXHIBIT A

DAYRATES

	RATES PER 24 HOUR DAY
Operating Rate	$444,165 per day
Moving Rate	$444,165 per day
Standby Rate With Crews	$444,165 per day
Standby Rate Without Crews	$444,165 per day less documented cost savings
Stack Rate With Crews	$444,165 per day less documented cost savings
Stack Rate Without Crews	$444,165 per day less documented cost savings
Equipment Repair Rate	$ -0- Per Day subject to Article 2.2.5(a)
Hurricane Evacuation Rate	Standby Rates Without Crews plus documented expenses of evacuated crew

Average Dayrates Calculation

The rigs used for the calculation of the average dayrates are

Cajun Express
Discoverer Millennium
Discoverer Spirit
Discoverer Deep Seas
Discoverer Enterprise

The table below identifies the dayrates used in the calculation average for the Deepwater Horizon's Operating Rate for the period detailed herein:

Rig	**Actual contracted day rates as calculated on December 14, 2007**
A	$ 462,501
B	$ 447,379
C	$ 497,198
D	$ 293,746
E	$ 520,000
Average Actual Daily Rate	**$ 444,165**

Exhibit F-l: Personnel to be Provided
Deepwater Horizon
Adjusted Labor as of
December 18, 2007

No. of Personnel			A	B	C	D
			GOM Base Labor		GOM Overtime Rates	
On Board	Assigned To Rig	JOB CLASSIFICATION	Daily Rate per person (inc. TT&C & P&I)	Total Daily on Board Cost	Daily Overtime Rates	Hourly Overtime Rates
1	2	OIM	1,293.28	1,157.04	1,107.77	92.31
3	6	Toolpusher	1,073.60	2,812.07	888.09	74.01
2	4	Driller	911.58	1,550.67	865.41	72.12
4	8	Assistant Driller	761.54	2,501.20	686.61	57.22
2	4	Derrickhand	655.02	1,037.54	559.63	46.64
2	4	Pumphand	570.66	932.40	507.77	42.31
8	16	Floorhand	536.73	3,458.17	467.32	38.94
1	2	Maintenance Supervisor	1,074.01	937.76	888.50	74.04
1	2	Mechanical Supervisor	921.31	785.06	735.80	61.32
2	4	Chief Mechanic	823.09	1,373.70	759.97	63.33
2	4	Mechanic	739.84	1,207.20	660.74	55.06
1	2	Senior Motor Operator	589.91	453.67	482.04	40.17
2	4	Motor Operator	589.91	907.34	482.04	40.17
1	2	Electrical Supervisor	921.31	785.06	735.80	61.32
1	2	Chief Electrician	823.09	686.85	759.97	63.33
1	2	Electrician	739.84	603.60	660.74	55.06
1	2	Chief Electronic Technician	823.09	686.85	759,97	63.33
1	2	Electronic Technician	739.84	603.60	660.74	55.06
1	2	Senior Sub Sea Sup Dp	1,024.95	888.71	1,000.57	83.38
1	2	Subsea Supervisor	908.58	772.34	861.87	71.82
1	2	Master	1,128.61	992.37	943.11	78.59
1	2	Chief Mate	923.18	786.93	879.27	73.27
1	2	Bosun	659.36	523.11	564.80	47.07
3	6	AB Seaman	569.48	1,395.05	506.36	42.20
2	4	DP Operator	756.02	1,239.55	680.02	56.67
2	4	Assistant Dp Operator	662.91	1,053.33	569.04	47.42
3	6	Crane Operator	664.09	1,583.54	570.45	47.54
1	2	Deck Pusher	713.41	577.17	629.23	52.44
2	4	Lead Roustabouts	488.99	769.06	410.42	34.20
9	18	Roustabouts	488.99	3,460.77	410.42	34.20
1	2	Welder	637.66	501.41	538.94	44.91
1	2	Senior Materials Coordinator	724.06	587.82	538.56	44.88
1	2	Material Coordinator	627.00	490.76	526.24	43.85
1	2	Medic (RSTT)	640.02	503.78	541.76	45.15
1	2	Radio Operator	562.69	426.45	449.59	37.47
1	2	RSTC	695.65	559.41	510.15	42.51
0	0	Offshore Safety Advisor	692.97	—	548.31	45.69
0	0	—	—	—	—	—
0	0	—	—	—	—	—
0	0	—	—	—	—	—
69	**138**		**Total Labor Costs =**	**$ 39,591.36**		

The figures in column "A" are to be used as the basis for adding personnel to the permanent crew and for determining the credit for crew members short. This includes all Training, Transportation, Catering and Marine P&I costs.

The figures in column "B" are the daily cost of all crew members <u>excluding</u> Training. Transportation, Catering and Marine P&I costs.

The figures in column "C" are the daily cost of overtime <u>excluding</u> Training, Transportation, Catering and Marine P&I costs (assuming a daily schedule of 12 hours)

The figures in column "D" are the hourly cost of overtime <u>excluding</u> Training. Transportation, Catering and Marine P&I costs.

Amendment No. 31
to
Drilling Contract No. 980249

This Amendment is effective as of the 18th day of March 2008, and is issued to BP America Production Company (hereinafter referred to as "COMPANY") with a place of business at 200 Westlake Park Blvd, Houston, Texas 77079.

W I T N E S S E T H:

WHEREAS, COMPANY and Transocean Holdings LLC (hereinafter referred to as "CONTRACTOR") entered into Drilling Contract No. 980249 made and effective the 9th day of December, 1998, for the "Deepwater Horizon" (hereinafter referred to as "CONTRACT"), which has been previously amended; and

WHEREAS, COMPANY and CONTRACTOR desire to set forth a notice as to the current application to dayrates of Amendment 30 of the CONTRACT as more particularly set forth therein;

NOW THEREFORE, CONTRACTOR advises as follows:

The Operating Rate (and, consequently, all other dayrates except the Equipment Repair Rate) specified in **EXHIBIT A, DAYRATES** shall be adjusted as per Article 3 of Amendment No. 30 to the CONTRACT.

Accordingly, CONTRACTOR hereby advises COMPANY that the Operating Rate on the Deepwater Horizon shall be $455,592.00 beginning March 18, 2008 and ending June 17, 2008. Additional rates are set forth in the attached EXHIBIT A along with support information for the average dayrate calculation. These rates are auditable as per Amendment 30 of the CONTRACT.

Except as changed by this Amendment, No. 31, the CONTRACT as amended shall remain in full force and effect between the Parties.

IN WITNESS WHEREOF, the authorized representatives of the Parties have executed this Amendment No. 31 in duplicate originals as of the day and year first above written.

BP America Production Company	Transocean Holdings LLC
COMPANY	*CONTRACTOR*
By: /s/ Wilbert Long, Jr.	By: /s/ Jess M. Richards
Wilbert Long, Jr.	Jess M. Richards
Printed Name	*Printed Name*
Title: Head of GoM PSCM	Title: Marketing Manager – North America

EXHIBIT A

DAYRATES

	RATES PER 24 HOUR DAY
Operating Rate	$455,592 per day
Moving Rate	$455,592 per day
Standby Rate With Crews	$455,592 per day
Standby Rate Without Crews	$455,592 per day less documented cost savings
Stack Rate With Crews	$455,592 per day less documented cost savings
Stack Rate Without Crews	$455,592 per day less documented cost savings
Equipment Repair Rate	$ -0- Per Day subject to Article 2.2.5(a)
Hurricane Evacuation Rate	Standby Rates Without Crews plus documented expenses of evacuated crew

Average Dayrates Calculation

The rigs used for the calculation of the average dayrates are

Cajun Express
Discoverer Millennium
Discoverer Spirit
Discoverer Deep Seas
Discoverer Enterprise

The table below identifies the dayrates used in the calculation average for the Deepwater Horizon's Operating Rate for the period detailed herein:

Rig		Actual contracted day rates as calculated on March 14, 2008
A	$	478,238
B	$	447,379
C	$	497,198
D	$	335,146
E	$	520,000
Average Actual Daily Rate	$	**455,592**

Amendment No. 38
to
Drilling Contract No. 980249

This Amendment is made and effective on this 28th day of September 2009 by and between BP America Production Company (hereinafter referred to as "COMPANY") with a place of business at 501 Westlake Park Blvd., Houston, Texas 77079, and Transocean Holdings LLC. (hereinafter referred to as "CONTRACTOR") with a place of business at 1311 Broadfield Blvd., Houston, Texas 77084. COMPANY and CONTRACTOR may sometimes be referred to herein individually as a "Party" and collectively as the "Parties".

W I T N E S S E T H:

WHEREAS, by Contract No. 980249 made and effective the 9th December 1998, COMPANY and CONTRACTOR entered into that certain contract for the provision of the Drilling Unit "Deepwater Horizon" and related service, as previously amended by Amendments No. 1 through No. 37 (hereinafter referred to as "Contract"); and

WHEREAS, COMPANY and CONTRACTOR desire to further amend the Contract as more particularly set forth herein.

NOW THEREFORE, for and in consideration of the mutual covenants and agreements hereinafter provided, COMPANY and CONTRACTOR agree to amend the Contract as follows:

1. The Parties agree to extend the term of the Contract for an additional three (3) years commencing from 12:01 a.m. local time on September 18, 2010, which date may sometimes be referred to herein as the "Renewal Date".

2. The Parties agree that with effect from the Renewal Date, the dayrates identified in Exhibit "A", Dayrates, shall be revised as follows:

Operating Rate	***US$497,000.00/day***
Moving Rate	***US$497,000.00/day***
Standby Rate With Crews	***US$497,000.00/day***
Standby Rate Without Crews	***US$497,000.00/day less documented cost savings***
Stack Rate With Crews	***US$497,000.00/day less documented cost savings***
Stack Rate Without Crews	***US$497,000.00/day less documented cost savings***
Equipment Repair Rate	***US$497,000.00/day subject to Article 2.2.5(A)***
Hurricane Evacuation Rate	***Standby Rate Without Crews plus documented expenses of evacuation***

3. The Parties agree that the dayrates specified above will be adjusted in accordance with the adjustment provisions of Article 2.3.2 of the Contract on the first anniversary of the Renewal Date in respect of the second year of the extended term described in Paragraph 1 above and on the second anniversary of the Renewal Date in respect of the third year of the extended term described in Paragraph 1 above. The cost components specified in sub-paragraphs a-d of Article 2.3.2 from which any revisions are to be based shall be base lined to figures supplied by CONTRACTOR to COMPANY and reflect CONTRACTOR's cost on the Renewal Date and are to be agreed by the PARTIES within ninety (90) days after the Renewal Date.

4. With effect from the Renewal Date, existing Articles 21, 22, 23, 24, 25 and 34 of the Contract are to be deleted and replaced with the following:

ARTICLE 21

LIABILITIES AND INDEMNITIES

21.0 As used in this Article 21, the following defined terms shall have the meaning ascribed to them below:

"AFFILIATE" of a company shall mean a current or future person or entity directly or indirectly controlling, controlled by, or under common control with such company. "Control" in this context, in the case of a corporation with outstanding voting stock, shall mean the direct or indirect ownership of a power to vote with respect to outstanding shares of a corporation's capital stock constituting 50% or more of the votes of any class of such corporation's outstanding voting stock.

"CLAIMS" means all claims, liens, liabilities, fines, penalties, judgments, losses, damages, and expenses (including without limitation legal costs and expenses and other costs of defence), and shall, except as otherwise expressly provided, include claims based on contractual indemnity.

"COMPANY GROUP" shall mean COMPANY, the CO-VENTURERS, its and their respective AFFILIATES and its and their respective directors, officers, invitees and employees (including agency personnel), but shall not include any member of CONTRACTOR GROUP.

"COMPANY'S MATERIALS" shall mean the equipment, materials, services and supplies to be provided directly or indirectly by COMPANY.

"CONTRACT AREA" shall mean the area in which the WORK is to be performed as set out in Article 14.7.

"CONTRACTOR'S EQUIPMENT" shall mean the DRILLING UNIT together with the DRILLING EQUIPMENT necessary for the performance of the WORK as listed in Exhibit B – CONTRACTOR EQUIPMENT.

"CONTRACTOR GROUP" shall mean CONTRACTOR, SUB-CONTRACTORS, its and their AFFILIATES, its and their respective directors, officers, invitees and employees (including agency personnel), but shall not include any member of COMPANY GROUP or SERVICE COMPANY GROUP provided that if any member of SERVICE COMPANY GROUP is also a SUB-CONTRACTOR it shall be considered, with respect to services performed for CONTRACTOR, to fall within the CONTRACTOR GROUP notwithstanding the definition of SERVICE COMPANY GROUP.

"CONTRACTOR'S PERSONNEL" or "PERSONNEL" shall mean CONTRACTOR'S labour and supervisory personnel engaged in the performance of the WORK, as listed in Exhibit F-1, whether directly employed or indirectly employed through a SUBCONTRACTOR.

"CO-VENTURERS" as applied to COMPANY shall mean any parties to a joint venture agreement whereby COMPANY undertakes to act as operator for such CO-VENTURERS within the CONTRACT AREA in which CONTRACTOR may be required to perform the WORK.

"DEMOBILISATION" shall mean those activities associated with closing down CONTRACT activities in the CONTRACT AREA and moving the DRILLING UNIT off the final location to another location, as may be agreed between the PARTIES, which, upon

completion, shall cause the CONTRACT scope to have been completed.

"DRILLING EQUIPMENT" shall mean the drilling and other drilling related equipment supplied with the DRILLING UNIT as listed in Exhibit BI – Drilling Unit Specifications, Exhibit B2 – Material Equipment List, and any material or supplies to be furnished by CONTRACTOR in Exhibit B-3 – Material, Supplies and Services.

"DRILLING UNIT" shall mean the named vessel Transocean Deepwater Horizon, formerly known as the RBS8D.

"PARTY" shall mean individually COMPANY or CONTRACTOR and collectively referred to as "PARTIES".

"SERVICE COMPANY" or "SERVICE COMPANIES" shall mean those other companies and persons (including their servants and agents) hired by COMPANY and providing miscellaneous services in conjunction with the WORK.

"SERVICE COMPANY GROUP" shall mean any SERVICE COMPANY, its sub-contractors of any tier, its and their AFFILIATES, and its and their respective directors, officers, invitees and employees (including agency personnel), but shall not include any member of COMPANY GROUP or CONTRACTOR GROUP.

"SUB-CONTRACTOR" shall mean any company contracted or hired by CONTRACTOR of any tier for the provision of any services in conjunction with the WORK.

"SUB-SEA EQUIPMENT" shall mean CONTRACTOR GROUP's sub-sea and mooring equipment including but not limited to riser, slip joints, control hoses, blowout preventers, anchors, anchor winches, anchor wires and chains, tripping lines and buoys, flex joints, control pods, tensioners and attendant components.

"THIRD PARTY" shall mean any party, excluding any member of the COMPANY GROUP or any member of the CONTRACTOR GROUP.

"WELL" shall mean a single hole drilled or to be drilled to a pre-defined spatial target located within the CONTRACT AREA, and shall include any remedial deviations or sidetracking required to reach the target. Any action taken to achieve a second spatial target, or after reaching the pre-defined spatial target any re-spudding or side tracking shall be considered a new WELL.

"WORK" shall mean the provision of equipment, personnel and services by CONTRACTOR as specified in the CONTRACT.

21.1 CONTRACTOR'S EQUIPMENT

(a) CONTRACTOR shall release, defend, indemnify and hold COMPANY GROUP and SERVICE COMPANY GROUP harmless from and against any and all CLAIMS for loss, damage or destruction of CONTRACTOR'S EQUIPMENT, excepting only damage to or loss of:

i) CONTRACTOR'S in-hole DRILLING EQUIPMENT when in the hole as stated in Sub-article 21.1 (b).

ii) The SUB-SEA EQUIPMENT as stated in Sub-article 21.1 (c).

Notwithstanding the foregoing, COMPANY shall not be liable to reimburse CONTRACTOR for the loss of or damage to CONTRACTOR's in-hole DRILLING EQUIPMENT and SUB-SEA EQUIPMENT if such loss or damage is due to the sole negligence and/or sole default of CONTRACTOR GROUP and/or a defect in CONTRACTORS EQUIPMENT caused by CONTRACTOR GROUP's negligence.

(b) In-hole DRILLING EQUIPMENT

(i) COMPANY shall reimburse CONTRACTOR for the cost of repair or replacement for loss of or damage (including damage as a result of corrosive properties induced by drilling or completion fluids or geological formation fluids) to its in-hole DRILLING EQUIPMENT while in the hole, less an allowance for depreciation (including, but not limited to drill pipe, drill collars, stabilizers, and subs). The discounted replacement cost factor shall be a percentage of the actual replacement costs, as set out below. Notwithstanding the foregoing COMPANY'S liability in respect of such lost in-hole DRILLING EQUIPMENT shall be limited to US$ 2,500,000 per event.

For the purpose of assessing the discounted depreciated cost for the lost in-hole materials, CONTRACTOR shall use the formula and factors as follows:

Discounted Replacement Cost is equal to:

[(DR% X Replacement Cost) X (100% - Depreciation Allowance)] + shipping & handling

Where:

	DRILL PIPE (DP)		OTHER IN-HOLE	
Inspection Criteria	**DS1-Cat5**	**Other than DS1-CAT5**	**DS1-Cat5/ Other than DS1-CAT5**	**SUB-SEA EQUIPMENT N/A**
Start		*COMMENCEMENT DATE*		
Start Factor (DR)	*100%*	*90%*	*100% (Cat 5)/ 90% (Other)**	*100%*
Depreciation Factor (F)	*2%*	*2%*	*1%*	*1%*
Max. Depreciation		*50%*		*50%*
Cap		*$2.5M*		*$10M*

(DR): Discounted replacement cost factor or start factor as set out in the above table. Select the DR from the column to which standard the equipment (Other than Sub-Sea Equipment) has been inspected.

** if the subject equipment was inspected to Cat 5 inspection then 100% applies and 90% applies if inspected to a lesser standard.*

(F): Depreciation Factor is the monthly depreciation percentage from the tables above.

Depreciation Allowance shall mean:

F x Number of MONTHS from the COMMENCEMENT DATE. The Depreciation Allowance shall not exceed the maximum depreciation set out in the foregoing table.

Shipping and handling costs are from CONTRACTOR'S yard or vendor stocking location to the DRILLING UNIT.

(ii) It is further agreed that in the event of any loss covered under this Sub-article 21.1 (b), COMPANY may, at its option, obtain a cost estimate for replacement

of the lost item. Prior to replacement of the item, CONTRACTOR shall submit to COMPANY at least two formal cost quotes (reflecting a detailed description of equipment, price, vendors, vendor representative names, date of quotes, delivery timing, etc.) for the replacement of the lost item. Should COMPANY be able to obtain such replacement of equipment of equal quality at a lesser cost than that which would be paid by the CONTRACTOR, then the CONTRACTOR will have the option of replacing the material at the lesser cost or asking COMPANY to purchase it. Regardless of whether COMPANY or CONTRACTOR actually purchases the replacement material, credit for the percentage depreciation stipulated above will be calculated in accordance with this provision of the CONTRACT; however, the basis for depreciation shall be the lower of the actual price paid by COMPANY for said material or the price actually paid by CONTRACTOR for said material, as applicable.

(c) SUB-SEA EQUIPMENT

COMPANY shall release, defend, indemnify and hold harmless CONTRACTOR GROUP from all CLAIMS for damage to or loss of CONTRACTOR'S SUB-SEA EQUIPMENT while deployed in its normal operating position and shall reimburse CONTRACTOR an amount equal to the then current replacement costs delivered to the DRILLING UNIT, or the repair cost, whichever is the lesser amount, subject to the formula set forth in Sub-article 21.1(b)(i). Notwithstanding the foregoing COMPANY'S liability in respect of such replacement SUB-SEA EQUIPMENT shall be limited to US$10,000,000 per event.

21.2 COMPANY's MATERIALS

(a) CONTRACTOR shall take all reasonable precautions (including but not limited to the making out of loading notes) to protect and save from loss or damage items of COMPANY'S MATERIALS while in the custody and care of CONTRACTOR. Subject to Sub-article 21.2(b) below when no longer required for the WORK CONTRACTOR shall return surplus COMPANY's MATERIALS to COMPANY, in the same condition as when handed to CONTRACTOR fair wear and tear excepted.

(b) CONTRACTOR shall not be liable to COMPANY for any loss of or damage to items of COMPANY'S MATERIALS except where caused by the negligence of CONTRACTOR GROUP. However, CONTRACTOR'S liability hereunder shall be limited to US$ 25,000 (twenty-five thousand US dollars) per occurrence.

21.3 Personnel and Property

(a) Except as provided for under the provisions of Sub-article 21.5 (b) (i), COMPANY shall release, defend, indemnify and hold CONTRACTOR GROUP harmless from and against any and all liability for sickness, injury or death of any THIRD PARTY or the loss of or damage to any THIRD PARTY property and against all CLAIMS resulting therefrom to the extent of any negligent act or default on the part of COMPANY GROUP in the performance of any of COMPANY's obligations hereunder.

(b) Except as provided for under the provisions of Sub-articles 21.5(a), 21.5 (b)(ii), (iii) and (iv) CONTRACTOR shall release, defend, indemnify and hold COMPANY GROUP and subject to the provisions of Article 21.11, SERVICE COMPANY GROUP, harmless from and against any and all liability for sickness, injury or death of any THIRD PARTY or the loss of or damage to any THIRD PARTY property and against all CLAIMS resulting therefrom, to the extent of any negligent act or default on the part of CONTRACTOR GROUP in the performance of any of CONTRACTOR's obligations hereunder.

(c) Except as provided for under the provisions of Sub-article 21.2 (b), COMPANY shall release, defend, indemnify and hold CONTRACTOR GROUP harmless from and against any and all liability for loss of or damage to COMPANY GROUP property (including COMPANY's MATERIALS) and/or the property belonging to, or in the possession of COMPANY GROUP personnel and against any and all liability for sickness, injury, or death to any of COMPANY GROUP personnel arising out of the CONTRACT or in tort and against all CLAIMS resulting therefrom.

(d) Except as provided for under the provisions of Sub-articles 21.1 (b) and (c) CONTRACTOR shall release, defend, indemnify and hold COMPANY GROUP and SERVICE COMPANY GROUP harmless from and against any and all liability for loss of or damage to CONTRACTOR GROUP property and/or the property belonging to, or in the possession of CONTRACTOR GROUP personnel and against any and all liability for sickness, injury or death to any of CONTRACTOR GROUP personnel arising out of the CONTRACT or in tort and against all CLAIMS resulting therefrom.

21.4 Loss of or Damage to the Hole

COMPANY shall release, defend, indemnify, and hold CONTRACTOR GROUP harmless from and against any and all liability for loss of, damage to, or destruction of the hole (including well equipment) and against all CLAIMS arising therefrom, provided that in the event of CONTRACTOR GROUP'S sole negligence, COMPANY may instruct CONTRACTOR, as its sole remedy, either to drill a new hole to the depth at which the said loss or damage occurred or to re-drill such section of the damaged hole in both instances at the RE-DRILLING RATE and in accordance with the terms of the CONTRACT.

21.5 Underground Damage and Control of Blowout and Pollution

(a) Reservoir Damage

COMPANY shall release, defend, indemnify and hold CONTRACTOR GROUP harmless against any damage to or destruction of or loss or impairment of any property right in or to oil, gas or other mineral substance or water if at the time of the act or omission causing such damage, destruction, loss or impairment the said substance had not been reduced to physical possession above the surface of the sea-bed, and for any loss or damage to any formation strata or reservoir beneath the seabed resulting from operations under the CONTRACT.

(b) Pollution

(i) CONTRACTOR property

CONTRACTOR shall assume all responsibility for, including control, clean-up and removal of and shall release, defend, indemnify and hold harmless COMPANY GROUP and, subject to the provisions of Sub-article 21.11, the SERVICE COMPANY GROUP, from all CLAIMS, howsoever caused and arising for pollution or contamination originating from the DRILLING UNIT from, by way of example, spills of fuels, lubricants, motor oils, pipe dope, paints, solvents, ballast, bilge and garbage. For the avoidance of doubt such pollution or contaminants shall exclude any WELL substances, produced fluids, or substances in the riser or drillstring. It shall include any drilling fluids and other such contaminants stored on the DRILLING UNIT prior to use, wholly in CONTRACTOR'S or its SUB-CONTRACTOR'S possession, care or control.

(ii) Blow-out, cratering, seepage or uncontrolled release of hydrocarbons

Except as provided for under the provisions of Sub-article 21.5 (b) (i) but subject always to Sub-article 21.5 (b) (iv), COMPANY shall assume all responsibility for, including control, clean-up and removal of and shall release, defend, indemnify and hold harmless CONTRACTOR GROUP from all CLAIMS, howsoever caused and arising in relation to pollution or contamination which may result from fire, blow-out, cratering, seepage, or any other uncontrolled flow of oil, gas, wastes or other substance from any WELL arising out of the CONTRACT.

(iii) Drilling fluids and chemicals

Except as provided for under the provisions of Sub-article 21.5 (b) (i) and (iv), COMPANY shall further assume all responsibility for, including clean-up and removal, of any pollution or contamination arising from the use or disposal of oil emulsion, oil based or chemically treated drilling fluids, produced fluids, contaminated cuttings and cavings, lost circulation materials and fluids as well as the furnishing, transportation and disposal or containerisation of any materials and shall release, defend, indemnify and hold CONTRACTOR GROUP harmless from, all CLAIMS, howsoever arising in respect of such pollution or contamination including control, clean-up and removal operations.

(iv) In the event of pollution or contamination as contemplated in Sub-article 21.5 b) ii) and/or Sub-article 21.5 b) iii) whereby COMPANY incurs a liability in respect of the sickness, injury or death of a THIRD PARTY or the loss of, or damage to, any THIRD PARTY property as a result of CONTRACTOR'S negligence, then CONTRACTOR shall reimburse COMPANY to the extent of CONTRACTOR's negligence in respect of all such losses or damages incurred by COMPANY up to a maximum aggregate limit of liability of US$10,000,000).

(v) CONTRACTOR shall immediately notify COMPANY of all instances of pollution arising out of operations hereunder and confirm such notification in writing or by telefax or e-mail to COMPANY within 24 hours of the event.

(c) Blowout and cratering

In the event that any WELL shall blowout or crater from any cause, including, but not limited to, the negligence or breach of duty (statutory, contractual or otherwise) of the CONTRACTOR GROUP, COMPANY shall be responsible for and release, indemnify and hold harmless CONTRACTOR GROUP for all CLAIMS resulting therefrom, and shall bear the entire cost and expense of, killing the WELL or otherwise bringing the WELL under control.

This assumption of liability by COMPANY applies only to the cost of bringing the well under control and does not apply to loss or damage to property or injuries to or death of persons caused by such blow-out or crater and shall in no event alter, lessen or affect the liabilities or responsibilities of CONTRACTOR or COMPANY specified elsewhere in the CONTRACT.

21.6 Sunken Property

When required by AUTHORITY or when CONTRACTOR'S sunken property interferes with present or currently planned operations of COMPANY as may be advised by COMPANY in writing, CONTRACTOR shall at its own expense raise and remove the DRILLING UNIT and any property of CONTRACTOR or its SUB- CONTRACTORS which may sink in the course of operations hereunder. In the event that CONTRACTOR does not carry out these obligations, COMPANY may buoy and light the sunken DRILLING UNIT or property

and may remove it (without prejudice to COMPANY'S rights) and in such event CONTRACTOR shall refund to COMPANY all costs so incurred. The fact that the sunken DRILLING UNIT or property is insured or has been declared a total loss shall not absolve CONTRACTOR from its obligations to raise and/or remove same. This Article shall remain binding on CONTRACTOR notwithstanding the termination of the CONTRACT for any reason.

The obligations of CONTRACTOR as provided for in Sub-article 21.6 shall cease when the DRILLING UNIT comes under tight tow at the final LOCATION prior to DEMOBILISATION except where COMPANY has previously provided written notice to CONTRACTOR that there is sunken property of CONTRACTOR or CONTRACTOR GROUP that must be removed in accordance with the terms of this CONTRACT.

21.7 Consequential Loss

Notwithstanding any provisions to the contrary elsewhere in the CONTRACT (but without prejudice to Articles 21.1 through 21.6), and except to the extent of any agreed liquidated damages or any termination fees provided for in the CONTRACT, COMPANY shall save, indemnify, release, defend and hold harmless CONTRACTOR GROUP from COMPANY GROUP'S own Consequential Loss and CONTRACTOR shall save, indemnify, release, defend and hold harmless COMPANY GROUP, and SERVICE COMPANY GROUP from CONTRACTOR GROUP's own Consequential Loss, CONTRACTOR's obligation with respect to SERVICE COMPANY GROUP shall be subject to the provisions of Sub-article 21.10.

For the purposes of this Sub-article 21.7 the expression "Consequential Loss" shall mean any indirect or consequential loss howsoever caused or arising whether under contract, by virtue of any fiduciary duty, in tort or delict (including negligence), as a consequence of breach of any duty (statutory or otherwise) or under any other legal doctrine or principle whatsoever whether or not recoverable at common law or in equity.

Without prejudice to the foregoing, "Consequential Loss" shall be deemed to include, also, the following losses, whether direct or indirect or consequential:

(a) loss or damage arising out of any delay, postponement, interruption or loss of production, any inability to produce, deliver or process hydrocarbons;

(b) loss or damage incurred or liquidated or pre-estimated damages of any kind whatsoever borne or payable, under any contract for the sale, exchange, transportation, processing, storage or other disposal of hydrocarbons;

(c) losses associated with business interruption including the cost of overheads incurred during business interruption;

(d) or any loss of or anticipated loss of use, profit or revenue, or loss of bargain, contract, expectation or opportunity (which for the avoidance of doubt shall not include payments due to CONTRACTOR by way of remuneration under this CONTRACT or damages of CONTRACTOR for the loss of this CONTRACT or any profit, revenue, expectation or opportunity thereunder); and

(e) COMPANY GROUP's spread costs, such as hire or other charges payable to owners of vessels or equipment and the costs of keeping the COMPANY GROUP's vessels and equipment and SERVICE COMPANY GROUP equipment and personnel on location or other similar costs; and

(f) any other loss or anticipated loss or damage whatsoever in the nature of or consequential upon the foregoing.

21.8 Indemnities in their Entirety

It is the PARTIES intention that the release, defense, indemnity and hold harmless obligations provided for in this CONTRACT are to apply:

a) without regard to any conflicting rules of liability under any applicable law or regulation,

b) without regard to any successful limitation or exoneration of liability proceeding filed by or on behalf of either PARTY or any other person or entity pursuant to the laws of any state or country or the provisions of any international convention, and

c) whether or not the CLAIM is: (1) predicated on negligence, breach of duty (statutory or otherwise) or strict liability (except as expressly set out in Sub-articles 21,1, 21.2 b), 21.3 a), 21.3 b), 21.4 and 21.5 b) iv)), or (ii) sought directly or indirectly by way of recovery, indemnification, or contribution by any person or entity against either PARTY (or any person or entity to whom indemnity is owed).

The release, defense, indemnity and hold harmless obligations as provided in the CONTRACT shall apply whether or not any injury, death, illness, loss or damage is occasioned by or the result in whole or in part of the negligence or fault, whether sole, concurrent, gross, joint, active, or passive, of either PARTY (or any person or entity to whom indemnity is owed), breach of contract, any theory of tort, strict liability, breach of duty (statutory, expressed, implied or otherwise provided in law or equity), breach of warranty (expressed or implied), or WILFUL MISCONDUCT, products liability or any other theory of liability, or the unseaworthiness of any vessel or unairworthiness of any aircraft, or is the result of any pre-existing condition or other premises liability (patent or latent, known or unknown),, and shall include, without limitation, any injury, death, illness, loss or damage directly or indirectly arising out or related to ingress, egress, loading or unloading or the presence of any covered person at or on or in transit to or from the CONTRACT AREA or any facility, platform, rig, vessel, aircraft or other premises owned, leased, used, or chartered by CONTRACTOR GROUP, SERVICE COMPANY GROUP or COMPANY GROUP directly or indirectly connected with any WORK under this CONTRACT within the CONTRACT AREA.

"WILFUL MISCONDUCT" shall mean an intentional disregard of good and prudent standards of performance.

21.9 Claims

If either PARTY becomes aware of any incident likely to give rise to a CLAIM under the above indemnities, they shall notify the other and both parties shall co-operate fully in investigating the incident.

21.10 The releases of liability, indemnities, defence, save and hold harmless provisions furnished by CONTRACTOR in Article 21, and the releases of liability, indemnities, defence, save and hold harmless provisions given by SERVICE COMPANY in COMPANY contracts shall apply:

(a) save as provided below for the benefit of the SERVICE COMPANY GROUP in the case of the releases of liability and indemnities, defence, save and hold harmless provisions furnished by CONTRACTOR; and,

(b) for the benefit of CONTRACTOR GROUP in the case of the releases of liability and indemnities, defence, save and hold harmless provisions given by the SERVICE COMPANY in COMPANY contracts.

The releases of liability, indemnities, defence, save and hold harmless provisions given by CONTRACTOR in this ARTICLE 21 in favour of SERVICE COMPANY GROUP shall be

provided by CONTRACTOR on the express understanding that they shall only apply in favour of such SERVICE COMPANIES who have provided substantially similar and reciprocal releases of liability, indemnities, defence, *save and hold harmless provisions in favour of CONTRACTOR GROUP in their respective contracts with COMPANY. The releases of liability, indemnities, defence, save and hold harmless provisions provided by CONTRACTOR in this Article 21 in favour of SERVICE COMPANY GROUP shall become effective from such time and for such duration as such SERVICE COMPANIES become bound by substantially similar reciprocal releases of liability, indemnities, defence, save and hold harmless provisions in favour of CONTRACTOR GROUP in their respective contracts with COMPANY.*

In fulfilment of this objective, COMPANY shall use commercially reasonable endeavours to ensure that in its respective contracts with SERVICE COMPANIES, the releases of liability, indemnities, defence, save and hold harmless provisions contained in such contracts in favour of CONTRACTOR GROUP shall be substantially similar and reciprocal to the releases of liability, indemnities, defence, save and hold harmless provisions given by CONTRACTOR in this Article 21 in favour of SERVICE COMPANY GROUP.

In the event that COMPANY is unable to fully fulfil the foregoing objective, then without delay, and in any event prior to permitting such SERVICE COMPANY to travel to the DRILLING UNIT, COMPANY shall notify CONTRACTOR in writing with details of the additional risk being assumed by CONTRACTOR, as soon as is reasonably practicable thereafter and the PARTIES further undertake to meet to discuss ways of minimising the impact of such a notification within the overall requirements of the CONTRACT. Failure by COMPANY to issue such written notification as required herein will constitute a material breach of the terms of the CONTRACT.

In the event that COMPANY advises CONTRACTOR that one or more SERVICE COMPANIES have declined to provide substantially similar releases of liability, indemnities, defence, save and hold harmless provisions in favour of CONTRACTOR GROUP in their respective contracts with COMPANY, the PARTIES shall meet to discuss and agree ways of minimising the impact of such additional risks as may be identified by either PARTY which may include: alternative working practices or arrangements to minimise the impact of such risks; a separate mutual hold harmless agreement applicable at the LOCATION or additional compensation to enable CONTRACTOR to insure against such additional risks.

The failure of any SERVICE COMPANY to provide substantially similar releases of liability, indemnities, defence, save and hold harmless provisions in favour of CONTRACTOR GROUP in their respective contracts with COMPANY or agree a risk mitigation plan to the satisfaction of CONTRACTOR as provided for herein shall entitle CONTRACTOR to refuse access to the DRILLING UNIT for all such SERVICE COMPANIES and CONTRACTOR shall not be penalised in any fashion by COMPANY.

21.11 Notwithstanding Sub-article 21.10, the failure of one or more SERVICE COMPANIES to provide substantially similar releases of liability, indemnities, defence, save and hold harmless provisions in favour of CONTRACTOR GROUP in its respective contracts with COMPANY as envisaged herein shall cause such SERVICE COMPANIES to be considered a THIRD PARTY for the purposes of this CONTRACT.

ARTICLE 22 NOT USED

ARTICLE 23 NOT USED

ARTICLE 24 NOT USED

ARTICLE 25 NOT USED

ARTICLE 34 NOT USED

5. With effect from the Renewal Date, the following new Articles 36 and 37 (together with Attachment 1 referenced in Article 36), are to be inserted as follows:

ARTICLE 36

BUSINESS ETHICS

COMPANY wishes to make it clear that it intends its business dealings to be characterised by honesty and freedom from deception and fraud and that it finds unethical behaviour unacceptable. Practices that COMPANY considers dishonest, unethical or unacceptable are listed in Attachment 1 – CODE OF CONDUCT and are set out in further detail in the document entitled "Our commitment to integrity" (hereafter referred to as the "BP Code of Conduct") a copy of which may be obtained using the web link highlighted in Attachment 1 - CODE OF CONDUCT. CONTRACTOR shall review the BP Code of Conduct. In connection with the performance of this CONTRACT, CONTRACTOR undertakes and agrees to act consistently with the principles of the BP Code of Conduct and refrain from practices that COMPANY considers dishonest, unethical or unacceptable, as set out in Attachment 1- CODE OF CONDUCT.

ARTICLE 37

ANTI-CORRUPTION UNDERTAKINGS

37.0 "COUNTRY OF OPERATIONS" shall mean the country in which the WORK is to be performed as set out in CONTRACT SCHEDULE. COUNTRY OF OPERATIONS shall encompass the CONTRACT AREA.

37.1 CONTRACTOR and COMPANY each agree and undertake to the other that in connection with this CONTRACT and the transactions contemplated by this CONTRACT, they will each respectively comply with all applicable laws, rules, regulations, decrees and/or official governmental orders of the United Kingdom, the United States of America and the COUNTRY OF OPERATIONS relating to anti-bribery and anti-money laundering.

37.2 CONTRACTOR agrees, undertakes and confirms that, in connection with the transactions contemplated by this CONTRACT, it and each of its AFFILATES and its and their respective directors, officers, employees and persons acting within their scope of authority on behalf of them, have not, made, offered or promised to make, and will not make, offer, or promise to make, any payment or other transfer of anything of value, including without limitation the provision of any service, gift or entertainment, directly or indirectly

(a) to any government official (including directors, officers and employees of government-owned and government-controlled companies and public international organizations);

(b) to any director, officer or employee of COMPANY or its CO-VENTURERS or any of its or their AFFILIATES;

(c) to any political party, official of a political party, or candidate for public office;

(d) to an agent or intermediary for payment to any of the foregoing; or

(e) to any other person or entity

for the purpose of obtaining or influencing the award of or carrying out this CONTRACT if and to the extent that to do so is or would be either, in violation of or inconsistent, in any material way, with the anti-bribery or anti-money laundering laws of any relevant jurisdiction, including, without limitation, the U.S. Foreign Corrupt Practices Act, the U.K. Anti-Terrorism, Crime and Security Act 2001 and successor legislation, the applicable country legislation implementing the OECD Convention on Combating Bribery of Foreign Public Officials in International Business Transactions and/or the anti-corruption laws of the COUNTRY OF OPERATIONS.

For the purposes of this Article 37, the term "government official" shall mean any director, officer or employee of any government or any department, agency or instrumentality thereof, and/or of any enterprise in which a *government owns an interest, and/or of any public international organization. This term also includes any person acting in any official, administrative or judicial capacity for or on behalf of any such government or department, agency, instrumentality, COMPANY, or public international organization.*

37.3 CONTRACTOR agrees and undertakes that in connection with this CONTRACT and in connection with any other business transactions involving COMPANY GROUP and CONTRACTOR in the COUNTRY OF OPERATIONS, CONTRACTOR and each of its Affiliates shall:

a) have and will apply effective disclosure controls and procedures; and

b) have and will maintain books, records, and accounts which, in reasonable detail, accurately and fairly reflect the transactions undertaken and the disposition of assets; and

c) have and will maintain an internal accounting controls system that is sufficient to ensure the proper authorization, recording and reporting of all transactions and to provide reasonable assurance that violations of the anticorruption laws of the applicable jurisdictions will be prevented, detected and deterred.

37.4 In the event that COMPANY has any reasonable basis for a good faith belief that CONTRACTOR and/or any of its Affiliates may not be in compliance, in any material way with the undertakings and/or requirements set forth in Sub-articles 37.1, 37.2 and/or 37.3, then COMPANY shall advise CONTRACTOR in writing within fourteen (14) days of it first becoming aware of such a possibility, and CONTRACTOR shall thereafter cooperate fully with any and all enquiries undertaken by or on behalf of COMPANY in connection therewith, including the provision by CONTRACTOR of personnel and supporting documents and affidavits if reasonably deemed necessary by COMPANY.

37.5 COMPANY shall have the right to terminate this CONTRACT with immediate effect:

(a) with respect to breach or non-fulfillment of CONTRACTOR'S agreements, duties and undertakings in Sub-article 37.2; or

(b) with respect to a material breach by CONTRACTOR in connection with the CONTRACT in the performance of its obligations set out in Sub-Articles 37.1 and 37.3 which results in a material adverse effect on COMPANY;

provided however, that COMPANY shall have provided CONTRACTOR with written notice of its intention to terminate the CONTRACT under the provisions of this Article 37 together with the reasons therefore and that CONTRACTOR has been unable within thirty (30) business days of delivery of such notice to *provide COMPANY with evidence which reasonably demonstrates that CONTRACTOR has not failed to comply with or*

fulfill any of the foregoing agreements, undertakings or requirements. Termination shall, except as provided in this Sub-article 37.5, represent COMPANY's sole and exclusive right of recourse against CONTRACTOR, whether under this CONTRACT or otherwise at law

Notwithstanding termination of this CONTRACT pursuant to this Sub-article 37.5, CONTRACTOR agrees to indemnify and hold harmless COMPANY and its affiliates and their respective officers, directors and employees, from the cost of any fines assessed by any AUTHORITY on such persons or entities as a result of any breach by CONTRACTOR of the provisions of Sub-articles 37.1 to 37.5 and 37.8.

37.6 In the event of termination in accordance with the provisions of this Article 37, COMPANY shall make payment to CONTRACTOR for the WORK performed up to the time at which COMPANY terminated the CONTRACT and such other payments as may be due in respect of such termination as described in Exhibit A – DAYRATES.

37.7 Any dispute arising hereunder as the result of COMPANY exercising its rights under Sub-article 37.5 hereof shall be settled in accordance with the provisions of Article 35.4 – ARBITRATION.

37.8 CONTRACTOR shall endeavour that the foregoing provisions (or substantially equivalent provisions) are included in all its sub-contracts entered into for the purpose of conducting the WORK hereunder.

6. With effect from the Renewal Date, delete the existing text of Exhibit D and insert new Exhibit D, HSSE Requirements, incorporating the attached terms marked as "Exhibit D".

7. With effect from the Renewal Date, delete the existing text of Exhibit B-2 and insert new Exhibit B-2, material equipment list, incorporating the attached terms marked as "Exhibit B-2". The Parties expressly agree that the following items are owned by CONTRACTOR, are dedicated to the DRILLING UNIT and will be available at COMPANY's request, and once deployed to the DRILLING UNIT shall form a part of CONTRACTOR's EQUIPMENT, but any costs associated with maintenance, inspection and replacement of said items, which will be incurred at COMPANY's sole discretion, shall be borne by COMPANY, notwithstanding any provision of the contract to the contrary:

   14,000 feet of 6-5/8" drill pipe 32.6 ppf S-135 FH R3
   4,000 feet of 6-5/8" drill pipe 40 ppf S-135 FH R3
   8,000 feet of 5" drill pipe 19.5 ppf S-135 4½" IF R3

8. With effect from the Effective Date, delete the existing text of Exhibit F-1 and insert new Exhibit F-1, PERSONNEL, incorporating the attached terms marked as "Exhibit F-1". The Parties expressly acknowledge that the adoption of the replacement Exhibit F-1 by this Amendment No. 38 is without prejudice to the rights of the Parties under the Contract, including without limitation COMPANY's rights under Letter of Agreement dated April 19, 2004, Subject: Contract Extension Agreement ("AGREEMENT") Contractor-5121-2002-011. The Parties further agree that the adoption of the replacement Exhibit F-1 by this Amendment No. 38 shall serve to extinguish the rights and obligations of the Parties pursuant to the Letter of Agreement dated February 20, 2005, Reference No. "CONTRACTOR 5121 — 2002 — 011" in respect of the furnishing of two (2) additional Deck Pushers.

Except as expressly changed by this Amendment No. 38, the Contract shall remain in full force and effect.

IN WITNESS WHEREOF, the authorized representatives of the Parties hereto have executed this Amendment No. 38 in duplicate originals as of the date and year first above written.

BP AMERICA PRODUCTION COMPANY
COMPANY

By: /s/ Wilbert Long Jr.
Wilbert Long Jr.
Printed Name
Title: CPO GoM

TRANSOCEAN HOLDINGS LLC
CONTRACTOR

By: /s/ Keelan Adamson
Keelan Adamson
Printed Name
Title: Managing Director - North America

ATTACHMENT 1 — CODE OF CONDUCT

The BP code of conduct stands for a fundamental BP commitment — to comply with all applicable legal requirements and the high ethical standards set out in this code — wherever we operate. To help us meet this commitment, the code defines what BP expects of its businesses and people regardless of location or background. It provides both guidance in key areas and references to more detailed standards, instructions and processes for further direction.

All employees must adhere to the principles and requirements contained in this code and should consult the code for guidance when acting on behalf of BP.

Employees must not use a contractor, agent, consultant or other third party to perform any act which conflicts with this Code. Employees who engage third parties such as contractors, agents or consultants to work on behalf of BP are required to gain a commitment from such parties that they will support the principles of this Code, including a contractual requirement to act consistently with the Code when working on our behalf.

BP wishes to make it clear that it intends its business dealings to be characterised by honesty and freedom from deception and fraud and that it finds unethical behaviour unacceptable.

Practices that BP considers dishonest, unethical or unacceptable include the following:

- Fraud, bribery or corruption
- Deception;
- Clandestine brokering or sharing of tender information;
- Collusion for the purpose of corrupting a competitive tender; and
- Payments, gifts or entertainment from suppliers to BP staff, agents or representatives to influence decision-making.
- Harassment in the Workplace

BP is committed to ensuring that its contractors apply the applicable principles contained within the “Code of Conduct” document. BP will endeavour to employ only those contractors that subscribe to these principles, demonstrate their commitment to working towards their fullest application, and agree to the measurement of their performance by BP.

The individual rights are intended to lead to greater mutual respect between both individuals and the companies they work for. They seek to encourage safer and more secure employment, increase efficiency, improve job satisfaction and provide a better trained workforce for all those engaged in the provision of Services under the Contract.

An electronic copy of BP’s Code of Conduct “Commitment to Integrity” can be downloaded from the following internet web site:

http://www.bp.com/sectiongenericarticle.do?categoryld=9003494&contentld=7006600

Where to go for help

If you do have a question or concern about legal or ethical standards, what, as a Contractor, should you do?

A good place to start

Contacting the **BP Representative/Contract Accountable Manager** named in Section 1 of the Contract is usually a good place to start with a legal or business conduct issue. You may also get help or advice from your own **legal** or **compliance & ethics advisors** within your own company.

The BP OpenTalk line

If you feel unsure about where to go for help, or are uncomfortable contacting the Contract Accountable Manager, BP has an additional resource that can help — OpenTalk.

The purpose of OpenTalk is to answer questions and respond to concerns about compliance, ethics and the requirements described in this code. The OpenTalk telephone line and e-mail facility is operated by an independent company that helps businesses respond to questions and concerns about compliance and ethics.

The line operates 24 hours a day/seven days a week and also has translation services available at all times.

Call OpenTalk on your local number or on 0800 917 3604 (UK), 1-800 225-6141 (US), or the collect call number 1 704 540 2242. or at the following:

A full list of local telephone numbers can be accessed on the OpenTalk website http://opentalk.bpweb.bp.com or you can e-mail the following address opentalk@myalertline.com

EXHIBIT B-2
MATERIAL EQUIPMENT LIST SEPTEMBER 28, 2009

A. Unit Specifications

General

Unit Name	:	***Deepwater Horizon (RBS8D)***
Rig Type	:	Semi-Submersible
Unit/Design/Shape	:	IHI-RBF Exploration
Unit Flag	:	marshall islands
Unit Classification	:	ABS
IMO Certification (yes/no)	:	Yes
Which code Version	:	1989 as Amended 1991
Year of Construction	:	2000
Construction Yard	:	Hyundai
Type of Positioning System (anchor /Dp /combined)	:	DPS-3

A.1 Main Dimensions/Technical Description

Weight (lightship)	mt:	25,539
Overall Width	ft:	255.9
Overall Length	ft:	396.0
Main Deck Width	ft:	200.1
Main Deck Length	ft:	267.4
Main Deck Depth	ft:	27.9
Number of Main Columns / Diameter (L x B)	No x ft:	4 / 49.2 x 49.2 (Top); 45.9 x 57.4 (Bottom)
Number of Small Columns / Diameter	No x ft:	0
Drilling Draft / Related Displacement	ft x mt:	75.5 x 52,589
Transit Draft / Related Displacement	ft x mt:	28.9 x 36,036
Survival Draft / Related Displacement	ft x mt:	54.1 x 44,305
Moonpool Dimensions	ft x ft:	21 x 93
Maximum Opening Through Spider Deck	ft:	N/A
Pontoon Length	ft:	374.0
Pontoon Breadth (ends/middle)	ft:	57.4/50.9
Pontoon Height	ft:	29.9
Accommodation for Maximum No. of Personnel	Qty:	146

A.2 Storage Capacities

Fuel	bbls:	27,855 (98%)
Drill Water	bbls:	13,076
Potable Water	bbls:	7,456
Active Liquid Mud (see F.2)	bbls:	4,141 (90%)
Mud Processing Tank (see F.2)	bbls:	464
Reserve Liquid Mud (see F.2)	bbls:	10,304 (100%)
Bulk Bentonite/Barite (see F.3)	cu ft:	13,625 (100%)
Bulk Cement (see F.3)	cu ft:	8,175 (100%)

Sack Storage	No. or ft2:	10,000 sacks
Pipe Rack Area	ft2:	9,367
Load Bearing Capacity	Ib/ft2:	500
Riser Sack Area	ft:	10,000
Load Bearing Capacity	Ib/ft2:	700
Miscellaneous Storage Area	ft2:	See Drawing
Brine Storage (Column)	bbls:	5,136 (100%)
Brine Storage (Pontoon)	bbls:	25,000
Base Oil Mud Storage	bbls:	5,033 (98%)
Ballast System	bbls:	140,550 (incl. Pontoon brine tanks)

A.3 Propulsion / Thrusters

Thruster/Type (azimuth/in line)	:	Azimuth - Full 360
Quantity	:	8
Location (aft, opposite corners, 4 corners)	:	4 Corners
Driven by Electric Motor (yes/No)	:	Yes - Variable Speed Drive
Make/Type	:	Kamewa
Power Output (HP EA.)	:	7375 hp (5500 kw)
Propeller Type(Fixed / Variable Pitch)	:	Fixed
Nozzled (yes/no)	:	Yes (w/5o down tilt)
Thruster Power (HP Total)	:	59,000 (44 MN)
DP System	:	‘Class III Kongsberg-Simrad Dynamic Positioning System in accordance with ABS DPS-3 requirements and recommendations. System consists of a triple redundant dynamic positioning system and shall accept inputs from Hipap Acoustic Positioning System, four (4) different GPS (DGPS) based on correction signal inputs from different sources, (3) three gyrocompass, (3) three vertical reference units, and (3) three wind sensors, as well as operator input. Power Management System is interfaced with the Integrated Alarm & Control System.
Position Reference	:	Kongsberg-Simrad Hipap & DGPS

	:	Kongsberg-Simrad IACS will operate as the System Control & Data acquisition system for the MODU. The IACS will perform several different functions including: Power Management System, Machinery Monitoring & Control, Manual Thruster control and Autopilot, Dynamic Positioning Control, Ballast & Bunker Monitoring & Control, Bulk Storage Sys. Monitoring & Control, Safety Sys. (Fire, Gas, WT Doors, HVAC Control, etc.)

A-4 Operational Capabilities

Maximum Designed Water Depth Capability	ft:	10,000
Outfitted Max. Water Depth Capability	ft:	8,000
Normal Min. Water Depth Capability	ft:	250
Drilling Depth Capability (Rated)	ft:	30,000
Transit Speed Towed (Historical Avg.)	Knots:	4.5
Transit Speed Self-Propelled (Historical Avg.)	Knots:	7.5

A-5 Variable Loading (VL)

Transit VL	mt:	See Exhibit B-1
Drilling VL	mt:	See Exhibit B-1
Survival VL	mt:	See Exhibit B-1

A-6 Environmental Limits

Drilling (including stationkeeping)	:	See Exhibit B-1
Air Gap	ft:	32.8
Sign. Wave Height	ft:	26
Max. Wave Height	ft:	48.2
Spec. Peak Period	see:	Pierson-Moskowitz Spectrum
Max. Wind Velocity	knots:	60 (1 min.)
Max Current Velocity	knots:	See Exhibit B-1
Max. Heave (Drill Floor Center)	ft:	6-7 (D.A.)
Max. Pitch	degrees:	2-3 (S.A.)
Max. Roll	degrees:	2-3 (S.A.)
Survival (excluding stationkeeping)		
Air Gap	ft:	54.2
Sig. Wave Height	ft:	41
Max. Wave Height	ft:	72.2
Spec. Peak Period	sec:	15
Max. Wind Velocity	knots:	103 (1 min.)
Max. Current Velocity	knots:	3.5
Max. Heave (Drill Floor Center)	ft:	20-30 (D.A.)
Max. Pitch	degrees:	6.5 (S.A.)
Max. Roll	degrees:	6.5 (S.A.)

Transit (field move)

Air Gap	ft:	79.4
Sign. Wave Height	ft:	16-21
Max. Wave Height	ft:	30 - 40
Max. Wave Period	sec:	8-12
Max. Wind Velocity	knots:	50
Max. Current Velocity	knots:	3.5
Max. Heave	ft:	10-15 (D.A.)
Max. Pitch	degrees:	9.0 (S.A.)
Max. Roll	degrees:	9.0 (S.A.)
Derrick Loading	kips:	Empty * See derrick loading capability in Operations Manual.

A.7.1 Anchor Winches

Quantity	no.:	0
Make	:	
Type (electric/hydraulic/diesel)	:	
Rated Pull	mt:	
Speed Low Gear	ft/m:	
Test Load	:	
Control Locations (Local/Remote/Both)	:	
Emergency Release (Type/Location)	:	

A.7.2 Fairleads

Quantity	no.:	Columns structually enhanced for future fairleads
Make	:	
Free Rotating Range	degrees:	

A.7.3 Anchors	:	Company Supplied.
A.7.3.1 Anchors - Primary	:	Company Supplied.
A.7.3.2 Anchors - Spare	:	Company Supplied.
A.7.4 Anchor Lines	:	Company Supplied, to be installed at a later date

A.7.5 Anchor Line Running/Retrieval System

A.7.5.1 Pennant Lines	:	N/A
A.7.5.2 Anchor Buoys	:	N/A
A.7.5.3 Chaser	:	N/A

A.7.6 Towing Gear

Towing Bridle Size	inches:	0
Hook-Up System	:	Air Winch, Ingersoll Rand FA5A
Rating	mt:	682
Power Required for Infield Tow	Bollard Pull:	N/A
Power Required for Ocean Tow	Bollard Pull:	N/A
Spare Bridle	yes/no:	No

A.7.7 Supply Vessel Mooring Lines

Quantity	no.:	2 each
System	mt:	Southwest Ocean Services, 180’x40’
Rating	lbs.:	Surge Force, 22,700 lbs.

A.8 Marine Loading Hoses

Location of Loading Manifolds (port/stbd./both)	:	Both

A.8.1 Potable Water Hoses

Quantity	no.:	2 x 150’ (50’ lengths)
Size	inch:	3
Make/Type	:	Goodall SS290
Color Coding	yes/no:	Yes
Make/Type/Connection	:	Weco, 250 psi WP

A.8.2 Drilling Water Hose

Quantity	no.:	2 x 150: (50’ lengths)
Size	inch:	5
Make/Type	:	Goodall SS122
Color Coding	yes/no:	Yes
Make/Type/Connection	:	Weco 300 psi WP

A.8.3 Gas Oil Hose

Quantity	no.:	2 x 150’
Size	inch:	4
Make/Type	:	Goodall SS145
Color Coding	yes/no:	Yes
Make/Type/Connection	:	TODO, 300 PSI WP
Pressure Rating	psi:	300

A.8.4 Mud Chemical Hose

Quantity	no.:	2 x 150’ (50’ lengths)
Size	inch:	6
Make/Type	:	Goodall SS146
Color Coding	yes/no:	Yes
Make/Type/Connection	:	TODO 300 PSI WP

A.8.5 Cement Hose

Quantity	no.:	2 x 150’ (50’ lengths)
Size	inch:	6
Make/Type	:	Goodall SS225
Color Coding	yes/no:	Yes
Make/Type/Connection	:	Weco 120 PSI WP

A.8.6 Base Oil Hose

Quantity	no.:	2 x 150’ (50’ lengths)
Size	inch:	4
Make/Type	:	
Color Coding	yes/no:	Yes
Make/Type/Connection	:	TODO

Pressure Rating	:	300 PSI WP

A.8.7 Brine Hose

Quantity	no.:	2 x 150’ (50’ lengths)
Size	inch:	4
Make/Type	:	Goodall SS110
Color Coding	yes/no:	Yes
Make/Type/Connection	:	Weco
Pressure Rating	:	500 PSI WP

A.9 Cranes, Hoists, & Material Handling

A.9.1 Cranes, Revolving, Main

Quantity	no.:	2
Specification (API, etc.)	:	ABS/US-Den
Make	:	Liebherr
Type	:	Pedestal
Location (stbd, port, aft, fwd)	:	Port & Stbd.
Maximum Rated Capacity (main hook)	mt:	100
Maximum Rated Capacity (whip hook)	mt:	15
Boom Length	ft:	150
Line Length (Nominal Boom Length)	ft:	1,893
• Main Boom	ft:	1,920
• Whip Line	ft:	475

Main Hoist, Platform Lift, 4 Lines	Radius Meters	Metric Tons
	6.6	92
	10	92
	11	80
	15	75
	20	65
	25	50
	30	40
	35	36
	40	30
	45	26
	48	23.7
		No Load

Main Hoist, Seastate Lift, 4 Lines	Radius Meters	Metric Tons
	6.6	51.5
	10	46
	11	44.8
	15	40.7
	20	36.8
	25	33.5
	30	30.6
	35	26.4
	40	22.4
	45	19.4
	48	18
		No Load

Main Hoist, Platfrom Lift, 4 Lines	Radius Meters	Metric Tons
	6.6	92
	10	92
	11	80
	15	75
	20	65
	25	50
	30	40
	35	36
	40	30
	45	26
	48	23.7
		No Load

Main Hoist, Seastate Lift, 4 Lines	Radius Meters	Metric Tons
	6.6	51.5
	10	46
	11	44.8
	15	40.7
	20	36.8
	25	33.5
	30	30.6
	35	26.4
	40	22.4
	45	19.4
	48	18
		No Load

	Radius Meters	Metric Tons
Whip Line	51	15
Platform Lift	51	10
Seastate Lift		No Load

	yes/no:	Yes
Hook Load Indicator Automatically Corrected for Boom Angle	:	Both
Alarm (audible, visual, both)	yes/no:	Yes
Automatic Brake	yes/no:	Yes
Safety Latch on Hooks	yes/no:	Yes
Crown Saver (limit switch)	yes/no:	Yes
Boom Illumination	no.:	2
Baskets for Personnel Transfer		

A.9.2 Cranes, Revolving, Secondary

Quantity	no.:	1
Specification (API, etc.)	:	API
Make	:	Outreach
Type	:	Knuckle boom
Location (stbd., port, aft, fwd.)	:	Forward
Maximum Rated Capacity (main hook)	lt.:	SWL 4000 KG/ 8800 lbs 14.6 meters / 47.9 ft
Maximum Rated Capacity (main hook)	lt.:	SWL 3000 KG/ 6600 lbs 21meters / 68 ft
Boom Length	ft.:	68
Line Length (nominal)	ft.:	N/A

A.9.3 Forklifts

Quantity	no.:	1
Make/Type	:	Stewart & Stevenson
Rated Capacity	lbs.:	5000
Location	:	Sack Room

A.9.4 Monorail Overhead Cranes

Quantity	no.:	1
Make	:	Hydralift
Type	:	Gantry Type
Rated Capacity	mt:	37 (18.5x2)
Location	:	Aft Riser Deck

A.9.5 BOP Handling System	:	Hydralift Bridge Crane
Make/Type	mt:	310
Rated Capacity		

BOP Carrier

Make/Type	:	Hydralift “C” Cart complete w/false rotary deck
Rated Capacity	mt:	310

A.9.6 Air Hoists/Derrick Winches

A.9.6.1 Rig Floor Winches (Non Man-Riding)

Quantity	no.:	4
Make	:	Ingersoll Rand

Type	:	Air
Rated Capacity	st:	5.5
Wire Diameter	inch:	0.75
Automatic Brakes	yes/no:	Yes
Overload Protection	yes/no:	No
Automatic Spooling	yes/no:	Yes

A.9.6.2 Monkey Board Work Winch

Quantity	no.:	1
Make	:	Ingersoll Rand
Type	:	Air
Rated Capacity	st.:	0.25
Wire Diameter	inch:	3/8”
Automatic Brakes	yes/no:	Yes
Overload Protection	yes/no:	No

A.9.6.3 Rig Floor “Man-Riding” Winch

Quantity	no.:	2
Make	:	Ingersoll Rand
Type	:	Air
Rated Capacity	st.:	0.25
Wire Diameter/Non-twist Wire	inch:	3/8”
Automatic Brakes	yes/no:	Yes
Overload Protection	yes/no:	No
Automatic Spooling	yes/no:	Yes
Certified for Man-Riding	yes/no:	Yes

A.9.6.4 Utility Winch (i.e. Deck Winch)

A.9.6.5 Cellar Deck Winch

Quantity	no.:	4
Make	:	Ingersoll Rand
Type	:	Air
Rated Capacity	st.:	5.5
Wire Diameter	inch:	0.75
Automatic Brakes	yes/no:	No
Overload Protection	yes/no:	No
Automatic Spooling	yes/no:	Yes
Man-Riding	:	2

A.10 Helicopter Landing Deck

Location	:	Port/Fwd - Main Deck
Dimensions	ft.xft.:	72.8 x 72.8
Perimeter Safety Net	yes/no:	Yes
Load Capacity	It.:	11.9
Designed for Helicopter Type	:	Sikorsky S-92
Tie Down Points	yes/no:	Yes
Covered by Foam Fire System (See L.36)	yes/no:	Yes

A.10.1 Helicopter Refueling System

Fuel Storage Capacity	US Gal.:	2,250 (750x3)
Jettisonable	yes/no:	No
Fuel Transport Containers	Qty.:	3
Volume (ea)	:	750
Covered by Foam Fire System (See L.3.5)	yes/no:	Yes

A.11 Auxiliary Equipment

A.11.1 Water Distillation

Quantity	no.:	6
Make/Type	:	Alfa-Laval
Capacity (each/total)	cu.ft./day:	20 Metric Tons Ea. (Depending on Engine Utilization)

A.11.2 Broilers : N/A

A.11.3 Air Conditioning

Quantity	no.:	4 Air Handlers, 6 Compressor/Condensers
Make/Type	:	Carrier
Capacity (Total System)	tons:	200

A.11.4 Electric Welding Sets

Quantity	no.:	3
Current Capacity	amp:	400
Make / Type	:	Lincoln S-7046 SAE 400

A.11.5 High Pressure Cleaner

Quantity	no.:	2
Make/Type	:	Unitor
Electric/Pneumatic	:	Electric
Max Delivered Pressure	PSI:	1600
Ring Main	yes/no:	Yes
Outlets	Number:	6

B. General Rig Description

B.1 Derrick & Substructure

B.1.1 Derrick / Mast

Make/Type	:	Dreco
Rated for Wind Speed		
•With Full Set Back	Knots:	60/71 (GOMEX/WOS)
•With No Set Back	Knots:	103/99 (GOMEX/WOS)
Height	ft.:	242 (drill floor to top of gin pole)
Dimensions of Base	ft.xft.:	48x48
Dimensions of Crown	ft.xft.:	18x18
Gross Nominal Capacity	st.:	1000
Maximum Number of Lines	no.:	14,1 Spare Sheave Fitted in cluster
Ladders w/Safety Cages & Rests	yes/no:	Yes
Platform for Crown Sheave Access	yes/no:	Yes

Counter Balance, System for Rig Tongs & Pipe Spinning Tong	yes/no:	Yes
Lighting System Explosion Proof	yes/no:	Yes

B.1.2 Racking Platform

		Unit is capable of field transiting with 238 stands of drill pipe w/o exceeding rated design loads of the derrick.
Make/Type	:	Varco
Racking Platform Total Capacity w/5-12/" or 6-5/8 D.P.	ft.:	31,000 (nominal)
Fixed Fingers (on left side of derrick) - up to 6-5/8 D.P.	ft.:	20,000 (nominal)
Adjustable Fingers (on right side) - 7" Casing	ft.:	11,000 (nominal)
or		
Adjustable Fingers (on right side) - 9-5/8" Casing	ft.:	11,000 (nominal)
or		
Adjustable Fingers (on right side) -13-3/8" or 13	ft.:	9,500 (nominal)
Racking Platform Capacity of 8" - 9" DC	no.:	8

Auxiliary Derrick (Moonpool)

Make/Type	:	Dreco
Capacity	:	300 Tons

B.1.3 Automatic Pipe Racker

Make/Type	:	2 - Varco RPS-6i Pipe Rackers Pipe racker on fwd. Side to be capable of handling 20", 16", 13-5/8", 11-3/4", 9-7/8", 9-5/8" 7-5/8" & 7" casing.

B.1.4 Casing Stabbing Board

Make/Type	:	Dreco/Hyd.
Adjustable from/to Height Above R/Table	ft./ft.:	Adjustable Casing Stabbing Basket - 28' Reach

Auxiliary Pipe Handler (Moonpool)

Make/Type	:	National - Casing/Tubular Horizontal to Vertical Rotator

B.1.5 Substructure

Make/Type	:	HHI
Height	ft.:	14.75
Width	ft.:	80
Length	ft.:	71
Setback Capacity	st.:	1,000
Hookload	st.:	1,000
Simultaneous Setback-Hookload Capacity	st.:	2,000

Tensioner Capacity	st.:	1,750
Clear Height Below Rotary Table Beams(from 3rd deck)	ft.:	29.5

B.1.6 Weather Proofing

Rig Floor Windbreaks Height	ft.:	11.5
Derrickman Windbreaks Height	ft.:	none

B.1.7 Derrick TV Camera System

Camera Located at	:	Monkey Board/Crown
Make/Type	:	Color
Zoom/Pan/Tilt-Function	yes/no:	Yes
Monitor Located at	:	Driller's House

B.2 Drawworks & Associated Equipment

B.2.1 Drawworks

Make/Type	:	Hitec/AHD 1000
Drum Type	:	Lebus Grooving 2" Drill Line
Spinning Cathead Type	:	N/A
Breakout Cathead Type	:	N/A
Crown Block Safety Device	:	Yes
Make	:	Hitec/SDI
Model	:	Hitec/SDI
Rated Input Power Continuous	hp:	6900
Rated Input Power Maximum	hp:	8400
Drum Diameter	inches:	73.5
Maximum Line Pull 14 Lines	st:	1,000 (intermittent)
Maximum Line Pull 12 Lines	st:	880
Maximum Line Pull 10 Lines	st:	750
Maximum Line Pull 8 Lines	st:	600
Independent Freshwater Cooling System for Drawworks	yes/no:	Yes

B.2.2 Drawworks Power

Number of Electric Motors	no.:	6
Make	:	General Electric
Model	:	GEB22A1
Output Power Continuous	hp:	1150
Output Power Intermittent (max.)	hp:	1400

B.2.3 Auxiliary Brake

Make	:	Hitec
Model	:	Regenerative AC braking: A11 6 Motors. Motors are split in to two groups w/redundant master controllers and automatic control transfer in case of failure of primary controller.
Independent Back-up System Type	:	Failsafe Disc Brakes

B.2.4 Sandline	:	N/A

B.2.5 Automatic Driller

Make/Type	:	Hitec

Auxiliary Drawworks (Moonpool)

Make/Type	:	Hitec
Lift Capacity	mt:	300
Input HP	:	1000

B.3 Derrick Hoisting Equipment

B.3.1 Crown Block

Make/Type	:	Dreco
Rated Capacity	st:	1000
No. of Sheaves	:	7 Sheave Cluster, Plus Dual In-Line Sheaves on Fastline & Deadline.
Sheave Diameter	inch:	72
Sheave Grooved for Line Size	inch:	2

Auxiliary Crown Block (Moonpool)

Make/Type	:	Dreco
Rated Capacity	mt:	300

B.3.2 Traveling Block

Make/Type	:	Shaffer
Rated Capacity	st:	1000 on 14 Lines
No. of Sheaves	no.:	8
Sheave Diameter	inches:	72
Sheave Grooved for Line Size	inch:	2

Auxiliary Traveling Block

Make/Type	:	Dreco
Rated Capacity	mt:	300

B.3.3 Hook

Make/Type	:	Varco / Rotating Hook Adapter
Rated Capacity	st:	1000
Complete w/Spring Assembly / Hook Locking Device	yes/no:	Yes. Active Counter Balance w/Stand, Jump & Hydraulic Locking Device.

B.3.4 Swivel

Make/Type	:	Integrated in TDS
Rated Capacity	st:	N/A
Test/Working Pressure	PSI/PSI:	N/A
Gooseneck & Washpipe Minimum ID >=76mm	yes/no:	N/A
Left-hand Pin Connection Size	inches:	N/A
Access Fitting for Wireline Entry on Top of Gooseneck	yes/no:	N/A

B.3.5 Drilling Line

Diameter	inch:	2”
Type	:	6x26 EIPS, IWRC Powersteel Plus
Length (original)	ft.:	12500
Support Frame for Drum/Cover	yes/no:	yes
Drilling Line Drum Power Driven	yes/no:	yes
Spare Reel Drilling Line	yes/no:	no
Location (rig, shore, etc.)	:	N/A

B.3.6 Anchor Dead Line

Make/Type	:	Dreco/FRH-160CR
Weight Sensor	yes/no:	Yes

B.3.7 Drill String Motion Compensator

Make/Type	:	Hitec ASA Active Heave Comp.
Stroke	ft.:	13.7
Capacity - Compensated	st:	500
Capacity - Locked	st:	1000

B.3.8 Block Guidance System

Make/Type	:	Dreco

B.3.9 Retraction System for Traveling Block

Make/Type	:	Shaffer/Retract Dolly

B.4 Rotating System

B.4.1 Rotary Table

Make/Type	:	Varco / RST 60-1/2”
Maximum Opening	inches:	60-1/2”
Rated Capacity	st:	1000
Static Load Capacity	st:	1000
Rotating Load Capacity	st@rpm:	37.5 Ton @ 10 rpm
Two Speed Gearbox	yes/no:	No
Max RPM @ Max Torque	RPM/Ft.Lbs.:	25/48,000
Emergency Chain Drive	yes/no:	No
Driven by an Independent Electric Motor	yes/no:	No
Electric Motor Type/Make	:	Hydraulic x 4
Maximum Continuous Torque	ft-lbs:	40000
Drip Pan/Mud Collection System	yes/no:	Yes

B.4.2 Rotary Table Adapter Bushing

Size	inches:	60-1/2 x 49-1/2
Quantity	:	1 each 60-1/2 x 49-1/2 Adapter Bushing; 2 ea 49-1/2 x 37.5 Spot Adapter Bushing

B.4.3 Master Bushing

Make/Type	:	Varco MPCH

Size	inch:	37-1/2
Inset Bushing	No:	3,2,1

B.4.4 Kelly Bushing

B.4.5 Top Drive

Make	:	Varco TDS8S w/Swingout Parking System
Type (electric/hydraulic)	:	Electric
Rated Capacity	st:	750
Test/Working Pressure	psi/psi:	11250/7500
Remote Operated Kelly Cock	yes/no:	Yes
If Driven by Electric Motor		
Make/Type	:	GE GEB-20AC
Output Power	hp:	1150
Output Torque	ft-lbs:	94,000 @ 600 Volts
Max. Torque @ Max. RPM	ft-lbs - RPM:	Per Manufacturer's rating 1150 HP 270 RPM = 13,000 ft-lbs; 95 RPM = 63,000 ft-lbs
Two Speed Gearbox	rpm:	No (Single speed)
Maximum Rotary Speed	:	270
Cooling System Type	:	All

B.4.6 Top Drive Makeout/Breakout System

Make	:	Varco
Model	:	PH100
Type	:	Hydraulic
Max. Breakout Torque That Can be applied by System	ft-lbs:	100,000

B.4.7 Raised back-up System

Make	:	Varco
Model	:	RBS4
Torque Rating	ft-lbs:	100,000
Vertical Travel	ft:	10
Pipe Range	:	4-3/4 In. to 8-1/4 In,

C. Power Supply Systems

C.1 Rig Power Plant

C.1.1 Diesel Engines

Quantity	no.:	6
Make/Type	:	Wartsila / 18V32
Maximum Continuous Power	hp:	7290 KW 9775 HP
At Rotation Speed of	rpm:	720
Equipped w/Spark Arrestors	yes/no:	Yes
Mufflers Installed	yes/no:	Yes
Total Fuel Consumption, Drilling (Average)	bbl/day:	Av 270. Estimate only, based on GOM weather and will vary depending on operations
Normal Drilling:	bbl/day:	270 (Est. only, will vary depending on operations

Tripping:	bbl/day:	270 (Est. only, will vary depending on operations
Top Hole Drilling:	bbl/day:	305 (Est. only, will vary depending on operations Estimated w/2,500 KW hotel load.

C.1.2 DC - Generator

Type	:	N/A

C.1.3 AC - Generator

Quantity	no.:	6
Make/Type	:	ABB/AMG 0900xU10
Continuous Power	kw:	7,000
At Rotation Speed of	rpm:	720
Output Volts	volts:	11,000

C.1.4 Variable Frequency Drives

Number of Inverters	no.:	8 Thruster Drives
Make/Type	:	ABB/Sami-Megastar
Maximum continuous Power (Total)	kw:	5.5 mw
Input Volts	volts:	Thrusters 1-6: 3.3 / 3.3 KV
Input Volts	volts:	Thrusters 7-8: 1.65 / 1.65 KV
Output Volts	volts:	0-3,300 variable AC (All 8 thruster drives)
Number of Inverters	no.:	6 Drilling Drive Lineups
Make/Type	:	GE
Maximum continuous Power (Total)	kw:	12,000
Output Volts	volts:	600

C.1.5 Transformer System

Quantity	no.:	8 Thruster Transformers
Make/Type	:	ABB
Continuous Power (ea)	KVA:	7,300 KVA
Input/Output Volts (dual wound secondaries)		
	volts:	Thrusters 1-6: 11 KV / 3.3 / 3.3 KV
	volts:	Thrusters 7-8: 11 KV / 1.65 / 1.65 KV
Frequency	Hz:	60
Quantity	no.:	6 Drilling Transformers
Make/Type	:	Olsun
Continuous Power (ea)	KVA:	3000 - 3 ea. Delta-Delta, 3 ea. Delta-Wye
Output Volts	volts:	11KV/600V
Frequency	Hz:	60
Quantity	no.:	4 Quadrant Transformers
Make/Type	:	Olsun
Continuous Power (ea)	KVA:	2500
Output Volts	volts:	11KV/480V, Delta-Wye
Frequency	Hz:	60

C.1.6 Emergency Shutdown

Emergency shutdown switches for complete power system (AC & DC), located at the following points.	:	Central Control Room; Rig Floor; Engine Control Room

C.1.7 Auxiliary Power Supply

Power Supply for a Mud Logging Unit	yes/no:	Yes
Power Supply Available:		
Output Volts	volts:	480
Frequency	Hz:	60
Current	amps:	100
Phase	single / three:	Three

C.1.8 Compressed Air Systems

Air Compressors - High Pressure

Quantity	no.:	2
Make	:	Hamworthy
Model	:	4swl234
Rated Capacity	scfm:	65 each
Working Pressure	PSI:	5000
Prime Mover (electric/diesel)	:	Electrical
Continuous Power	HP:	60
Quantity	no.:	1
Make	:	Price
Model	:	W-3
Rated Capacity	scfm:	200 each
Working Pressure	PSI:	5000
Prime Mover (electric/diesel)	:	Electrical
Continuous Power	HP:	75

Air Dryers

Quantity	no.:	2
Make/Type	:	Hamworthy Regenerative Tower (Dual)
Rated Capacity	scfm:	90

Air Compressors - Medium Pressure (rig air):

Quantity	no.:	4
Make	:	Gardner Denver
Model	:	EBQ99F Rotary Screw
Rated Capacity	scfm:	750 each
Working Pressure	PSI:	125
Prime Mover (electric/diesel)	:	Electric
Continuous Power	HP:	200

Air Dryers

Quantity	no.:	4
Make/Type	:	Desiccant Dominick Hunter / DX110 Heatless
Rated Capacity	scfm:	1089 ea

Air Compressors - Lower Pressure (bulk air):

Quantity	no.:	3

Make	:	Kimray -4 each reduicing wave/back pressure valve
Model	:	Series G Regulator 318 FGT-BP & FGT-PR
Rated Capacity	scfm:	176 each (10,600cf/hr each)
Working Pressure	PSI:	60

Air Dryers

Quantity	no.:	None
Make/Type	:	
Rated Capacity	scfm:	

C.2 Emergency Generator - Emergency Generator Not Required due to Power System Design

C.2.1 Engine (Standby)

Quantity	no.:	1
Make/Type	:	Caterpillar 3408 DITA
Maximum Output	kw:	400 cont. power output
At Rotation Speed	rpm:	1200
Starting Methods (Automatic, Manual, Air/Hydraulic)	:	Automatic Electric / Hydraulic
Maximum Angle of Operation	degrees:	22.5 Per ABS

C.2.2 AC Generator (Standby)

Quantity	no.:	1
Make/Type	:	Caterpillar SR4
Maximum Output	kw	370
At Rotation Speed	rpm:	1200
Output Volts	volts:	480
Capable of Back-Feeding to Main Bus	yes/no:	Yes - To 480V Motors

C.3 Primary Electric Motors

C.3.1 Propulsion Motors Type: See Thruster Motors

C.3.2 Thruster Motors

Quantity	no.:	8
Type (AC/DC)	:	ABB - AC, Squirrel Cage Motors
Power of Each	MW	5.5
RPM	RPM:	0-780
Output	Volts:	2x3300

D. Drillstring Equipment

D.1 Tubulars

D.1.1 Kellies

D.1.2 Top Drive Saver Subs

Quantity	no.:	2
Connection Type	:	HT55
API Classification	:	8 C
Protector	yes/no:	No
Quantity	no.:	2
Connection Type	:	4-1/2 IF
API Classification	:	8 C
Protector	yes/no:	No

D.1.3 Drill Pipe

Drill Pipe OD - String #1	inch:	5.5
Grade	:	S135
Total Length	ft:	16000
Range	:	3
Weight	lbs/ft	21.9 Nominal
Tensile Yield Strength Premium	lbs.:	621000
Internally Plastic Coated	yes/no:	Yes, TK-34
Tool Joint OD/ID	inch /inch:	7” x 4” provisional
Make Up Torque	ft-lbs:	46300
Tool Joint Pin Length	inch:	12
Tapered Shoulder Tool Joints	degree:	18
Connection Type	:	HT 55
Type of Hardfacing	:	X-Metal 7,000
API Classification	:	Premium
Thread Protectors	yes/no:	Yes
Drill Pipe OD - String #2	inch:	6.625
Grade	:	V-150
Total Length	ft.:	15,450 (+0%, -3%)
Range	:	3
Weight	lbs/ft:	34.02
Tensile Yield Strength Premium	lbs.:	1,420,100
Internally Plastic coated	yes/no:	Yes, TK-34
Tool Joint OD/ID	inch /inch:	8.5” x 4.25”
Make Up Torque	ft-lbs:	Max 56k, Min 54.5k
Tool Joint Pin Length	inch:	12
Tapered Shoulder Tool Joints	degree:	18
Connection Type	:	6-5/8 FH
Type of Hardfacing	:	X-Metal 7,000
API Classification	:	Premium
Thread Protectors	yes/no:	Yes
Drill Pipe OD - String #3	inch:	6.625
Grade	:	V-150
Total Length	ft.:	10,300 (+0%, -3%)
Range	:	3
Weight	lbs/ft:	40.9
Tensile Yield Strength Premium	lbs.:	1,410,000
Internally Plastic coated	yes/no:	Yes, TK-34
Tool Joint OD/ID	inch /inch:	8.5” x 4.25”
Make Up Torque	ft-lbs:	Max 67k, Mix 63k

Tool Joint Pin Length	inch:	12
Tapered Shoulder Tool Joints	degree:	18
Connection Type	:	6-5/8 FH
Type of Hardfacing	:	X-Metal 7,000
API Classification	:	Premium
Thread Protectors	yes/no:	Yes

Drill Pipe OD - String #4 Landing String inch: 5.5

Grade	:	S-135
Total Length	ft.:	7000
Range	:	3
Weight	lbs/ft:	38
Tensile Yield Strength Premium	lbs.:	1170600
Internally Plastic Coated	yes/no:	Yes
Tool Joint OD/ID	inch /inch:	7-1/8 x 3-3/4 Provisional
Tool Joint Pin Length	inch:	12
Tapered Shoulder Tool Joints	degree:	18
Connection Type	:	HT 55
Type of Hardfacing	:	X-Metal 7,000
API Classification	:	Premium
Thread Protectors	yes/no:	Yes

D.1.4 Drill Pipe Pup Joints (Integral)

OD	:	5.5”
Grade/Yield	:	4145 H Equiv. To 120K
Tool Joint OD/ID	inch /inch:	7-1/4 x 3-3/4
Weight	lb/ft:	40
Connection Type	:	HT-55
Stress Relief Pin Groove	:	No
Boreback on Box	:	No
Internally Plastic Coated	yes/no:	No
Thread Protectors	yes/no:	Yes
Length	ft.:	5
Quantity	no.:	2
Length	ft.:	10
Quantity	no.:	1
Length	ft.:	15
Quantity	no.:	2
Length	ft.:	20
Quantity	no:	1
OD	:	6.625
Grade/Yield	:	V-105
Tool Joint OD/ID	inch /inch:	8.5” x 4.25”
Weight	lb/ft:	47.76
Connection Type	:	6-5/8 FH
Stress Relief Pin Groove	:	No
Boreback on Box	:	No
Internally Plastic Coated	yes/no:	No
Thread Protectors	yes/no:	Yes
Length	ft.:	5

Quantity	no.:	2
Length	ft.:	10
Quantity	no.:	1
Length	ft.:	15
Quantity	no.:	2
Length	ft.:	20
Quantity	no:	1

O.D.	:	
Grade/Yield	inch /inch:	
Tool Joint OD/ID	:	
Grade	lb/ft:	
Weight	:	
Connection Type	:	
Stress Relief Pin Groove	:	
Boreback on Box	yes/no:	
Internally Plastic Coated	yes/no:	
Thread Protectors	ft.:	
Length	no.:	
Quantity	ft.:	
Length	no.:	
Quantity	ft.:	
Length	no.:	
Quantity	ft.:	
Length	no:	
Quantity	yes/no:	
Thread Protectors	:	N/A

D.1.5 Drill Pipe Casing Protectors

D.1.6 Heavy Weight Drill Pipe (Integral)

Quantity	no.:	30
Nominal Size OD	inch:	5-1/2”
Weight	lbs/ft	58” Nominal
Range	:	2
Tool Joint OD	inch:	7-1/4”
Tool Joint ID	inch:	3-3/4”
Pin Stress Relief Groove	yes/no:	No
Box, Bore Back	yes/no:	No
Type of Hardfacing	:	X-Metal 7000
Internally Plastic Coated	yes/no:	No
Connection Type	:	HT55
Thread Protectors	yes/no:	Yes, Bale Type

Quantity	no.:	36
Nominal Size OD	inch:	6-5/8” S-135 FH R-3
Weight	lbs/ft	70.8
Range	:	3
Tool Joint OD	inch:	
Tool Joint ID	inch:	

Pin Stress Relief Groove	yes/no:	
Box, Bore Back	yes/no:	
Type of Hardfacing	:	
Internally Plastic Coated	yes/no:	
Connection Type	:	
Thread Protectors	yes/no:	

D.1.7 Drill Collars

Quantity	no.:	15
OD Body	inches:	9.5
ID Body	inches:	3”
Nominal Length of each Joint	ft.:	31.5 Nominal
Drill Collar Body (Slick/Spiral)	:	Spiral
Recess for “Zip” Elevator	yes/no:	Yes
Recess for Slips	yes/no:	Yes
Stress Relief Pin Groove	yes/no:	Yes
Boreback on Box	yes/no:	Yes
B.S.R.	:	2.72
Connection Type	:	7-5/8”reg.
Thread Protectors	yes/no:	Yes, Bale Type
Quantity	no.:	15
OD Body	inches:	8-1/14”
ID Body	inches:	2-13/16”
Nominal Length of each Joint	ft:	31.5 ft. Nominal
Drill Collar Body (Slick/Spiral)	:	Spiral
Recess for “Zip” Elevator	yes/no:	Yes
Recess for Slips	yes/no:	Yes
Stress Relief Pin Groove	yes/no:	Yes
Boreback on Box	yes/no:	Yes
B.S.R.	:	2.93
Connection Type	yes/no:	6-5/8” reg.
Thread Protectors	yes/no:	yes, Bale Type
Quantity	no:	30
OD Body	inches:	6-1/2”
ID Body	inches:	2-1/2”
Nominal Length of each Joint	ft:	31.5 ft. Nominal
Drill Collar Body (Slick/Spiral)	:	Spiral
Recess for “Zip” Elevator	yes/no:	Yes
Recess for Slips	yes/no:	Yes
Stress Relief Pin Groove	yes/no:	Yes
Boreback on Box	yes/no:	Yes
B.S.R.	:	2.73
Connection Type	yes/no:	4” IF
Thread Protectors	yes/no:	Yes, Bale Type

D.1.8 Shot Drill Collars	:	Company Supplied.
D.1.9 Non-Magnetic Drill Collars	:	Company Supplied.
D.1.10 Core Barrels	:	Company Supplied.
D.1.11 Stabilizers	:	Company Supplied.
D.1.12 Roller Reamers	:	Company Supplied.

D.1.13 Shock Absorbers (Damping Subs)	:	Company Supplied.
D.1.14 Drilling Jars	:	Company Supplied.

D.1.15 Inside BOP Valve

Quantity	:	2
Make	:	SMF / BVR
OD	inch:	7-1/4 x 2-1/4
Connection Type	:	HT 55
Working Pressure Rating	PSI:	15000

Quantity	no.:	2
Make	:	SMF / BVR
OD	inch:	6-1/2 x 2-13/16
Connection Type	:	4-1/2 IF (NC-50)
Working Pressure Rating	PSI:	15000

D.1.16 Full Opening Safety Valve

Quantity	no.:	2
Make	:	SMF/KC2S
OD/ID	inch x inch:	7-1/4” x 2-1/8”
Connection Type	:	HT55
Working Pressure	PSI:	15000

Quantity	no.:	2
Make	:	SMF/KC2S
OD/ID	inch x inch:	6-5/8” / 2-13/16”
Connection Type	:	4-1/2 IF (NC 50)
Working Pressure	PSI:	15000

D.1.17 Circulation Head	:	N/A

D.1.18 Top Drive Valves

Upper:

Quantity	no.:	2
Make/Type	:	Varco
Working Pressure	:	15000
Max. OD Body	inch:	8-5/8”
Min. ID Body	inch:	3-1/16”
Connection Type	:	7-5/8 Reg.

Lower:

Quantity	no.:	2
Make/Type	:	Varco
Working Pressure	PSI:	15000
Max. OD Body	inch:	8-5/8”
Min. ID Body	inch:	3-1/16”
Connection Type	:	7-5/8 Reg.

D.1.19 Circulation Subs	:	Company Supplied.
D.1.20 Cup Type Testers	:	Company Supplied.
D.1.21 Plug Type Testers	:	Company Supplied.

D1.22 Drop-In Valves : Company Supplied.

D.1.23 Near-Bit Subs (Box-Box)

Quantity	no.:	2
OD Size	inch:	9-1/2”
ID Size	inch:	3”
Top Connection	inch:	7-5/8 Reg.
Boreback	yes/no:	Yes
BSR	:	2.25-3
Bottom Connection	inch:	7-5/8 Reg.
Boreback	yes/no:	No
Bored for Float Valve	yes/no:	Yes
Float Size	inch:	5F-6R

Quantity	no.:	2
OD Size	inch:	9-1/2”
ID Size	inch:	2-13/16”
Top Connection	inch:	7-5/8 Reg.
Boreback	yes/no:	Yes
BSR	:	2.25-3
Bottom Connection	inch:	6-5/8 Reg.
Boreback	yes/no:	No
Bored for Float Valve	yes/no:	Yes
Float Size	inch:	5F-6R

Quantity	no.:	2
OD Size	inch:	8-1/4”
ID Size	inch:	2-13/16”
Top Connection	inch:	6-5/8 Reg.
Boreback	yes/no:	Yes
BSR	:	2.25-3
Bottom Connection	inch:	6-5/8 Reg.
Boreback	yes/no:	No
Bored for Float Valve	yes/no:	Yes
Float Size	inch:	5F-6R

Quantity	no.:	2
OD Size	inch:	6-1/2”
ID Size	inch:	2-1/2”
Top Connection	inch:	4-1/2 XH
Boreback	yes/no:	Yes
BSR	:	2.25-3
Bottom Connection	inch:	4-1/2 Reg.
Boreback	yes/no:	No
Bored for Float Valve	yes/no:	Yes
Float Size	inch:	4 R

D.1.24 Crossover Subs

Quantity	no.:	2
OD Size	inch:	8-1/4” x 9-1/2”
Top Connection Size	inch:	6-5/8 Reg.
Type (pin/box)	:	Box

ID	:	2-13/16”
BSR	:	2.25-3
Boreback	yes/no:	Yes
Bottom Connection Size	inch:	7-5/8 Reg.
Type (pin/box)	:	Pin
ID	:	3”
BSR	:	2.25-3
Relief Groove	yes/no:	Yes
Quantity	no.:	2
OD Size	inch:	7-1/4” x 8-1/4”
Top Connection Size	inch:	HT 55
Type (pin/box)	:	Box
ID	inch:	3”
BSR	:	2.25-3
Boreback	yes/no:	No
Bottom Connection Size	inch:	6-5/8 Reg.
Type (pin/box)	:	Pin
ID	:	3”
BSR	:	2.25-3
Relief Groove	yes/no:	Yes
Quantity	no.:	2
OD Size	inch:	7-1/4” x 6-1/2”
Top Connection Size	inch:	HT 55
Type (pin/box)	:	Box
ID	inch:	2-1/2”
BSR	:	2.25-3
Boreback	yes/no:	No
Bottom Connection Size	inch:	4-1/2 XH (NC 46)
Type (pin/box)	:	Pin
ID	:	2-1/2”
BSR	:	2.25-3
Relief Groove	yes/no:	Yes
Quantity	no.:	2
OD Size	inch:	6-1/2” x 8-1/2”
Top Connection Size	inch:	4 IF (NC 46)
Type (pin/box)	:	Box
ID	inch:	2-1/2”
BSR	:	2.25-3
Boreback	yes/no:	Yes
Bottom Connection Size	inch:	6-5/8 Reg.
Type (pin/box)	:	Pin
ID	inch:	2-1/2”
BSR	:	2.25-3
Relief Groove	yes/no:	Yes
Quantity	no.:	2
OD Size	inch:	7-1/4 x 6-5/8
Top Connection Size	inch:	HT 55
Type (pin/box)	:	Box

ID	inch:	2-13/16”
BSR	:	2.25-3
Boreback	yes/no:	No
Bottom Connection Size	inch:	4-1/2 IF (NC 50)
Type (pin/box)	:	Pin
ID	inch:	2-13/16”
BSR	:	2.25-3
Relief Groove	yes/no:	Yes

Quantity	no.:	2
OD Size	inch:	6-5/8 x 8-1/4
Top Connection Size	inch:	4-1/2 IF
Type (pin/box)	:	Box
ID	inch:	2-13/16”
BSR	:	2.25-3
Boreback	yes/no:	Yes
Bottom Connection Size	inch:	6-5/8 Reg.
Type (pin/box)	:	Pin
ID	inch:	2-13/16”
BSR	:	2.25-3
Relief Groove	yes/no:	Yes

Quantity	no.:	
OD Size	inch:	
Top Connection Size	inch:	
Type (pin/box)	:	
ID	inch:	
BSR	:	
Boreback	yes/no:	
Bottom Connection Size	inch:	
Type (pin/box)	:	
ID	inch:	
BSR	:	
Relief Groove	yes/no:	

D.1.25 Stabbing Subs - Approximately 9” Long

Quantity	no.:	1
OD	inch:	9.5
ID	inch:	3
Top Connection Size	inch:	HT 55
Type (pin/box)	:	Box
Bottom Connection Size	inch:	7-5/8 Reg.
Type (pin/box)	:	Pin

Quantity	no.:	1
OD	inch:	9.5
Top Connection Size	inch:	4-1/2 IF
Type (pin/box)	:	Box
ID	inch:	3
Bottom Connection Size	inch:	7-5/8 Reg.
Type (pin/box)	:	Pin

Quantity	no.:	1
OD	inch:	8.25
ID	inch:	2-13/16
Top Connection Size	inch:	HT 55
Type (pin/box)	:	Box
Bottom Connection Size	inch:	6-5/8” Reg
Type (pin/box)	:	Pin

Quantity	no.:	
OD	inch:	
ID	inch:	
Top Connection Size	inch:	
Type (pin/box)	:	
Bottom Connection Size	inch:	
Type (pin/box)	:	

D.1.26 Pump In/Testing Subs

Quantity	no.:	1
Connection	Pin/Box:	HT 55 Box
Union Type	:	2: 1502 Female
Quantity	:	1
Connection	Pin/Box:	HT 55 Pin
Union Type	:	2” 1502 Female
Quantity	:	1
Connection	Pin/Box:	4-1/2 IF Box
Union Type	:	2” 1502 Female
Quantity	:	1
Connection	Pin/Box:	4-1/2 IF Pin
Union Type	:	2” 1502 Female
Quantity	:	1
Connection	Pin/Box:	4 XH
Union Type	:	2” 1502 Female
Quantity	:	1
Connection	Pin/Box:	6-5/8 Reg. Pin
Union Type	:	2” 1502 Female
Quantity	:	1
Connection	Pin/Box:	7-5/8 Reg. Pin
Union Type	:	2” 1502 Female

D.1.27 Side Entry Subs

Quantity	:	1
Top Connection	Box/Pin:	HT 55 Box
Lower Connection	:	HT 55 Pin
Outlet Size & Type	:	2” 1502 Female
Quantity	:	1
Top Connection	Box/Pin:	4-1/2 IF Box
Lower Connection	:	4-1/2 IF Pin
Outlet Size & Type	:	2” 1502 Female

D.1.28 Drilling Bumper Subs	:	Company Supplied.
D.1.29 Hole Openers	:	Company Supplied.
D.1.30 Underreamers	:	Company Supplied.

D.2 Handling Tools

D.2.1 Drill Pipe Elevators

Quantity	no.:	2
Make	:	Varco
Model	st:	BX Frame 4
Drill Collars Inserts	150 Tons:	6-1/2”, 8-1/4”, 9-1/2”
Casing Inserts	350 Tons:	Company Supplied.
Drill Pipe Inserts	500 Tons:	5, 5-1/2”
Elevators	750 Tons:	5, 5-1/2”
BOP Handling Elevators	st:	1,000 Refer E6.10

D.2.2 Drill Collar Elevators

Size	inch:	N/A
Quantity	no.:	
Make	:	
Model	:	
Rated Capacity	st:	
Size	inch:	N/A
Quantity	no.:	
Make	:	
Model	:	
Rated Capacity	st:	
Size	inch:	N/A
Quantity	no.:	
Make	:	
Model	:	
Rated Capacity	st:	
Size	inch:	N/A
Quantity	no.:	
Make	:	
Model	:	
Rated Capacity	st:	

D.2.3 Tubing Elevators

Type: Company Supplied.

D.2.4 Drill Pipe Hand Slips

Size	inch:	5-1/2”
Quantity	no.:	1
Make/Type	:	Varco/SDXL
Size	inch:	5
Quantity	no.:	1
Make/Type	:	Varco/SDXL
Size	inch:	3-1/2”
Quantity	no.:	N/A
Make/Type	:	N/A

D.2.5 Power Slips

Make/Type	:	Varco PS 30
Quantity	:	1
Slip Assembly: 20” to 18-5/8”	:	1
Slip Assembly: 16” to 6-5/8”	:	1
Slip Assembly: 2-3/8 to 10-3/4”	:	1
Insert Carriers for Drillpipe	:	5”, 5-1/2”
Insert Carriers for Drill Collars	:	6-1/2, 8-1/4, 9-1/2
Insert Carriers for Casing	:	Company Supplied.
Die Sets for 13-3/8”, 9-5/8” & 7” Carriers	:	Company Supplied.
Mousehole Slips	:	Varco Mousehole Spider, Range 3-1/2” to 14”

D.2.6 Drill Collar Slips

Size	inch:	8-1/2” to 10”
Quantity	no.:	1
Make/Type	:	Varco/DCS-L
Size	inch:	8” to 9-1/2”
Quantity	no.:	1
Make/Type	:	Varco/DCS-L
Size	inch:	5-1/2” to 7”
Quantity	no.:	1
Make/Type	:	Varco/DCS-R

D.2.7 Drill Collar Safety Clamps

Quantity	no.:	1
Model	:	MP-L
Range	:	19-3/8” to 4-1/2”
D.2.8 Tubing Slips	:	Company Supplied.
D.2.9 Tubing Spider	:	Company Supplied.
D.2.10 Drill Collar Lift Subs	:	10 ea.: NC 46 Conn. For 6-1/2” D.C.
	:	5 ea.: 6-5/8 Reg. Conn. For 8-1/4” D.C.
	:	5 ea.: 7-5/8 Reg. Conn. For 9-1/2” D.C.
D.2.11 Dc Lifting Plugs	:	N/A

D.2.12 Bit Breaker

Quantity	no.:	1
For Bit Size	inch:	26
Quantity	no.:	1
For Bit Size	inch:	17-1/2
Quantity	no.:	1
For Bit Size	inch:	14-3/4”
Quantity	no.:	1
For Bit Size	inch:	12-1/4
Quantity	no.:	1

For Bit Size	inch:	8-1/2

D.2.13 Gauge Rings

Sizes	:	26,17-1/2,14-3/4,12-1/4,8-1/2

D.2.14 Elevator Links

Quantity of Sets	no.:	3
Make/Type	:	Varco
Size	inch:	3.5
Length	inch:	120”, 180” & 108”
Rated Capacity	st:	500
Quantity of Sets	no.:	2
Make/Type	:	Varco
Size	inch:	4-3/4”
Length	inch:	264” & 216”
Rated Capacity	st:	750
Quantity of Sets	no.:	1
Make/Type	:	Varco
Size	inch:	4-3/4”
Length	inch:	200”
Rated Capacity	st:	1000

D.2.15 Drill Pipe Spinner Type: Grayspin Mark 30

D.2.16 Mud Saver Bucket

Make	:	Dreco
Size	inch:	9-3/4 to 3-1/2”
Operation	:	Remote from DWS

D.2.17 Ezy Torque

Make/Type	:	Varco
Maximum Line Pull	lb:	31000
Quantity	:	2

D.2.18 Rotary Rig Tongs

Quantity	no:	2
Make/Type	:	Varco HT 100
Size Range (Max. OD/Min. OD)	inch /inch:	17 to 4
Torque Rating	ft-lbs:	Max 100,000, reduces depending on size
Quantity	no:	2
Make/Type	:	Varco HT 50
Size Range (Max. OD/Min. OD)	:	20” / 17-1/4”
Torque Rating	ft-lbs:	50000

D.2.19 Tubing Tongs (Manual)
D.2.20 Tubing Tongs (Power)

D.2.21 Iron Roughneck

Make/Type	:	Varco/AR3200
Size Range (Max OD/Min OD) Drill Collars	inch /inch:	9-1/2” / 4”
Size Range (Max OD/Min OD) Drill Pipe	inch /inch:	6-5/8” / 3-1/2”

D.3 Fishing Equipment

D.3.1 Overshots

Quantity	no.:	1
Make/Type	:	F.S
Top Sub Connection Type	:	6-5/8 Reg.
Overshot OD	inch:	11-3/4”
Max. Catch Size	inch:	9-1/2”
To Catch Size: Spiral Grapple	inch:	9-1/2, 9-3/8, 8-1/2, 8-3/8, 8-1/4, 8-1/8, 7-1/4, 7-1/8, 7, 6-7/8, 6-5/8, 6-1/2, 6-3/8
To Catch Size: Basket Grapple	inch:	5-1/2, 5
Control Rings	:	For Above Grapple
Extension Sub Length	ft.:	2.5
Lipped Guide (oversize, regular)	inch:	11-3/4, 15, 21
Quantity	no.:	1
Make/Type	:	SH Series 150
Top Sub Connection Type	:	4 1/2 IF
Overshot OD	inch:	8-3/8
Max Catch Size	inch:	7-1/4
To Catch Size: Spiral Grapple	inch:	7-1/4, 7-1/8, 7, 6-7/8
To Catch Size: Basket Grapple	inch:	6-5/8, 6-1/2, 6-3/8, 5-1/2, 5
Control Rings	:	For Above Grapple
Extension Sub Length	ft:	2.5
Lipped Guide (oversize, regular)	:	8-3/8, 11

D.3.2 Hydraulic Fishing Jar	:	Company Supplied
D.3.3 Jar Intensifier	:	Company Supplied
D.3.4 Surface Jar	:	Company Supplied

D.3.5 Fishing Bumper Subs

Quantity	no.:	1
Make/Type	:	Gotco
OD Body	inch:	8
Min. ID	inch:	3.5
Stroke	inch:	20
Connection Type	:	6-5/8 Reg.
Quantity	no.:	1
Make/Type	:	Gotco
OD Body	inch:	6-1/2”
Min. ID	inch:	2.25
Stroke	inch:	20
Connection Type	:	4-/12 IF

D.3.6 Safety Joints	:	Company Supplied
D.3.7 Junk Baskets (Reverse Circ.)	:	Company Supplied

D.3.8 Junk Subs	:	Company Supplied
Quantity	no.:	1
Make/Type	:	Gotco
For Hole Size	inch:	11-1/2 to 13
Boot OD	inch:	9-5/8

Connection Type	:	6-5/8 Reg.
Quantity	no.:	1
Make/Type	:	Gotco
For Hole Size	inch:	7-1/2 to 8-1/2
Boot OD	inch:	6-5/8
Connection Type	:	4-1/2 reg.
Quantity	no.:	1
Make/Type	:	Gotco
For Hole Size	inch:	14-3/4 to 17-1/2
Boot OD	inch:	12-7/8
Connection Type	:	7-5/8 reg.

D.3.9 Flat Bottom Junk Mill : Company Supplied

D.3.10 Magnet Fishing Tool

Quantity	no.:	1
Make/Type	:	Gotco/Flush Guide
OD Body	inch:	16
Hole Size	inch:	17.5
Connection Type	:	6-5/8 Reg. Pin

D.3.11 Taper Taps : Company Supplied
D.3.12 Die Collars : Company Supplied

D.3.13 Sheared Drill Pipe Recovery System
(In conjunction w/11-3/4" overshot)

Quantity	no.:	1
Make/Type	:	Gotco/Special Short Guide w/Soft Metal Bottom
OD Body	inch:	11-3/4
Quantity	no.:	1
Make/Type	:	Gotco/Special Short Guide w/Soft Metal Bottom
OD Body	inch:	11-3/4
Quantity	no.:	1
Make/Type	:	Gotco/Mill Extension to Dress 5" Drill Pipe
OD Body	inch:	11-3/4
Quantity	no.:	1
Make/Type	:	Gotco/Mill Extension to Dress 5-1/2" Drill Pipe
OD Body	inch:	11-3/4

E. Well Control / Subsea Equipment

E.1 Lower Riser Diverter Assy. : **N/A**

E.2 Primary BOP Stack (from Bottom to Top)
Stack Complete with:
• Guide Frame yes/no: Yes

• Pick Up Attachment	yes/no:	Yes
• Transport Base	yes/no:	Yes
Size (bore)	inch:	18.75
Working Pressure	PSI:	15000
H2S Service	yes/no:	Yes

E.2.1 Alternate Hydraulic Connector **N/A**

E.2.2 Hydraulic Wellhead Connector

Size	inch:	18-3/4
Make/Type	:	Vetco SHD H-4
Working Pressure	PSI:	15000
Hot Tap for Underwater Intervention ROV	yes/no:	Yes
Spare Connector Same Type	yes/no:	No
Hydrate Seal	yes/no:	Yes (1- O-Ring & 1- Lip Seal Options as STD.)
Glycol Injection (ROV)	yes/no:	Yes (4x1” NPT @ 90 Deg. Increments)
Pilot Operated Check Valve, Close Function	yes/no:	Yes

E.2.2A Hydraulic Wellhead Connector

Size	inch:	18-3/4
Make/Type	:	Cameron DWHC
Working Pressure	PSI:	15000
Hot Tap for Underwater Intervention ROV	yes/no:	Yes
Spare Connector Same Type	yes/no:	No
Hydrate Seal	yes/no:	Yes (1- O-Ring & 1- Lip Seal Options as STD.)
Glycol Injection (ROV)	yes/no:	Yes (4x1” NPT @ 90 Deg. Increments)
Pilot Operated Check Valve, Close Function	yes/no:	Yes

E.2.3 Ram Type Preventers

Preventers

Quantity	no.:	5
Bore Size	inch:	18-3/4
Working Pressure	PSI:	15000
Make	:	Cameron
Model	:	Type TL
Type (single/double)	:	Double x 2, Single x 1
Stack Configuration	:	A1, A2, CL, BSR, SSCSR, VBR, VBR, LFPR, CH
Rams Locks	yes/no:	Yes
Preventer Connection Type - Top	:	CX18
Preventer Connection Type - Bottom	:	CX18
Side Outlets	yes/no:	Yes
Size	inch:	3-1/16
Connection Type	:	No. 6 Cameron Clamp AX Groove

Blind/Shear Rams:

Super/Shear Rams - Less Than or Equal to 13-5/8”	Qty.:	1 Set
Blind/Shear Rams	Qty.:	1 Set

Variable Rams:

Quantity	No.:	2 Sets
Size Range (max/min)	inch / inch:	3-1/2 x 6-5/8 DP
Quantity	no:	
Size Range (max/min)	inch / inch:	
Quantity	no:	
Size Range (max/min)	inch / inch:	

Pipe Rams:

Quantity	Qty.:	1 Set
Size	inch:	5-1/2
Quantity	Qty.:	
Size	inch:	

E.2.4 Stack Configuration

(Blind/Shear/Pipe/Variable)

Upper Shear Rams Cavity 5	:	BSR
Lower Shear Rams Cavity 4	:	SSCSR (Less than or Equal to 13-5/8”)
Middle Upper Ram Cavity 3	:	VBR
Middle Lower Ram Cavity 2	:	VBR
Lower Rams - Cavity 1	:	LFPR
Position of Side Outlets - Kill		
Upper	:	Below BSR (Cavity #5)
Lower	:	Below LFRP (Cavity #1)
Position of Side Outlets - Choke		
• LMRP	:	Below Lower Annular (#2)
• Stack	:	Below Top VBR (Cavity #3)
• Stack	:	Below Bottom VBR (Cavity #2)

E.2.5 Annular Type Preventer On Stack

Size	inch:	n/a
Working Pressure	PSI:	n/a
Make/Type	:	n/a

E.2.6 Mandrel

Make/Type	:	Cameron 18-3/4 10 HC
Size	inch:	18.75

E.2.7 Fail-Safe Hydraulic Valves

(Kill & Choke)

Quantity on Each Side Outlet	no.:	2
Size (ID)	inch:	3-1/16”
Make/Type	:	Cameron MCS
Working Pressure	PSI:	15000
Solid Block	yes/no:	Yes

E.2.8 Subsea Accumulators
(See also E.7.1 - Surface Accumulator Unit)

LMRP

Quantity	no.:	2 ea. 10 gal. (Pods)
Useful Capacity per Accumulator (w/o Pre-Charge)	US Gal.:	0
Bottle Working Pressure	PSI:	6000
Quantity	no.:	6 ea. 15 gal.
Useful Capacity per Accumulator (w/o Pre-Charge)	US Gal.:	0
Bottle Working Pressure	PSI:	6000
Quantity	no.:	4 ea. 60 gal.
Useful Capacity per Accumulator (w/o Pre-Charge)	US Gal.:	0
Bottle Working Pressure	PSI:	6000

BOP

Quantity	no.:	6 ea. 15 gal.
Useful Capacity per Accumulator (w/o Pre-Charge)	US Gal.:	0
Bottle Working Pressure	PSI:	6000
Quantity	no.:	8 ea. 80 gal.
Useful Capacity per Accumulator (w/o Pre-Charge)	US Gal.:	0
Bottle Working Pressure	PSI:	6000

E.2.9 Hydraulic Control Pod/Receptacles

Quantity	no.:	2
Redundancy	%:	100
Color Coded	yes/no:	Yes
Remote Regulation of Operating Pressure for Functions Requiring Lower Operating Pressure	yes/no:	Yes
Spare Control Pod	yes/no:	No
Deadman System	yes/no:	Yes
Pressure & Temperature Sensor's LMRP	yes/no:	Yes

E.3 Primary Lower Marine Riser Package
(From Bottom to Top)

E.3.1 Hydraulic Connector

Make/Type	:	Cameron 18-3/4-10 HC or Equivalent
Size	inch:	18.75
Working Pressure	PSI:	10000
Hot Tap for Underwater Intervention	yes/no:	Yes
Spare Connector Same Type	yes/no:	No

E.3.2 Annular Type Preventer (LMRP)

Size	inch:	18-3/4
Quantity	no.:	2
Working Pressure	PSI:	10000
Make/Type (2*70.5=141” Total Height)	:	Cameron Type DL

E3.3 Flex Joint

Make/Type	:	Oil States 18-3/4”
Size	inch:	21
Max Deflection	degrees:	20 (10 from Vertical)

E.3.4 Riser Adapter

Make/Type	:	Vetco HMF-Class H
Size	inch:	21 (Minimum ID-19.25”)

E.3.5 Connection Lines to Riser

Type (Rigid Loops, Coflexip, etc.)	Make:	Coflexip
	Size:	3” ID x 200’
	WP:	15,000 PSI
	Collapse PSI:	12,710 PSI

E.3.6 Riser Centralizer : Hydralift

E.4 Annular Gas Handler

Make/Type	:	Supplied by Company at Later Date. Hard Piping & Control Functions to be Supplied by Contractor.
Rating	:	N/A
Number Outlets	:	N/A
Number Valves	:	N/A

E.5 Secondary Lower Marine Riser Pack. : N/A

E.6 Primary Marine Riser System

E.6.1 Marine Riser Joints : Designed for 10,000 Ft. Water Depth

Make/Mode	:	Vetco / HMF-Class H
OD	inch:	21.25, 21.5
ID	inch:	19.5
Wall Thickness	inch:	.875 & 1.00
Average Length of Each Joint	ft.:	90
Weight of One Complete Joint (In Air)	39,920	lbs.
11 ea. x1” wall Slick	37,340	lbs. (Future for 10,000 foot water depth.)
8 ea. x 0.875” wall Slick	62,035	lbs., 8,000’ rated buoyancy, 52” OD
3 ea. x 0.875” wall buoyed	62,287	lbs., 7,000’ rated buoyancy, 52” OD
11 ea. x 0.875” wall buoyed	62,216	lbs., 6,000’ rated buoyancy, 52” OD
11 ea. x 1.000” wall buoyed	60,707	lbs., 5,000’ rated buoyancy, 52” OD
11 ea. x 1.000” wall buoyed	60,069	lbs., 4,000’ rated buoyancy, 52” OD
11 ea. x 1.000” wall buoyed	55,895	lbs., 3,000’ rated buoyancy, 52” OD
11 ea. x 0.875” wall buoyed	54595	lbs., 2,000’ rated buoyancy, 52” OD
11 ea. x 0.875” wall buoyed	47356	lbs., 1,000’ rated buoyancy, 42” OD

9 ea. x 1.000” wall buoyed		
	no.:	90 ea. 90’ jts.
Quantity	grade:	API 5L Grade X80 Mod.
Pipe Material	PSI:	80 KSI
Minimum Yield Strength	:	HMF-Class H
Type Riser Connectors	no.:	N/A
Dogs		

Pup Joints

Quantity	no.:	1
Length	ft.:	45.0
Quantity	no.:	1
Length	ft.:	37.5 X0
Quantity	no.:	1
Length	ft.:	30.0
Quantity	no.:	1
Length	ft.:	22.5
Quantity	no.:	1
Length	ft.:	15

E.6.2 Telescopic Joint

Make/Type	:	Vetco
Size (ID)	inch:	19.75
Stroke	ft:	65
Double Seals	yes/no:	Yes
Working Pressure	PSI:	500
Spare Telescoping Joint	yes/no:	Yes
Location	:	Shore or Rig
Rotating Support Ring for Riser Tensioners	type:	Vetco SDC
Connection Points	no.:	6

E.6.3 Kill/Choke Lines

Quantity	no.:	2
Outside Diameter	inch:	6.625
Inside Diameter	inch:	4.5
Working Pressure	PSI:	15000
LMRP Isolation Valves	yes/no:	Yes. Fail Open

E.6.4 Booster Lines

Quantity	no.:	1
Outside Diameter	inch:	4.5
Inside Diameter	inch:	3.83
Working Pressure	PSI:	6000
LMRP Isolation Valve (Mud Boost Valve)	yes/no:	Yes, Failsafe Close

E.6.5 Hydraulic Supply Lines

Quantity	no.:	1
Outside Diameter	inch:	3.5
Inside Diameter	inch:	2.62
Working Pressure	PSI:	5000

E.6.6 Upper Ball (Flex) Joint

Make/Type	:	Oilstates Diverter 3
Size	inch:	21-1/4
Maximum Deflection	deg.:	20 (10 from vertical)
Spare Upper Ball (Flex) Joint	yes/no:	No

E.6.7 Buoyancy Modules (If Fitted)

Make	:	Cumming
Quantity of Buoyed Riser Joints	no.:	78
OD of Buoyed Riser Joints	inch:	42” on 1000’ Buoyancy, 52” all other Buoyancy Joints
Length of Each Module	ft.:	14
Volume of Each Module	ft3:	42”/32.50, 52”/69.30 (12 mod. Per Joint)
Module Lift in Seawater	2,287	lbs., 8,000’ rated buoyancy, 52” OD
	2,298	lbs., 7,000’ rated buoyancy, 52” OD
	2,495	lbs., 6,000’ rated buoyancy, 52” OD
	2,620	lbs., 5,000’ rated buoyancy, 52” OD
	2,695	lbs., 4,000’ rated buoyancy, 52” OD
	2,828	lbs., 3,000’ rated buoyancy, 52” OD
	2,938	lbs., 2,000’ rated buoyancy, 52” OD
	1,437	lbs., 1,000’ rated buoyancy, 42” OD
Rated Capacity	ft:	1,000 to 8,000

E.6.8 Marine Riser Spider

Make/Type	:	Vetco / Hydraulic

E.6.9 Marine Riser Gimbal

Make/Type	:	Vetco

E.6.10 Riser Handling Tools

Tool Riser Lifting	no.:	3
1,000 Ton Solid Body Elevators	no.:	1
BX Frame 5, 1,000 Ton	no.:	1, Fitted w/8-5/8” Insert Bushing
Type	:	HMF - Class h
Torque Wrenches	:	2 - Dual Speed

E.6.11 Riser Test Tools

Quantity	no.:	2
Type	:	HMF-Class H Hydraulic Test Tool (Pin)

E.6.12 Instrumented Riser Jt. : N/A

E.7 Secondary Marine Riser Sys. : N/A

E.8 Diverter BOP (For Installation in Fixed Housing)

Make/Type	:	Hydril 60
Max Bore Size	inch:	21-1/4

Working Pressure	PSI:	500
Number of Diverter Outlets	no.:	2
Outlet OD	inch:	14
Insert Packer Size ID	inch:	N/A CSO
Element Type	:	Nitrile Rubber
Running from Diverter to	:	Overboard, port/stbd. / Poorboy MGS

E.8.1 Diverter Flowline

Quantity	no.:	1
ID of Flowline	inch:	18 Nominal
Valve Types	:	Diverter Sleeve
Size	inch:	18
Working Pressure	PSI:	500
Control Valve Type (Air / Hydraulic / etc.)	:	Hydraulic
Remote Controlled from	Location:	Drillers Workstation

E.8.2 Diverter Control Panels

Driller's Panel

Make	:	Cameron
Model	:	Multiplex
Location	:	Drillers Workstation
Locking / Unlocking Control	yes/no:	Yes

Remote Panel

Make	:	Cameron
Model	:	Multiplex
Location	:	Control Room
Locking/Unlocking Control	yes/no:	Yes

E.9 Subsea Support System

E.9.1 Riser Tensioners : Ability to Skid Tensioners from Well Centerline

Quantity	no.:	6
Make/Type	:	Hydralift - Inline
Capacity Each Tensioner	st.:	800 Kips
Maximum Stroke	ft.:	50 - Max. Stroke
Wireline Size	inch:	N/A
Line Travel	ft.:	N/A
Independent Air Compressors	yes/no:	Yes
Independent Air Drying Unit	yes/no:	Yes
Riser Recoil System	yes/no:	Yes

E.9.2 Guideline System : N/A

E.9.3 Remote Guideline Repl. Tool : N/A

E.9.4 Remote Guideline Cutting Tool : N/A

E.9.5 Pod Line Tensioners : No, turn Down Sheaves Complete w/Storm Loop within Moonpool Included within Design Layout.

E.9.6 Tensioner / Compensator Air Pressure Vessels

Quantity	no.:	30
Total Capacity	ft3:	2747
Read Working Pressure	PSI:	3000
Pressure Relief Valve Installed	yes/no:	Yes

Standby APVs

Quantity	no.:	16
Total Capacity	ft3:	588
Rated Working Pressure	PSI:	4000
Pressure Relief Valve Installed	yes/no:	Yes

E.10 BOP Control System

Cameron Mux system including: 2 ea. remote control panels, one located in Driller's House & one in the Control Room, both panels incorporate full function & monitoring system for BOP's & diverter system. In addition, a BOP Workstation located in the Subsea Shop w/keyboard & monitor for functioning of BOP. One each pod test stand & Mux system analyzer consisting of test stand & portable computer test set. Two each Mux cable reels complete w/11,000' of Multiplex cable, one reel blue & one reel yellow for functioning yellow & blue pods plus one spare. Two each stack mounted pods, complete w/subsea electronics assemblies; one is designated for yellow side and one is designated for the blue side.

E.10.1 Surface Accumulator Unit (See also E.2.8 & E.4.8 - Subsea Accumulators)

Make	:	Cameron
Model/Type	:	Mux
Location	:	Accumulator Room
Soluble Oil Reservoir Capacity	US Gal.:	500
Oil/Water Mix Capacity	US Gal / Min.	1200
Glycol Reservoir Capacity	US Gal.:	300
No. of Bottles Installed	no.:	45 Main, 6 Diverter = 51 Total
Useful Cap. Per Accum. (w/o pre-charge)	US Gal.:	40
Bottle Working Pressure	PSI:	5000
Control Manifold Model	:	Multiplex
Regulator Type	:	Pressure Switch / Relief Valves
Total Useful Accum. Volume (Surface & Stack) Equals all Preventor Opening & Closing Volumes	yes/no:	Yes
Plus Percent Additional Volume	%:	50

E.10.2 Accumulator Hydraulic Pumps

Electric Driven

Quantity	no.:	2

Power Source	:	From Bus A
Make	:	FMC
Model	:	P509 898
Each Driven by Motor of Power	hp:	100
Flow Rate of Each Pump	US Gal / Min.	32
At Minimum Operating Pressure	PSI:	5000
Secondary		
Quantity	no.:	1
Power Source	:	From Bus B
Make	:	FMC
Model	:	P509 898
Each Driven by Motor of Power	hp:	100
Flow Rate of Each Pump	US Gal / Min.	32
At Minimum Operating Pressure	PSI:	5000

E.10.3 Driller's Control Panel

Graphic control panel at driller's position showing subsea functions w/controls for the following functions of the BOP Stack		
Location	:	Driller Work Station
Boost Line Control Valve	yes/no:	Yes
Marine Riser Connector	yes/no:	Yes
All Annular Type BOPs	yes/no:	Yes
All Ram Type BOPs	yes/no:	Yes
Lock for Ram Type BOPs	yes/no:	Yes
Wellhead & LMRP Connector	yes/no:	Yes
Inner & Outer Kill & Choke Line Valves	yes/no:	Yes
Low Acc. Pressure Warning	yes/no:	Yes
Low Reservoir Level Warning	yes/no:	Yes
Low Rig Air Pressure Warning	yes/no:	Yes
Pressure Regulator for Annular	yes/no:	Yes
Flowmeter	yes/no:	Yes
Quantity of Pressure Gauges	no.:	29
Emergency Push Button for Automatic Riser Disconnection	:	Yes
Other control Functions	yes/no:	Yes
Control Panel Make	:	Cameron
Control Panel Model	:	Multiplex

E.10.4 Remote Control Panels

Ability to Operate Main Closing Unit Valves (directly).	yes/no:	No
Quantity	no.:	2
Make/Model	:	Cameron / Multiplex
Locations	:	Driller's Workstation & Control Room
Operating System Routing (Direct/via Primary Control Panel)	:	Direct Dual bus

E.11 Subsea Control System

E.11.1 Hose Reels

Quantity	no.:	2 BOP Control (MUX)
Location	:	Moonpool
Make/Type	:	Cameron
Maximum Storage Length Ea.	ft.:	11000
Drive Motor Type	:	Air
Quantity	no.:	1 Hotline
Location	:	Moonpool
Make/Type	:	Synflex (Kevlar)
Maximum Storage Length Ea.	ft.:	11000
Drive Motor Type	:	Air

E.11.2 Pod Hose Type: N/A (Mux System)

E.11.3 Pod Hose Manifold

Make/Model	:	None
Surface Test Stump	yes/no:	Yes

E.11.4 Surface Test Pod yes/no: Yes

E.12 Deadman System : Yes - Part of Cameron Controls

E.13 Subsea Auxiliary Equipment

E.13.1 Hole Position Indicator

Make/Type	:	Simard
Quantity of Monitors	no.:	2 (Blue Pod / Yellow Pod)
Monitor Location	:	Driller's Work Station
Monitor Location	:	Control Rooms
Recorder	yes/no:	No

E.13.2 Riser Angle Indicator

Make/Type	:	Simrad
Quantity of Monitors	no.:	2 (Blue Pod/Yellow Pod)
Monitor Location	:	Driller's Work Station
Monitor Location	:	Control Room
Recorder	yes/no:	No
Location	:	Flex Joint Neck, Lower Stack

E.13.3 Slope Indicators

Make	:	Regan
Quantity	no.:	2
Provision for Installation on BOP	yes/no:	Yes
Pin Connector	yes/no:	No
Other	:	Lower Stack LMRP

E.13.5 ROV System : Power & Foundations Supplied

E.14 Choke Manifold

E.14.1 Choke Manifold (For Instrumentation, See H.3)

Make	:	Stewart & Stevenson
Minimum ID	inch:	3-1/16
Maximum WP	PSI:	15000
H2S Service	yes/no:	Yes
Quantity of Fixed Chokes	no.:	N/A
Make	:	N/A
Model	:	N/A
Size (ID)	inch:	N/A
Quantity of Adjustable chokes	no.:	2
Make	:	Stewart & Stevenson / Foley
Model	:	Model QF2
Size (ID)	inch:	3-1/16”
Quantity of Power Chokes	no.:	2
Make	:	Stewart / Stevenson / Foley
Model	inch:	Model QF2 Hydraulic
Size (ID)	yes/no:	3-1/16”
Power Choke Remote Control panel		Yes
Make	:	Houston Digital
Model	:	CPU w/ 2 ea. 27” Redundant Monitors & Hyd. Back-up.
Location	yes/no:	Driller’s Workstation / Choke Manifold
Glycol Injection		No Inlet Available

E.14.2 Flexible Choke & Kill Lines (Connecting Riser to Drilling Unit)

Quantity	no.:	2
Make/Type	:	Coflexip
ID	inch:	3”
Working Pressure / Test Pressure	PSI/PSI:	15,000/22,500
Quantity	no.:	N/A
Make/Type	:	N/A
ID	inch:	N/A
Working Pressure / Test Pressure	PSI/PSI:	N/A

E.15 BOP Testing Equipment

E.15.1 Hydraulic BOP Test Pump

Make	:	Shaffer
Model/Type	:	Electro Hydraulic Variable Speed 5 GPM
Pressure Rating	PSI:	22500
Chart Recorder	yes/no:	Yes

E.15.2 BOP Test Stump

Quantity	no.:	1
Test Pressure	PSI:	15000
Type	:	Vetco / Cameron
Size	:	18.75
Connected to Deck (Welded/Bolted)	:	Bolted

E.16 Wellhead Running/Retrieving/Testing Tools (RT/RRT/TT)

E.16.1 RT's for Casing Installation	:	Company Supplied
E.16.2 RRT's for Casing Installation	:	Company Supplied
E.16.3 Miscellaneous Tools	:	Company Supplied
E.16.4 DP Hang-Off Subs	:	Company Supplied
E.16.5 Mini-Hose Bundle for Hyd. R. Tools		Company Supplied
E.16.6 Emergency BOP Recovery System	yes/no:	Yes
Make/Type	:	Cameron

F.1 High Pressure Mud System

System Working Pressure	PSI:	7500
System Test Pressure	PSI:	11250
Built to Which Design Standard	:	ANSI, API

F.1.1 Mud Pumps

Quantity	no.:	4
Make	:	Continental Emsco
Model	:	FC-2200
Type (Triplex/Duplex)	:	Triplex
Liner Sizes Available	inch:	5" - 9"
Mud Pump Drive Motors	no.:	2
Motor Type	:	AC
Continuous Power Rating Per Motor	hp:	1150
Fluid End	Type:	Two Piece
Maximum Working Pressure	PSI:	7500
Test Pressure	PSI:	11250
Pump Stroke Counter	Type:	Hitec
Supercharging Pump	Type:	Halco
Driven by Motor of Power	hp:	100
Discharge/Suction Line ID	inch / inch:	5"-12"
MP Pulsation Dampener	Type:	White Rock
Soft Pump	:	1 System
Reset Relief Valve	Type:	Retsco
Working Flowrate Per Pump @ 90% of Max. SPM	SPM:	90 SPM @ 90%
Maximum SPM	SPM:	100 SPM @ 100%

F.1.2 Tansfer Pumps / Mixing Pumps (Centrifuge)
Treatment Pumps (Desilter / Desander)

Quantity	no.:	4
Make	:	Halco
Model	:	2500
Driver Motor Type	:	Electric / Belt
Power Output	hp:	100
Impeller	:	14"
Impeller Speed	RPM:	1,200 RPM
Packing Type	:	Mechanical Seal

Mixing Pumps

Quantity	no.:	3
Make	:	Halco
Model	:	2500
Driver Motor Type	:	Electric / Belt
Power Output	hp:	125
Impeller	:	14”
Impeller Speed	RPM:	1200 RPM
Packing Type	:	Mechanical Seal

Charging Pumps

Quantity	no.:	4
Make	:	Halco
Model	:	2500
Driver Motor Type	:	Electric/Belt
Power Output	hp:	100
Impeller	:	14”
Impeller Speed	RPM:	1200
Packing Type	:	Mechanical Seal

Column Transfer

Quantity	no.:	6 (4 Reserve Mud & 2 Brine)
Make	:	Halco
Model	:	2500
Driver Motor Type	:	Electric
Power Output	hp:	125
Impeller	:	11.5
Impeller Speed	RPM:	1800
Packing Type	:	Mechanical Seal

F.1.3 Booster Pump

Quantity	no.:	Rig Mud Pump
Make/Type	:	See Section F.1.1
Pumping Capacity (ea)	US Gal / Min.	See Section F.1.1
Drive Motor Type	:	See Section F.1.1
Power Output	hp:	See Section F.1.1

F.1.4 StandPipe Manifold

Quantity of Standpipes	no.:	2 @ 7500 PSI WP
Standpipes ID	inch:	5
H-Type Standpipe Manifold	yes/no:	Yes
Kill Line Outlet	yes/no:	Yes
Fill-Up/Bleed-Off Line Outlet	yes/no:	Yes
Outlets (Total)	no.:	4
ID	inch:	5 & 3

Type Connections	:	Weco
Dimensions OD X ID	inch x inch:	6x5
Design Standard	:	ANSI, API

F.1.5 Rotary Hoses

Quantity	no.:	2 @ 7500 PSI WP
Make/Type	:	Beattie
ID x Length	inch x ft.:	5 x 126
Snubbing Lines	yes/no:	Yes

F.1.6 Cementing Hose

Type (i.e. Coflexip)	:	Beattie
Length	ft.:	85
ID	inch:	3
Working Pressure	PSI:	15000

F.1.7 Chiksan Steel Hoses

Integral Non-Screwed	yes/no:	Yes
Make/Type	:	1502
ID Nominal	inch:	2
Section Length	ft.:	12
Quantity	no.:	4
Section Length	ft.:	10
Quantity	no.:	4
Sweep Swivels, Make/Type	:	LS15/Style 50
Nom. Size ID	inch:	2
Fittings, Non-Screwed Type	yes/no:	Yes
Suitable for H2S Service	yes/no:	No

F.2 Low Pressure Mud System

F2.1 Mud Tanks

Quantity	no.:	15
Column Tanks		
Quantity	:	4
Capacity 100%	bbls:	10304
Surface Tanks		
Quantity	:	10
Capacity 90%	bbls:	4141
Capacity Tank No.1	bbls:	201
Type (Active/Reserve)	:	Chemical
Capacity Tank No. 2	bbls:	201
Type (Active/Reserve)	:	Chemical
Capacity Tank No. 3	bbls:	183
Type (Active/Reserve)	:	Chemical
Capacity Tank No. 4	bbls:	183
Type (Active/Reserve)	:	Chemical
Capacity Tank No. 5	bbls:	534
Type (Active/Reserve)	:	Upper Hull Reserve
Capacity Tank No. 6	bbls:	689
Type (Active/Reserve)	:	Upper Hull Reserve
Capacity Tank No. 7	bbls:	508

Type (Active/Reserve)	:	Upper Hull Reserve
Capacity Tank No. 8	bbls:	575
Type (Active/Reserve)	:	Active
Capacity Tank No. 9	bbls:	566
Type (Active/Reserve)	:	Active
Capacity Tank No. 10	bbls:	501
Type (Active/Reserve)	:	Active
Mixer in each Tank	yes/no:	Yes
Mud Guns in each Tank	yes/no:	Yes

F.2.2 Processing Tanks

Quantity	no.:	6
Total Capacity (@100%)	bbls.:	464
Capacity Sand Trap Tank	bbls.:	119
Capacity Degasser Tank	bbls.:	69
Capacity Desander Tank	bbls.:	69
Capacity Desilter Tank	bbls.:	69
Capacity Desilter Tank	bbls.:	69
Capacity Treated Mud Tank	bbls.:	69

F.2.3 Pill / Slug Tank

Capacity (@90%)	bbls.:	196
Mud Agitator	yes/no:	Yes
Mud Guns	yes/no:	Yes

F.2.4 Trip Tank

Capacity @ 100%	bbls:	100 (2 x 50)
Capacity/Foot	bbls/ft:	4.6
Level Indicator	yes/no:	Yes
Electric Pump make	:	Halco x 2
Model Type	:	Centrifical
Motor Output	hp:	30
Facility for Casing Fill-Up	yes/no:	No
Alarm & Strip Chart Recorder (See H.1.11)	yes/no:	Yes

F.2.5 Stripping Tank

Capacity (@100%)	bbls:	10 Approx.
Capacity/Foot	bbls/ft:	0.8
Equalizing Facility w/Trip Tank	yes/no:	Yes
Transfer Pump	yes/no:	No
Alarm & Strip Chart Recorder (See H.1.11)	yes/no:	Yes

F.2.6 Chemical Mixing Tank	:	Separate Mixing Tank Above for Mixing Caustic
Capacity	Gal.:	100 Model DA-13
Chemical Mixer Type	:	Portable Rotor/Stator - Dual Impeller Mixing Assembly, 1/3 hp air motor

F.2.7 Shale Shakers

Primary:

Quantity	no.:	7
Make/Model	:	Brandt/LCM-2D CS
Type	:	Linear Motion/Cascading
Driven by No. of Electric Motor	no.:	3
Design Flowrate	bbl/min:	Depending on Mud Characteristics

Cascading:

Quantity	no.:	See Above.
Make/Model	:	See Above.
Type	:	See Above.
Driven by No. of Electric Motor	no.:	See Above.
Design Flowrate	bbl/min:	See Above.

F.2.8 Desander

Quantity	no.	REMOVED
Make/Model	:	
Type	:	
Number of Cones x Sizes	no.x inch:	
Type/Size Centrifugal Pump	:	
Driven by Electric Motor of what power?	hp:	
Is pump Dedicated to Desander	yes/no:	
Max. Flowrate	gal / min:	

F.2.9 Desilter

Quantity	no.:	REMOVED
Make/Model	:	
Type	:	
Number of Cones x Sizes	no.xinch:	
Type/Size Centrifugal Pump	:	
Driven by Electric Motor of	hp:	
Is Pump Dedicated to Desilter	yes/no:	
Max. Flowrate	gal/min:	

F.2.10 Mud Cleaner

Quantity	no.:	Desilter Cones Over One Linear Motion Shaker
Make/Model	:	Brandt, LCM-2D/LMC
Type	:	Desilter Cones Over One Linear Motion Shaker
Number of Cones x Sizes	no.xinch:	40 x 4 w/Discharge Over Shaker or Overboard
Type/Size Centrifugal Pump	:	2 ea 8 x 6 x 14
Driven by Electric Motor of	hp:	100 ea.
Is Pump Dedicated to Mud cleaner	yes/no:	NO
Max. Flowrate	bbl/min:	2400

Inlet & Outlet for Centrifuge to be Provided

F.2.11 Mud/Gas Separator (Poor Boy)	:	Shall be capable to direct flow from flowline to MGS
Make/Type	:	Swaco
Gas Discharge Line ID	inch:	12” Nominal
Gas Discharge Location, Primary	:	Top

Can Discharge Be Tied Into Burner System	yes/no:	No
Mud Seal Height	feet:	22
Calculated Gas Throughput	mmscf:	20
Dimensions	:	Overall - 48 ft. x 6 ft.

F.2.12 Degasser

Quantity	:	2
Make/Type	:	Burgess/1500
Capacity	:	1000 GPM X 2
Type/Size Centrifugal Pump	:	N/A
Driven by Electric Motor of Power	hp:	N/A
Discharge Line Running to	:	6”
Vacuum Pump Make	:	Internal
Type	:	N/A

F.2.13 Mud Agitators

Quantity	no.:	5
Make/Model	:	Brandt/MA-20
Driven by Motor of Power	hp:	20
Located in Tanks (See F.2.1 for Tank Numbers)	:	1,2,3,4 & Slug Tanks
Quantity	no.:	12
Make/Model	:	Brandt / MA-25
Driven by Motor of Power	hp:	25
Located in Tanks (See F.2.1 for Tank Numbers)	:	5,6,7,8,9, & 10 (2 in ea. tank)

F.2.14 Mud Centrifuge

Quantity	no.:	1
Make/Model	:	MI SWACO
Feed Pump Make/Model	:	

F.2.15 Mud Hopper

Quantity	no.:	2
Make/Model	:	Vortex Ventures
Feed Pump Make/Model	:	Mixing Pumps

F.2.16 Shearing Hoppers

Quantity	no.:	2
Make/Model	:	Vortex Ventures
Feed Pump Make/Model	:	Mixing Pumps

F.2.17 Deck Hoppers

Quantity	no.:	1
Make/Model	:	Halco
Feed Pump Make/Model	:	Mixing Pumps

F.3 Bulk System

F.3.1 Barite/Bentonite Silos

Quantity	no.:	5
Capacity of Each Silo	C.F.:	2725
Locations	:	Columns
Type Weight Loadcell	:	Hydraulic
Manufacturer	:	Martin Decker
Pressure Rating	:	65
Relief Valve(s) Installed	yes/no:	Yes

F.3.2 Barite Day Tanks

Quantity	:	2
Capacity of Each Silo	C.F.:	1030
Locations	:	Cmt. Room
Type Weight Loadcell	:	Hydraulic
Manufacturer	:	Martin Decker
Pressure Rating	PSI:	65
Relief Valves (s) Installed	yes/no:	Yes

F.3.3 Surge Tank For Barite

Quantity	no.:	2
Capacity of Each Tank	C.F.:	75
Type Weight Loadcell	:	Hydraulic
manufacturer	:	Martin Decker
Pressure Rating	PSI:	65
Relief Valve (s) Installed	yes/no:	Yes

F.3.4 Cement Silos

Quantity	no.:	3
Capacity of Each Silo	C.F.:	2725
Locations	:	Columns
Type Weight Loadcell	:	Hydraulic
Manufacturer	:	Martin Decker
Pressure Rating	PSI:	65
Relief Valve (s) Installed	yes/no:	Yes
Separate Mud/Cement Loading Facilities	yes/no:	Yes
Discharge Line for Cement Independent From Barite/Bentonite Discharge Line	yes/no:	Yes

F.3.5 Cement Day Tanks

Quantity	no.:	2
Capacity of Each Silo	C.F.:	1030
Locations	:	Cement Room
Type Weight Loadcell	:	Hydraulic
Manufacturer	:	Martin Decker
Pressure Rating	PSI:	65

Relief Valve (s) Installed	yes/no:	Yes
F.3.6 Surge Tank for Cement	:	Third Party
F.3.7 Bulk Transfer System		
(See also C.1.8 - Compressed Air System)		
Independent Air System for the Silos & Surge Tanks consisting of a high -volume low-pressure Compressor & Air Dryer	yes/no:	No
Air Reduced from Main Air Supply through Pressure Regulators	yes/no:	Yes
Separate Volume Tank & Dryer	yes/no:	No
G. Casing / Cementing Equipment	:	Company Supplied
G.1 Casing Equipment	:	Company Supplied
G.1.1 API Casing Drift	:	Company Supplied
G.1.2 Clamp-on CSG Thread Protectors		Company Supplied
G.1.3 Casing Elevator	:	Company Supplied
Manufacturer	:	
Type	:	
Capacity	st:	
Inserts for	inch:	
G.1.3 Side Door Casing Elevator	:	Company Supplied
G.1.4 Single Joint Casing Elevator	:	Company Supplied
G.1.5 Slip Type Elevator / Spiders	:	Company Supplied
Quantity	no.:	Company Supplied
G.1.6 Casing Slips (Hand)		
Quantity	no.:	Company Supplied
Make/Type	:	Company Supplied
For OD Casing	inch:	Company Supplied
Quantity	no.:	Company Supplied
Make/Type	:	Company Supplied
For OD Casing	inch:	Company Supplied
Quantity	no.:	Company Supplied
Make/Type	:	Company Supplied
For OD Casing	inch:	Company Supplied
G.1.7 Casing Bowls		
Quantity	no.:	Company Supplied
Make/Type	:	Company Supplied
For OD Casing (max/min)	:	Company Supplied

Quantity	:	Company Supplied
Make/Type	:	Company Supplied
For OD Casing (max/min)	:	Company Supplied

G.1.8	**Casing Tongs**	:	Company Supplied
G.1.9	**Power Casing Tongs**	:	Company Supplied
G.1.10	**Power Unit for Casing & Tubing Tongs**		
Quantity		no.:	1 Central Hydraulic Unit
Driven by Electric Motor		yes/no:	Yes

G.1.11	**Casing Circulating Head (Swedge)**		Company Supplied
G.1.12	**Casing Spears (Internal)**	:	Company Supplied
G.1.13	**Casing Cutters (Internal)**	:	Company Supplied
G.1.14	**Crossover Casing to Drill Pipe**	:	Company Supplied
G.1.15	**Casing Scrappers**	:	Company Supplied

G2 Cementing Equipment

G.2.1	**Cement Unit**	:	Company Supplied

G.2.2 Cementing Manifold

Discharge Manifold Working Pressure	PSI:	15000
Cement Pump Discharge Lines Min. ID	inch:	3 Nominal
Cement Pump Discharge Lines Working Pressure	PSI:	15000

G.2.3	**Cement Kelly**	:	N/A
G.2.4	**Cementing Tubing**	:	N/A

H. Instrumentation/Communication

H.1 Drilling Instrumentation at Driller's Position

Make/Type	:	Hitec Smart Drilling Instrumentation
Sensor Type	:	Electronic Deadend
Calibrated for Number of Lines Strung (6,8,10,12, etc.)	no.:	User Selectable

H.1.1 Weight Indicator

Make/Type	:	Hitec Smart Drilling Instrumentation
Sensor Type	:	Electronic Deadend
Calibrated for Number of Lines Strung (6,8,10,12, etc.)	no.:	User Selectable

H.1.2 Standpipe Pressure Gauges

Quantity	no.:	2 ea. local, 2 ea. DWS, 1 ea. Choke Panel
Make/Type	:	Hitec Smart Drilling Instrumentation / HDI
Pressure Range (Maximum)	PSI:	10,000

H.1.3 Choke Manifold Pressure Gauge

Quantity	no.:	2 Local, 2 Hitec SDI, 2 Choke Panel

Make/Type	:	HDI
Pressure Range (Maximum)	PSI:	0 - 16,000 / Selectable

H.1.4 Rotary Speed Tachometer

Make/Type	:	Hitec Smart Drilling Instrumentation
Capacity Range (Maximum)	rpm:	0-200

H.1.5 Rotary Torque Indicator : Hitec Smart Drilling Instrumentation

H.1.6 Motion Compensator Instruments

Make/Type	:	Hitec Smart Drilling Instrumentation
Hook Position Indicator	yes/no:	Yes on SDI Screens
Lock/Unlock Indicator	yes/no:	Yes

H.1.7 Pump Stroke Counters

Make/Type	:	Hitec Smart Drilling Instrumentation
One Pump Stroke Indicator & One Cumulative Pump Stroke Counter for each Pump	yes/no:	Yes

H.1.8 Tong Torque Indicator

Make/Type	:	Hitec
Capacity Range (Maximum)	ft.lbs.:	Dependent on Tong Length Input

H.1.9 Pit Volume Totalizer

Make/Model	:	Hitec Smart Drilling Instrumentation
Floats in Active Mud Tanks	yes/no:	Yes
Floats in Reserve Mud Tanks	yes/no:	Yes
Loss/Gain Indicator	yes/no:	Yes
Alarm (Audio & Visual)	yes/no:	Yes

H.1.10 Mud Flow Indicator

Make/Model	:	Hitec Smart Drilling Instrumentation
High/Low Alarm (Audio & Visual)	yes/no:	Yes

H.1.11 Trip Tank Indicator

Make/Model	:	Hitec Smart Drilling Instrumentation
Chart Recorder	yes/no:	Data Logging
Alarm	yes/no:	Yes

H.1.12 General Alarm Sys. yes/no: Yes

H.1.13 Automatic Driller

Make/Type : Hitec Smart Drilling Instrumentation

H.1.14 Remote Choke Control Unit (See E.14.1)

Make/Model : Houston Digital

H.2 Drilling Parameter Recorder

Quantity	no.:	User Defined Elect. Data Acquisition
Location - 1	:	Driller's House
Location - 2	:	Drilling Ofices
Make/Type	:	Hitec Smart Drilling Instrumentation
Quantity of Pens	no.:	User Defined Elect Data Acquisition
Parameter Recorded	:	User Defined Elect Data Acquisition
Parameter Recorded	:	User Defined Elect Data Acquisition
Parameter Recorded	:	User Defined Elect Data Acquisition
Parameter Recorded	:	User Defined Elect Data Acquisition
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Parameter Recorded	:	User Defined Elect Data Acquisition
Parameter Recorded	:	User Defined Elect Data Acquisition
Parameter Recorded	:	User Defined Elect Data Acquisition

H.3 Instrumentation at Choke Manifold

H.3.1 Standpipe Pressure Gauge

Make/Type	:	Strain Gauge
Pressure Range (Maximum)	PSI:	0-10,000

H.3.2 Choke Manifold Pressure Gauge

Make/Type	:	Strain Gauge
Pressure Range	PSI:	0-15,000
H.3.1 & H.3.2 Combined on One Panel	yes/no:	Yes
Visible from Choke Operating Position	yes/no:	Yes

H.4 Standpipe Pressure Gauge Strain Gauges

Make/Type	:	Oteco
Pressure Range	PSI:	0-10,000
Visible from Driller's Position	yes/no:	No

H.5 Deviation Equipment

H.5.1 Measuring Device

Quantity	no.:	1
Make/Type	:	Totco
Deviation Range	degree:	0-8 / 0-16

H.5.2 Wireline Winch

Make/Model	:	Mathey
Wire Length (Nominal)	ft.:	25000
Depth Counter	yes/no:	Yes
Wire Size	inch:	3/16
Pull Indicator	Ibs:	Yes

H.6 Calibrated Press. Gauges : Strain Gauges

H.7 Rig Communication System

H.7.1 Telephone System

No. of Stations	no.:	120
Make/Type	:	Mitel Exchange
Explosion Proof	yes/no:	As Required

H.7.2 Public Address System

Can be combined with above	yes/no.:	Yes
Make/Type	:	Akusta
Explosion Proof	yes/no.:	As Required

H.7.3 Drill Floor - Derrickman's Talkback (For Intercom System)

No. of Stations	no.:	21
Location	:	DWS-DER
Location	:	CCR-ECR
Location	:	Floor, ROV, CP Area, Monkeyboard, MP Room, Moonpool, Shakers, Crown, Pit Room, Sack Room, Mud Lab, Schlumberger, Knuckleboom Crane
Make/Type	:	Federal Signal
Explosion Proof	:	As Required

H.7.4 Hand-Held VHF Radios

Quantity	:	24 Min.
Make/Type	:	Motorola Radins HT-750

H.8 Environmental Instrumentation

H.8.1 Temperature Indicators

Air Temperature	:	Yes
Make/Model	:	Kongsberg (Integral to Metocean System)
Seawater Temperature	:	Yes
Make/Model	:	Kongsberg (Integral to Metocean System)
Recorder	yes/no:	Yes

H.8.2 Barometer Pressure Indicator yes/no: Yes

Make/Model	:	Kongsberg (Integral to Metocean System)
Recorder	:	Yes

H.8.3 Humidity Sensing Indicator yes/no: Yes

Make/Model	:	Kongsberg (Integral to Metocean System)
Recorder	:	No

H.8.4 Wind Speed / Direction Monitor : Yes - Qty. 3

Make/Model	:	R.M. Young / DEIF879
Recorder	:	Yes

H.8.5	**Wave Profile Recorder**	:	No
H.9	**Additional Module Specific Instrumentation**		
H.9.1	**Roll, Pitch & Heave Indicator**		
Make/Type		:	2 ea. Seatex MRU-5, 1 ea. Watson VRU
Recorder		:	Included in IACS/DP
H.9.2	**Gyro Compass**		
Make/Model		:	3 ea. Anschutz / Standard 20
Located at		:	ECR
H.9.3	**Echo Sounder**	:	Yes
Make/Model		:	Furuno / FE880
Located at		:	Bridge
Recorder		:	Yes
H.9.4	**Current Indicator**	:	Doppler Current Profiler
Make/Model		:	Fugro Geos - RDI Oceans Surveyor 75 KHz PA
Located at		:	Port/Aft - “Dipping” System
Recorder		:	Fugro Geos Rig ADCP3 Version 3..27
H.9.5	**Weather Facsimile Recorder**	:	Yes
Make/Model		:	Furuno / Fax 270
Located at		:	Radio Room
Recorder		yes/no:	Yes
H.9.6	**Radar**	yes/no:	Yes
Quantity		no.:	1
Make/Model		:	FURUNO 28375
Located at		:	Bridge
Bandwidth		cm:	S-Band
Quantity		no.:	2
Make/Model		:	FURUNO 2827
Located at		:	ECR
Bandwidth		cm:	X-Band
H.10	**Radio Equipment**		
H.10.1	**SSB Transceiver**		
Quantity		no.:	2
Make/Model		:	Sailor / RE2100
Power		watts:	250
Frequency Ranges		hz:	100 khz - 30 MHz
(Synthesized Crystal)		:	Synthesized
Facsimile Capable		:	No
Telex Capable		:	N/A
H.10.2	**EPIRBs**		
Quantity		no.:	5
Make/Model		:	ACR/SAT

H.10.3 VHF Radio Telephone

Quantity	no.:	5
Make/Model	:	Sailor / RT 2048 W/ DSC
Power	watts:	25 Watts
Channels	:	

H.10.4 VHF Radio Transceiver

Quantity	no.:	3
Make/Model	:	FURUNO FM-8800
Power	watts:	25 W

H.10.5 Radio Beacon Transmitter

Quantity	no.:	1
Make/Model	:	Southern Avionics / SA 100
Power	watts:	100 W

H.10.6 Aeronautical VHF Transceiver

Quantity	YES	1
Make/Model	:	ICOM
Power	watts:	40 W PEP
Frequency Range	hz:	118-137
(Synthesized/Crystal):	:	

H.10.7 Watch Receiver

Quantity	no.:	1
Make/Model	:	Sailor / R501
Frequency	khz:	2182

H.10.8 Scrambler

Quantity	no.:	No
Make/Model	:	

H.10.9 Telex

Quantity	YES	2
Make/Model	:	FURUNO

H.10.10 Satellite Comm. System

Make/Model	:	DMS / Spacetrack 400
Type	:	Vsat C/Ku Band
Facsimile Link	yes/no :	Yes
Telex Link	yes/no :	Yes
Telephone Link	:	Full Voice/Fax
Other Capabilities	:	Wide Area Network V3.5

Make/Model	:	Caprock/Seatel Dual Band 9797
Type	:	Single Stabilized Dual Band 2.4m Antenna
Facsimile Link	yes/no :	
Telex Link	yes/no :	
Telephone Link	:	
Other Capabilities	:	

I.	**Production Test Equipment**		
I.1	**Burners**	:	N/A
I.2	**Burner Booms**	:	Foundations Only
I.3	**Lines on Burner Booms**	:	N/A

I.3.1	**Oil Line**	
OD	inch:	4
Working Pressure	PSI:	1480 PSI
Connection Type at Burner End	:	Suitable to Connect to Well Test Equipment
H2S	yes/no:	Yes
Pressure Gauge connection @ Barge End	inch:	Provided by Well Test Company

I.3.2	**Gas Line**	
OD	inch:	3”
Working Pressure	PSI:	1480 PSI
Extended Beyond Burner By	ft.:	Provided by Well Test Company
Connection Type at Burner End	Type:	Suitable to Connect to Well Test Equipment
H2S	yes/no:	Yes
Pressure Gauge Connection at Barbe End	inch:	Provided by Well Test Company

I.3.3	**Water Line**	
OD	inch:	Seawater - 1-1/2”
Working Pressure	PSI:	285 PSI
Connection Type at Burner End	Type:	Suitable to Connect to Well Test Equipment
Pressure Gauge Connection at Barge End	inch:	Provided by Well Test Company

I.3.4	**Air Line**	
OD	inch:	4”
Working Pressure	PSI:	285 PSI
Connection Type at Burner End	Type:	Suitable to Connect to Well Test Equipment
Pressure Gauge Connection at Barge End	inch:	Provided by Well Test Company

I.3.5	**Pilot Gas Line**	
ID	inch:	Provided by Well Test Company
Working Pressure	PSI:	
Connection Type at Burner End	Type:	
Pressure Gauge Connection at Rig End	inch:	

I.4	**Sprinkler System**	
Sufficient to give protection to rig & personnel against heat radiation damage from the burners	yes/no:	Provided by Well Test Company

I.5 Fixed Lines for Well Testing

I.5.1 Drill Floor to Separator Area

Type (Screwed/Welded, Both)	:	Tested & Certified Flexible Flowlines Provided by Well Test Company for Connecting from Rig Floor to Well Test Equipment.

I.5.2 Separator Area to Both Burner Booms

Type (Screwed/Welded, Both)	:	Welded
Quantity	no.	2 ea. / one oil / one gas
Size OD	inch:	3” Gas / 4” Oil
Working Pressure	PSI:	1480 PSI
Connection Type at Separator	Type:	Suitable for Connecting to Well Test Company
Connection Type at Boom	Type:	As Above
Number of Valves/Lines	no.:	Provided by Well Test Company
Size of Valves	inch:	Provided by Well Test Company
H2S	yes/no:	Yes
Valves Installed Near Separator Area for Switching Gas to Either Burner	yes/no:	Yes

I.5.3 Mud Pumps to 2-Burner Boom : N/A

I.5.4 Rig Air System to Both Burner Booms

Type (Screwed/Welded, both)	:	Welded
Quantity	no.:	1 ea. Port & Starboard
Size OD	inch:	4”
Working Pressure	PSI:	150
Non-Return Valves Fitted	yes/no:	Yes

I.5.5 Oil Storage Tank to Overboard

Type (Screwed/Welded, both)	:	Provided by Well Test Company
Quantity	no.:	
Size ID	inch:	
Working Pressure	PSI:	
Height Above Water Level	ft.:	
Connection Type at Separator Area	Type:	

I.5.6 Separator To Vent Stack of Rig

Type (Screwed/Welded, Both)	:	No Vent from Separator. Relief to Flair
Quantity	no.:	
Size ID	inch:	
Working Pressure	PSI:	
Connection Type at Separator Area	Type:	

I.6 Auxiliary Power Availability

I.6.1 For Field Laboratory (Well Test Equipment)

Quantity	KW:	2 ea. 330 kw
Volts	V:	480
Frequency	Hz:	60

I.6.2 For Crude Transfer Pump

Quantity	KW:	As above only
Volts	V:	
Freqeuncy	Hz:	

I.6.3 For Electric Heaters

Quantity	KW:	As above only
Volts	V:	
Frequency	Hz:	

J. Workover Tools : Company Supplied

K. Accommodation : Company Supplied

K.1 Offices : Company Supplied

K.1.1 Company Representatives Office

Quantity	:	3
Complete w/Desk, Filing Cabinet(s) & Other Necessary Furniture	:	Yes
Unrestricted View to Drill Floor	:	No (CCTV Monitor)

K.1.2 Contractor Representatives Office

Quantity	:	4
Unrestricted View to Drill Floor	:	No (CCTV Monitor)

K.1.3 Radio Room : Yes - On Bridge

Quantity : 1

K.1.4 Hospital Room

Number of Beds/Bunks	:	3 Bunks / 6 Beds
Wash Basin	:	Yes
Medical Cabinet	:	Yes
Dangerous Drugs Locker	:	Yes

K.1.5 Mud Laboratory & Facilities

Separate Room	yes/no:	Yes
Equipped With:		
• Mud Balance	yes/no:	Yes
• Marsh Funnel	yes/no:	Yes
• Filtration Kit	yes/no:	Yes
• Sand Content Kit	yes/no:	Yes
• Stop Watch	yes/no:	Yes

K.2 Living Quarters

K.2.1 Total Persons Accommodated

Quantity	: 146

K.2.2 Accommodation for Company's Personnel

Total Quantity	: 60
Quantity of Single Bed Rooms	: 2
C/W Attached Toilet	: Yes
Quantity of Two-Bed Rooms	: 19
C/W Attached Toilet	: Yes
Quantity of Four-Bed Rooms	: 5
C/W Attached Toilet	: N/A

K.2.3 Accommodation for Contractor's Personnel

Total Quantity	: 86
Quantity of Single Bed Rooms	: 4
C/W Attached Toilet	: Yes
Quantity of Two-Bed Rooms	: 33
C/W Attached Toilet	: Yes
Quantity of Four-Bed Rooms	: 4
C/W Attached Toilet	: N/A

K.2.4 Galley

Quantity	: 1

K.2.5 Mess Seating Capacity

Main Mess	: 60
Auxiliary Mess	: N/A

K.2.6 Meeting Rooms

Quantity	: 1

K.2.7 Recreation Rooms

Quantity	: 2
Recreation Facilities:	: Yes
• TV	: Yes
• VCR	: Yes
• Pool Table	: No
• Ping Pong Table	: No
• Computer	: YES
• Other	: Darts/Cards/Reading

K.2.8 Other Rooms

Laundry	: 1
Dry Food Store	: 1
Refrigerator	: 3
Change Rooms	: 3
Prayer Room	: No
Cinema	: YES
Workout/Weight Room	: Yes

L. Safety Equipment

L.1 General Safety Equipment

L.1.1 General Personnel Protective Gear

Safety Hats (Contractor Only/Everyone Not Supplied)	:	Contractor Only
Safety Boots (Contractor Only/Everyone Not Supplied)	:	Contractor Only
Safety Clothing (Contractor Only/Everyone Not Supplied)	:	Contractor Only
Ear Protection (Contractor Only/Everyone Not Supplied)	:	Contractor Only
Rubber Gloves (Contractor Only/Everyone Not Supplied)	:	Contractor Only
Rubber Aprons (Contractor Only/Everyone Not Supplied)	:	Contractor Only
Full Face Visors (Contractor Only/Everyone Not Supplied)	:	Contractor Only
Eye Shields (For Grinding Machines, Etc.)	:	Yes
•(Contractor Only/Everyone Not Supplied)	:	Contractor Only
Dust Masks (Contractor Only/Everyone Not Supplied)	:	Contractor Only
Rubber Gloves - Elbow Length for Chemical Handling	:	Contractor Only
•(Contractor Only/Everyone Not Supplied)	:	Contractor Only
Explosion Proof Hand Torches c/w Batteries		
•(Contractor Only/Everyone Not Supplied)	:	Contractor Only
Safety Belts c/w Lines (Contractor Only/Everyone Not Supplied)	:	Contractor Only

L.1.2 Eyewash Stations

Quantity	no.:	3
Make/Model	:	Haws #8317
Located at	:	Mud Process Room
Located at	:	Drill Floor
Located at	:	Mud Mixing Room

L.1.3 Derrick Safety Equipment

Derrick Escape Chute (Rem Chute)	no.:	N/A - Derrick fall protection it to be provided
• Make/Type	:	N/A
Derrick Safety Belts	no.:	N/A
• Make/Type	:	TBA

L.1.4 Derrick Climbing Assistant

Make/Type	:	N/A

L.1.5 Fresh Air Blowers (Bug Blowers)

Quantity	:	2
Make/Type	:	Brandt B-250 & B-400
Located at	:	Rig Floor / Portable

Located at:	:	

L.2 Gas/Fire/Smoke Detection

1.2.1 H2S Monitoring System

Make/Type	:	Kongsburg (Autronica/Crowcon/Detcon)
Sampling Points at:		
• Bell Nipple	yes/no:	Yes
• Drill Floor	yes/no:	Yes
• Shaleshaker	yes/no:	Yes
• Mud Tanks	yes/no:	Yes
• Ventilation System into Living Quarters	yes/no:	Yes
• Other	:	Yes
• General Alarm	yes/no:	Yes
Alarm Types (Audible, Visual, both), at:		
• Driller's Console	:	Both
• Engineroom	:	Both
• Mud Room	:	Both
• Living Quarters each Level	:	Both
• Central Area Each Structural Level	:	Both
• Other	:	Both
• Central Alarm Panel	yes/no:	Yes
• Located at	:	Bridge

L.2.2 Combustible Gas Monitoring System

Make/Type	:	Simrad Integrated Alarm & Control System
Sampling Points at:	yes/no:	
• Bell Nipple	yes/no:	Yes
• Drill Floor	yes/no:	Yes
• Shale Shaker	yes/no:	Yes
• Mud Tanks	yes/no:	Yes
• Ventilation System into Living Quarters	yes/no:	Yes
• Other	:	Yes
• General Alarm	yes/no:	N/A
Alarm Types (Audible, Visual, Both) at:		
• Driller's Console	:	Both
• Other	:	Both

L.2.3 H2S Detectors (Portable)

Quantity	no.:	2
Make/Type	:	Industrial Scientific ATX612, Combustable Gas / O2 / H2S
Phials for H2S: Measuring Range		
• From 1 to 20 RPM	no.:	As required
• From 100 to 600 RPM	no.:	As required

L.2.4 CO2 Gas Detectors (Portable)

Quantity	no.:	None
Make/Type	:	
Phials for CO2: Measuring Range		
• From 1 to 20 RPM	no.:	

• From 20 to 200 RPM	no.:	
• From 250-3000 RPM	no.:	

L.2.5 Explosimeters

Quantity	no.:	See H2S Detectors
Make/Type	:	

I.2.6 Fire/Smoke Detectors in Accommodations

Make/Type	:	Optical with a few Thermal
Fire Detection	yes/no:	Yes
Smoke Detection	yes/no:	Yes
Central Alarm Panel	yes/no:	Yes
Location	:	CCR

L.3 Fire Fighting Equipment

L.3.1 Fire Pumps

Quantity	no.:	2
Make/Model	:	Patterson
Type	:	Centrifugal
Output	US Gal/Min.:	550
All Offtake Points Supplied by Each Pump	yes/no:	Yes
Location of Pumps	:	Aux. Machine Room Port
Location of Pumps	:	Aux. Machine Room STB.
Fire Fighting Water Delivery Conforms to MODUs	yes/no:	Yes
MODU Spec Version	:	1998

L.3.2 Hydrants & Hoses

Hydrants Positioned Such That any Point May be Reached by a Single Hose Length from Two Separate Hydrants.	yes/no:	Yes
Quantity of Hydrants	no.:	59
Hose Connections/Hydrant	no.:	59 x 1
Hose Max. Diam.	inch:	2.5” OD
Length	ft.:	50

L.3.3 Portable Fire Extinguishers

Quantity (Total)	no.:	70
Type 1 - CO2	no/lbs:	2 @ 4
	no/lbs:	37 @15
	no/lbs:	2 @ 150
Type 2 - Dry Chemical	no/lbs:	17 @ 5
	no/lbs:	9 @10
	no/lbs:	3 @ 50
Type 3 - Foam	no/lbs:	10 AFFF
	no/lbs:	0
	no/lbs:	0
Mounted Adjacent to Access Ways & Escape Routes	yes/no:	Yes

L.3.4 Fire Blankets

Location	:	Rig Floor, Galley, Helicopter Box
Quantity	no.:	3

L.3.5 Fixed Foam System

Automatically Injected into Fixed Fire Water System at Central Point w/Remote Manual Control.	yes/no:	Yes
Make/Type	:	Patterson
Quantity Foam Stored On Site	Gal:	200
Inductor Tube	yes/no:	Yes
Foam Nozzles	no.:	4
Located at	:	Heliport - 3 Turret Mounted
Located at	:	Heliport - 1 Hose Reels
Located at	:	

L.3.6 Helideck Foam System

Dedicated System Adequate for at least 10 Minutes fire fighting at the Rate Quoted in the IMO MODU Code	yes/no:	Yes
IMO MODU Code Version	:	1998
Make/Type	:	Dooly
Quantity of Monitors	no.:	3
Foam Type	:	Ansulite 3x3 Low Viscosity AFFF
Rate	US Gal/Min:	350 gpm ea.

L.3.7 Fixed Fire Extinguishing System

Protected Spaces		
Engine Room, Type (Halon/CO2)	:	CO2
Paint Locker, Type (Halon/CO2)	:	CO2
Emergency Generator, Type (Halon/CO2)	:	CO2
SCR Room, Type (Halon/CO2)	:	CO2
Other (Specify Location & Type)	:	CO2 in Mud Pump Room
Alarms (Audible, Visual or Both)	:	Audible
Automatic Shutting of Mechanical Ventilation in Protected Spaces	yes/no:	Yes
Remote Manual Release Located at	:	Entrance to Space & at Bottles
Remote Manual Release Located at	:	
Remote Manual Release Located at	:	

L.3.8 Manual Water Deluge System	yes/no:	Yes
Protected Spaces	:	Drill Floor, Lifeboats
Protected Spaces	:	Liferafts, Moonpool
Water Supplied from Fire Main Line	yes/no:	Yes Main Salt Water Ring

L.3.9 Water Sprinkler System in Accommodations

Automatic	yes/no:	Yes

Working Pressure	PSI:	130
Pressurized Tank Capacity	ft3:	53.47

L.4 Breathing Apparatus : 12

L.5 Emergency First Aid Equipment

L.5.1 First Aid Kits

Quantity	no.:	3

L.5.2 Burn Kits

Quantity	no.:	3

L.5.3 Resuscitators

Quantity	no.:	1
Charged (spare) Oxygen Cylinders	no.:	10

L.5.4 Stretchers / Stokes Litters w/Lift Bridles

Quantity	no.:	2
Type	:	Billy Pugh #S-1
Located at	:	In Hosiptal & On Third Deck

L.6 Helideck Rescue Equipment

L.6.1 Storage Boxes

Quantity	no.:	1
Construction Material	:	Stainless
Max. Height Open	inch:	48

L.6.2 Equipment

Aircraft Axe	yes/no:	Yes
Large Fireman's Rescue Axe.	yes/no:	Yes
Crowbar	yes/no:	Yes
Heavy Duty Hacksaw	yes/no:	Yes
Spare Blades	yes/no:	Yes
Grapnel Hook	yes/no:	No
Length of Wire Rope Attached	ft.:	100
Quick Release Knife	yes/no:	Yes
Bolt Croppers	yes/no:	Yes

L.7 Rig Safety Store

Equipment to Repair, Recharge & Restock : R&BF will carry all spares necessary to ensure an efficient & safe operation.

L.8 Emergency Warning Alarms

Approved System to Give Warning of Different Emergencies yes/no: Yes

L.9 Survival Equipment

L.9.1 Lifeboats

Make/Type	:	Fassmer
Quantity	no.:	4
Capacity	person/craft:	73
Locations (Fore, Aft, Port, Stbd.)	:	2 Forward, 2 AFT
Fire Protection	yes/no:	Yes
Radios	yes/no:	Yes
Flares	yes/no:	Yes
Food	yes/no:	Yes
First Aid Kits	yes/no:	Yes

L.9.2 Liferafts

Make/Type	:	Viking
Quantity	no.:	6
Capacity	Person/craft:	25
Davit Launched	yes/no:	Yes & Float Free
Locations (Fore, Aft, Port, Stbd.)	:	3 Fore, 3 AFT
Fire Protection	yes/no:	No
Radios	yes/no:	No
Flares	yes/no:	Yes
Food	yes/no:	Yes
First Aid Kits	yes/no:	Yes
Make/Type	:	Viking
Quantity	no.:	
Capacity	Person/craft:	
Davit Launched	yes/no:	
Locations (Fore, Aft, Port, Stbd.)	:	
Fire Protection	yes/no:	
Radios	yes/no:	
Flares	yes/no:	
Food	yes/no:	
First Aid Kits	yes/no:	

L.9.3 Rescue Boat

Make/Type	:	Port Fwd. Lifeboat is Designated as a Rescue Boat
Engine Power	hp:	29

L.9.4 Life Jackets

Make/Type	:	Safeguard w/Light, #S22SRT
Quantity	no.:	163

L.9.5 Life Buoys

Make/Type	:	Jim Buoy
Quantity	no.:	10

L.9.6 Work Vests

Make/Type	:	Billy Pugh
Quantity	no.:	30

L.9.7 Escape Ladders/Nets

Make/Type	:	Permanent Ladders
Quantity	no:	4, 1 per Corner Column

L.9.8 Distress Signals

Type	:	Datrex
Quantity	no.:	12 ea.

M. Pollution Prevention Equipment

M.1 Sewage Treatment

Make/Model	:	Hamworthy (USCG Approved)
System Type	:	Biological
Conforms to (Marpol Annex IV, Etc.)	:	Yes

M.2 Garbage Compaction

Make/Model	:	Envior-Pak *I* Model 5000
System Type	:	Air
Conforms to (Marpol Annex IV, Etc.)	:	Yes

M.3 Garbage Disposal/Grinder

Make/Model	:	Gulf Gulp *I* Tuff Gut
System Type	:	Electric
Conforms to (Marpol Annex IV, Etc.)	:	Yes

N. Third Party Equipment

N.1 Space Available

Mud Loggers (Available Sq.Ft.)	Sq.Ft.:	555 Sq.Ft.
MWD/LWD (Available Sq.Ft.)	Sq.Ft.:	555 Sq.Ft.
Cement Unit (Available Sq.Ft.)	Sq.Ft.:	1,087 Sq.Ft.
ROV (Available Sq.Ft.)	Sq.Ft.:	1,184 Sq.Ft.
Electric Log (Available Sq.Ft.)	Sq.Ft.:	895 Sq.Ft.

EXHIBIT "D"

HSSE REQUIREMENTS

[ATTACHED]

HSE Management

INDEX

1.0 GETTING HSE RIGHT
2.0 HEALTH, SAFETY AND ENVIRONMENTAL MANAGEMENT SYSTEM
3.0 COMPATIBILITY OF HSE MANAGEMENT SYSTEMS
4.0 COMPLIANCE
5.0 REPORTING
6.0 WORKING CONDITIONS
7.0 WASTE DISPOSAL AND ENVIRONMENTAL SAFEGUARDS
8.0 SUBSTANCE ABUSE POLICY
9.0 HSE REFERENCE DOCUMENTS

ATTACHMENTS

1. Scope Specific HSSE Requirements
   - HSSE Standard 01 Vibration
   - HSSE Standard 02 Noise
   - HSSE Standard 03 Automation/Mechanisation
   - HSSE Standard 04 Man Riding
   - HSSE Standard 05 Lifting Operation
   - HSSE Standard 06 Waste Management
   - HSSE Standard 07 Maintenance
   - HSSE Standard 08 Dropped Objects
   - HSSE Standard 09 Risk Management
   - HSSE Standard 10 Ventilation
   - HSSE Standard 11 Lighting
   - HSSE Standard 12 Work Time
   - HSSE Standard 13 Hazardous Materials

2. CONTRACT AREA Specific HSE Requirements
   - GoM Specific HEALTH, SAFETY, SECURITY, AND ENVIRONMENTAL REQUIREMENTS
   - Substance Abuse Policy

1.0 "GETTING HSE RIGHT"

COMPANY is committed to conducting its business in a manner which:-

(a) ensures that all COMPANY facilities are designed, constructed, maintained and operated to high and consistent standards;

(b) complies with all relevant laws and regulations; and

(c) is compatible with the balanced economic and environmental needs of the community.

2.0 HEALTH, SAFETY AND ENVIRONMENTAL MANAGEMENT SYSTEM

2.1 Prior to commencement of the DRILLING SERVICES and at routine periods thereafter, CONTRACTOR shall provide COMPANY with a written statement on the health, safety and environmental (HSE) policy of CONTRACTOR relevant to the DRILLING SERVICES to be performed by CONTRACTOR and subsequently, any revision or amendment issued during the term of the CONTRACT.

2.2 CONTRACTOR must have in place and be actively using a formal HSE management

system which demonstrates commitment to continuous improvement and excellence in HSE issues.

2.3 CONTRACTOR's HSE management system shall be adequately documented, shall be shown to be effective in implementing the aims and objectives of CONTRACTOR's HSE policy and shall include provisions for auditing the effectiveness of CONTRACTOR's HSE management system as applied to the DRILLING SERVICES.

2.4 CONTRACTOR shall review its HSE management system at least annually and update it as necessary.

2.5 Without prejudice to the foregoing generalities, CONTRACTOR's HSE management system shall:-

(a) require an assessment of all identifiable HSE risks associated with the DRILLING SERVICES to be identified and submitted to COMPANY and shall indicate the proposed method of controlling those risks to an acceptable level;

(b) include measurable and realistic targets for HSE performance, covering, but not necessarily limited to:-

- the frequency of injuries;
- the frequency of chemical and oil spills;
- the number of statutorily reportable events; and
- predetermined targets for environmental emissions and waste production as appropriate to the DRILLING SERVICES;

(c) include a follow-up system to ensure that all remedial actions identified by reviews and investigations are closed out, including accidents, incidents and HSE audits;

(d) incorporate measures which demonstrate that all PERSONNEL provided by CONTRACTOR are competent and physically/medically fit at all times to perform their tasks;

(e) incorporate measures which demonstrate that, in the performance of the DRILLING SERVICES, PERSONNEL provided by CONTRACTOR are not under the influence of drugs or alcohol (see section 12.0); and

(f) demonstrate that the system for the pre-qualification and selection of SUBCONTRACTORS ensures the compatibility and effectiveness of the SUBCONTRACTOR'S own HSE management systems.

2.6 Certain activities pose a higher risk to the safety of personnel, property and the environment. Higher risk activities will accordingly demand a higher level of HSE management from CONTRACTOR. Where the use of a SUBCONTRACTOR involves the importation of higher risk activity, CONTRACTOR shall ensure and demonstrate the appropriate level of HSE management.

2.7 Risk may vary from one LOCATION to another and, where the DRILLING SERVICES is being provided at more than one LOCATION, CONTRACTOR may be required to provide different levels of HSE management at each LOCATION.

3.0 COMPATIBILITY OF HSE MANAGEMENT SYSTEMS

3.1 CONTRACTOR's HSE management system shall, where relevant interfaces exist, be compatible with COMPANY'S HSE management system. CONTRACTOR shall liaise with COMPANY REPRESENTATIVE to ensure that the roles and responsibilities in the systems of all parties are clearly defined and allocated and are clearly understood by all parties involved in the DRILLING SERVICES and associated operations.

3.2 Within the framework of its HSE management system, CONTRACTOR shall perform the DRILLING SERVICES to HSE performance standards, which are compatible with those in COMPANY's HSE Management System.

3.3 Where appropriate, the interfaces between CONTRACTOR and COMPANY shall be documented in the form of an HSE Management System (HSEMS) Interface Document which when agreed between the PARTIES hereto shall be deemed to be incorporated in the CONTRACT. The preparation of these Interface Documents shall be to the account of the CONTRACTOR and shall be prepared before the COMMENCEMENT DATE. The HSEMS Interface Document shall incorporate any specific requirements relevant to the DRILLING SERVICES and take account of current industry standards, appropriate legislation and guidelines applicable to the CONTRACT AREA.

3.4 Where applicable, the CONTRACTOR shall ensure that similar standards apply to the HSE management systems used by all SUBCONTRACTORS.

3.5 CONTRACTOR'S HSE management system together with the HSE Management System Bridging Document ("HSEMS") shall collectively define and govern the HSE requirements for the DRILLING SERVICES.

4.0 COMPLIANCE

4.1 CONTRACTOR and its SUB-CONTRACTORS shall observe and comply with all relevant and current statutory requirements, approved codes of practice and industry guidance on HSE matters.

4.2 CONTRACTOR shall ensure that PERSONNEL and personnel provided by the CONTRACTOR comply with all relevant HSE legislation and guidance and that they are:-

(a) fully conversant with the working conditions at the LOCATION, the hazards and risks associated with the DRILLING SERVICES and the roles and standards relating to the environment including the handling of waste and hazardous materials;

(b) fully aware that they are expected to bring to the immediate notice of their Supervisor all health, safety and environmental risks which they believe not to be under adequate control, so that action may be taken to prevent potential injuries or other losses and provide a safe and healthy workplace;

(c) familiar with all other safety and working instructions applicable in the CONTRACT AREA; and

(d) available at all times for periodic drills, instructions on survival, life saving and fire fighting as requested and conducted by COMPANY and shall, prior to or on the day of arrival offshore, attend a safety induction course conducted by the COMPANY.

4.3 If, in the opinion of COMPANY REPRESENTATIVE, CONTRACTOR is working in a manner which contravenes any requirement of these HSE provisions, COMPANY shall serve notice on CONTRACTOR to this effect and CONTRACTOR shall immediately take action to rectify the situation.

CONTRACTOR's Initial _____ COMPANY'S Initial _____

5.0 REPORTING

Full details of the HSE reporting responsibilities of the CONTRACTOR are provided in ATTACHMENT 2 to SECTION 4.

6.0 WORKING CONDITION

6.1 CONTRACTOR will immediately notify COMPANY REPRESENTATIVE of all CONTRACTOR incidents resulting in personal injury or damage to property in connection with the DRILLING SERVICES.

6.2 CONTRACTOR shall ensure that it's PERSONNEL and shall keep all places of work as clean and tidy as is reasonably practicable under the circumstances, to minimise the risk of causing injury to persons, damage to property or delays in providing the DRILLING SERVICES.

7.0 WASTE DISPOSAL AND ENVIRONMENTAL SAFEGUARDS

In the performance of the DRILLING SERVICES, CONTRACTOR shall at all times:-

(a) observe and comply with all laws and regulations concerning the production, carrying, keeping, treating and/or disposal of waste;

(b) act to minimise the quantity of wastes; and

(c) comply with the worksite environmental management system as it affects their operations.

If required by the applicable law, CONTRACTOR shall register as a Registered Waste Broker or a Licensed Waste Manager.

8.0 SUBSTANCE ABUSE POLICY

8.1 COMPANY is committed to providing a safe and healthy and working environment for all employees, visitors and third parties impacted by our operations. This includes an environment free from the hazards caused by the abuse of substances including drugs and alcohol. The policy equally applies in all aspects to both onshore and offshore staff both of COMPANY and its contractors and at all locations where work is performed on behalf of COMPANY.

8.2 In addition, COMPANY specific requirements related to applicable law and the CONTRACT AREA may require additional considerations to be appropriately managed by CONTRACTOR. Specific requirements applicable to the CONTRACT AREA are additionally included in SECTION 8 – Attachment 2.

9.0 HSE REFERENCE DOCUMENTS

9.1 In the performance of the DRILLING SERVICES, CONTRACTOR shall, as appropriate, refer the following reference documents attached hereto:

Attachment 1. Scope Specific HSE Requirements
Attachment 2. CONTRACT AREA Specific HSE Requirements
- GoM Specific Health, Safety, Security, and Environmental Requirements
- Substance Abuse Policy

9.2 CONTRACTOR shall observe and comply with these HSE provisions and failure to meet their requirements or to satisfy COMPANY with regard to the control of HSE risks will be regarded as due cause for termination of the CONTRACT without notice and without financial penalty to COMPANY.

CONTRACTOR's Initial _____ COMPANY'S Initial _____

The following HSSE Standards for Drilling Equipment shall apply to this CONTRACT.

HSSE Standard 01 Vibration
HSSE Standard 02 Noise
HSSE Standard 03 Automation/Mechanisation
HSSE Standard 04 Man Riding
HSSE Standard 05 Lifting Operation
HSSE Standard 06 Waste Management
HSSE Standard 07 Maintenance
HSSE Standard 08 Dropped Objects
HSSE Standard 09 Risk Management
HSSE Standard 10 Ventilation
HSSE Standard 11 Lighting
HSSE Standard 12 Work Time
HSSE Standard 13. Hazardous Material

HSSE Standard 01 – Vibration

Please note – This standard outlines the minimum conditions that shall apply on all BP operated drilling rigs. This standard should be considered and applied in conjunction with Contractor management systems, local legislative requirements and industry standards.

The purpose of this standard is to ensure that personnel are protected against the effects of Hand Arm Vibration Syndrome (HAVS). Without effective controls, people who use high vibration tools on a regular or prolonged basis may suffer various forms of damage to their hands and arms. The widest known form of damage is "Vibration White Finger" (VWF). All personnel who use power tools for any period that could cause HAVS should be monitored for their exposure and necessary controls put in place to prevent such injury occurring.

The Drilling Contractor and Well Services Providers shall ensure that all tools and equipment used on the Well-site is designed to minimize vibration levels to as low as reasonably practical. The fabrication/refurbishment methodology should also take account of the tools to be used and wherever possible, those having the potential to cause HAVS should not be employed.

A tool register and tracking system should be in place. Regular health screening of employees likely to be at risk shall be conducted. The BP Well-site Representative shall also be responsible for periodically reviewing compliance arrangements for their effectiveness and continuous application.

Prior to any work commencing, a Task Risk Assessment (TRA) must be carried out and all personnel likely to be using power tools with the potential to cause HAVS made aware of the associated dangers.

This standard covers, but is not exclusive to the following tools:

Air Hammers
Air Chisels
Needle Guns
Angle grinders
Bench Grinders
Drills
or similar hand held tools

Specification:

Low vibration equipment should be the preferred option where possible. When purchasing new tools or equipment. Prior to purchase, information should be sought regarding vibration levels and vibration controls which are built into the equipment.

When working with powered equipment, it is essential that good working practices are adopted. The hierarchy of control measures along with a number of simple but effective practices can be adopted to reduce the risk of injury to that which is as low as is reasonably practicable.

In order to keep vibration levels down to the absolute minimum necessary for efficient operation, equipment should be regularly inspected, serviced and maintained. Manufacturers and Drilling Contractor maintenance schedules should be followed. All defects or damage should be reported immediately. The following measures can also help keep down vibration exposures:

Cutting tool should be kept sharp
Grinding wheels should be dressed properly

CONTRACTOR'S Initial _____ COMPANY'S Initial _____

Worn parts should be replaced
Vibration dampers, bearings and gears should be checked and replaced when found to be defective

Competency:

It is important that those persons operating powered tools are competent in their use. Operators need to be made aware of the hazards and what can be done to reduce the risk.
Key information should include:
Potential sources of hand-arm vibration
The health effects of hand-arm vibration
The risk factors - high levels of vibration and regularity of exposure
Ways to minimise risk including:-
Changes to working practices to reduce exposure
How to use tools to minimise grip force, strain etc.
Maintenance of good blood circulation at work

Symptoms:

Tingling or pins and needles at the end of the work period (may be accompanied by numbness). With continued exposure, the user may suffer periodic attacks in which the fingers change colour when exposed to cold. In mild cases the whiteness and numbness only affects the tips of the fingers. As the condition becomes more severe the whole finger down to the knuckles becomes white.

Maintaining good blood circulation is important in avoiding HAVS and the symptoms associated with it, so in cold weather stay warm, wrap up in warm waterproof clothing, wear lined gloves or use glove liners and avoid standing or kneeling in the same position for prolonged periods.

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HSSE Standard 02 – Noise

Please note – This standard outlines the minimum conditions that shall apply on all BP operated drilling rigs. This standard should be considered and applied in conjunction with Contractor management systems, local legislative requirements and industry standards.

This Standard is intended to outline an approach for the management of noise in order to reduce the risk of noise-induced hearing damage. Hearing damage is cumulative and irreversible and can occur over a long period of time.

During facilities design, individual items of equipment, and complete systems should be assessed to ensure that noise levels are kept as low as reasonably practical.

Well-site supervisors have a duty to ensure that all people working under their control are made aware of any noise risks associated with their activities or workplace, the effects of exposure to high noise levels and the necessary precautions to be taken. This should be formalised as part of local safe systems of work within e.g. Task Risk Assessment, Job Safe Analyses and Permit to Work processes.

Noise exposure shall be reduced to the lowest level reasonably practicable. Factors to consider are; a) noise action levels expressed in decibel units as dB(A) and; b) how long people are exposed to the noise, daily and over longer periods of time.

First Action Level - a daily personal noise exposure of 82 dB(A) for 12 hours.
Second Action Level - a daily personal noise exposure of 88dB(A) for 12 hours.
Peak action level - this is based on the highest pressure reached by an instantaneous sound pressure level for any single event e.g operation of mud pump pop-off valve.

Where Well-site personnel are likely to be exposed to noise, then a competent person should complete a noise assessment to:

a) Identify which employees are involved
b) Determine the action level

Areas at first action level and above should be identified as ear protection zones and ear protection provided. Where noise levels are at second action levels and above then steps should be taken to reduce exposure by means other than ear protection e.g.

Noise reduction at source during workplace/equipment design and specification
Engineering control ie damping, isolation, silencers, maintenance etc
Enclosure, screens, barriers and noise refuges
Reduction of time spent in noisy areas

Ear protection zones should all be clearly demarcated and signs fitted at appropriate places to alert people of the hazards. Adequate supplies of technically suitable hearing protection devices should be made available.

Where employees are likely to be exposed at or above any action levels they must be provided with information, instruction and training that covers:

Risk of damage to hearing
Steps to minimize that risk
How to obtain and use ear protection
How to report defects

All noise measurement equipment should be regularly tested in line with a formal planned maintenance system requirement.

Where it is not reasonably practicable to mark ear protection zones then adequate alternative arrangements should be made to ensure employees are aware where or when protection should be worn eg:

Attaching warning signs to tools
Written instructions for particular tasks (ie permit to work)

Audit and Review

Noise assessment and noise management actions require to be documented and resultant recommendations placed within a suitable action tracking system. Such noise management records require periodic review to track action items eg:

New noise sources addressed
Noise assessments up-dated and verified
Training schedules met

Targets for continuous improvement should be established and a process should exist for regular self assessment.

GLOSSARY AND ABBREVIATIONS
dB(A) - Unit of sound level and noise exposure. A-weighting (A) of the audible frequencies is designed to compensate for the sensitivity of the ear. The ear is more sensitive to noise at frequencies in the middle of the audible range than it is to either very high or low frequencies.

HSSE Standard 03 – Automation/Mechanization

Please note – This standard outlines the minimum conditions that shall apply on all BP operated drilling rigs. This standard should be considered and applied in conjunction with Contractor management systems, local legislative requirements and industry standards.

Within the Drilling industry, the move from manual to mechanization and/or automated systems is growing. This is particularly noticeable on some of the new build offshore MODUS where many of the tasks that previously required some degree of manual handling, are now completed by automated or mechanized processes. Unless correctly managed from conception to completion these processes do not necessarily make drilling operations safer. Mechanization may reduce minor hazards but potentially introduce more serious hazards such as equipment collision and dropped objects onto main working areas.

The following must be followed for drilling implemented mechanization or automation projects.

During conception, build and commissioning

To achieve optimum levels of safe operation, a holistic approach should be applied whereby designers, manufacturers and importantly end users all have input to the risk assessment process at the earliest possible stage.

A competent third party should carry out QRA to ensure that there are actual benefits.

The engineering complexities introduced by mechanized and automated systems should be fully evaluated on the basis of risk assessment. Subsequent training of personnel must take account of the human factors involved.

Computerized control programmes should be devised jointly by the software specialist, equipment manufacturer and subjected to a risk assessment process involving the end user.

Software and control systems must be embedded is such a manner that no matter what happens to power supplies onboard the rig including induced surges and loss of UPS battery derived power, no software is corrupted or lost, nor any control system malfunctions.

MOC procedures should be used for software changes during commissioning, final back up software should be stored in a fireproof location and be quickly accessible.

It is important that upgrading equipment does not become a reason to “dumb-down” the quality of the operators, if anything the project should ensure that proficiency standards rise. A suitable “competency matrix” should be produced and implemented prior to operations.

The decision to mechanize/automate increases the requirement for strong, maintenance systems. Maintenance processes must be upgraded before the equipment starts to operate on drilling operations. This includes manuals, drawings, maintenance training and incorporation into the Planned Maintenance System.

Before a mechanization and/or automation project starts the various philosophies that introduced equipment will operate around must be understood, agreed on by all vendors and followed during the project e.g. is zone management to be controlled by anti collision or collision awareness processes.

Mechanization and automation often needs to be backed up by other critical systems e.g. CCTV. The provision and design of these systems must be part of the overall project and no final commissioning should start until all systems have gone through equipment testing in their final position.

Unless other critical design characteristics prevent it, new build mechanized rigs should use a minimum 40 by 40 floor area to give adequate space for personnel movement and equipment.

The drillers cabin must be located so that there is an uninterrupted view of all mechanized equipment and operational areas including the “V” door.

For major upgrades/new build simulators working in a safe environment should be used for initial training, prior to individuals using actual rig equipment.

The design team must develop, within the Basis of Design, an outline of how operations will continue / stop in the event of equipment failure.

During Drilling and other operations

Before any laptop is connected to an operational system – a PTW must be correctly issued with implications of potential failure fully explained to all parties.

No software is to be modified without written permission from a competent authority. All modifications must be under a PTW process.

In the event of the failure of a critical system or part of such a system e.g. CCTV, unless unsafe to do so for well control reasons, rig floor operations must be halted and only restarted once suitable risk analysis and mitigation is in place.

Protection systems such as Zone Management must be fully tested, as a minimum, on a daily basis and the tests recorded in the IADC logbook.

In the event of failure within any aspect of the Zone Management unless unsafe to do so for well control reasons, rig floor operations must be halted and only restarted once suitable risk analysis and mitigation is in place.

A fully functional register of any “bypasses and defeats” relating to software, sensors etc for mechanized and/or automated equipment, must be in place before any operations commence. The contents of the register must form part of any toolbox talks and any other processes relating to risk awareness.

HSSE STANDARD 04 - MAN-RIDING

Please note – This standard outlines the minimum conditions that shall apply before any man-riding operation can take place on a COMPANY operated drilling rig. Local legislative requirements and industry standards should also be considered.

Lifting and lowering personnel by air hoist (man-riding) on drilling rigs is considered a high potential risk activity and must only be considered when no safer alternative method can be found. Man-riding must be kept to an absolute minimum and shall only be performed under the strictest of controls and always with the permission of the on duty OlM/Tool-pusher/Rig Superintendent. Man-riding must only take place under the supervision of the person in charge of the area who shall nominate only trained personnel to perform tasks.

The following controls must be adhered to on any COMPANY drilling operation:

Man-riding should be considered a "safety critical" routine and must be conducted under a Permit to Work.

A pre-job risk assessment/Job Safety Analysis and tool-box talk must be held.

Specific working instructions must be available, understood and followed by all those involved in the operation.

A min of three people shall be used at all times and clear lines of communication established. Consideration should be given in the use of the hands free radio. Hand signals are to be agreed by all parties prior to commencement of the man-riding operation.

Adverse weather conditions and lighting conditions should be assessed prior to the commencement of any man-riding operation.

Man-riding air-hoists shall be used solely for hoisting and lowering personnel and must incorporate the following safety features in their design:

a) The hoist-operating lever should automatically return to neutral on release from any operating position.

b) An automatic brake should be fitted so that it will apply whenever the operating lever is returned to neutral or on loss of power.

c) In the event of failure of the automatic brake a secondary brake should be provided to prevent the load from falling. This may be manual in operation and simple in design.

d) A clutch capable of disengaging should not be fitted.

f) A plate fixed to the frame of the man-riding air hoist stating "For Manriding Purposes Only" and the Safe Working Load should be clearly Identified on the air-hoist.

g) The air supply to the hoist will be regulated to the manufacturers recommended air pressure.

h) A device should be fitted to prevent the winch from over-riding or under-riding e.g. a ball type, isolation valve on the air supply line, close to the hoist- operating handle.

I) A functional load limiting device should be installed.

j) Anti-spin wire should be used or a swivel fitted to prevent the rope turning.

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k) Hydraulically operated man-riding winches should have self-locking and self braking systems fitted.

Safety hooks shall not be attached to the air hoist line when used for man-riding. The employee must be shackled directly onto the end of the air hoist line without any intervening chains, slings, swivels or other fittings. (Shackle must be secured)

Any tools carried into the derrick must be tied off to either the employee or the air hoist line and no other equipment shall be lifted. (All tools should be logged)

The riding belt used shall be of an approved standard and inspected for wear or damage before use.

When man-riding operations are taking place, all other operations in the vicinity shall be suspended. At no time shall the traveling blocks be moved or pipe rotated. No other activity shall interfere with man-riding operations. A sign shall be placed in Dog House clearly stating that man-riding operations are on-going.

Personnel involved in man-riding operations shall be fully trained and deemed competent to perform the work.

When a man-riding lifting basket is used it must be verified that the slings and basket have a current Certificate of Inspection. The total weight of the basket, equipment and personnel must be determined to ensure the safe working load of the air-hoist and the basket slings are not exceeded. Personnel riding in the basket must have a safety line secured to the air-hoist line and when work is carried out above the monkey board level, radio communications shall be used and a banksman shall maintain line of sight at all times.

Mechanised man-riding lifting baskets e.g. “cherry-picker” should have a collision/ emergency stop system fitted.

When any equipment or tools are hoisted into the derrick, the area below shall be kept clear of personnel and steps taken to ensure no one enters into the area.

Consideration shall be given to the weight of air-hoist line versus the weight of the man rider when hoisted above a certain level (e.g. the minimum weight of a man while using 19mm airhoist line above the monkey board level is approximately 200lbs/91kg).

Prior to commencing with any man-riding operation a contingency rescue/recovery plan should be established in the event of possible equipment failure or power loss.

All of the above safe working practices would apply when man-riding operations are conducted under the drill floor.

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HSSE Standard 05 – Lifting Operations

Please note – This standard outlines the minimum conditions that shall apply on all BP operated drilling rigs. This standard should be considered and applied in conjunction with Contractor management systems, local legislative requirements and industry standards. (This standard incorporates BP Golden Rules of Safety relating to Lifting Operations)

The purpose of this standard is to prevent injuries or incidents during mechanical lifting operations.

All lifting equipment shall be certified or successfully load tested and documented prior to use. Lifting equipment comprises:

lifting Gear – any device which is used or designed to be used directly or indirectly to connect to a load or appliance (e.g. a crane or chain block) and does not form part of the load, e.g. sling, chain, hook, shackle, eyebolt or lifting beam.

Lifting Appliances – any mechanical device capable of raising or lowering a load, e.g. a crane, winch, pipe handler, BOP handler, fork lift truck or chain block.

All lifting operations shall be planned and appropriately supervised. The level of supervision will be determined by an assessment, by competent person, of the lift to be completed. The first step in planning shall be to conduct a Risk Assessment/Job safe Analysis. Risks identified can then be eliminated or adequately controlled so that the job can be safely completed.

Lifting Gear

All lifting gear shall be certified for use, as a minimum, within the previous twelve months. Prior to use, all lifting gear and lifting appliances shall be marked with their safe working load (SWL) and be visually examined by a competent person. A system of color coding shall be used whereby only lifting gear with the current color code can be used.

A register of lifting gear shall be maintained at each Well-site which shall include:

- Description of gear, e.g. 4 leg sling with links and lifting ring, socket each end
- Certification number (or Identification number if different)
- SWL
- Date in Service
- Location in use at Well-site
- Dates inspected

Before the lifting operation commences, the following checks shall be made:

- The SWL is clearly marked
- The ID number is visible so that equipment can be checked against certification
- The color code is current
- The equipment is not damaged in any way

Hand spliced wires and slings are not permitted.

When transporting barrels, a net, basket or specialist device is recommended.

Slings constructed in synthetic fibres are easily damaged and can be sensitive to chemical attack. Strength is lost if there are any cuts, tears, abrasion, fraying and burst stitching, therefore this sling type requires close examination by a competent person for any signs of damage prior to every lifting operation. Storage of web slings shall be strictly controlled to preserve their condition and prevent contamination.

Positive locking pipe hooks, as opposed to open ended pipe hooks, will be used when lifting casing by the box end or pin end with a crane.

Slings not included in the lifting gear register shall be kept separate from those tracked in the register. This refers to BP/Third Party transit slings that do not belong to the Drling Contractor.

Lifting appliances

All lifting appliances shall be certified for use.

Operators of lifting appliances shall be trained, competent and certified for that equipment.
All lifting appliances will be included within the Planned Maintenance system in use at the Well-site.

Crane operations

Crane operators shall be able to clearly communicate with the handling crew, only one of which should be designated as banksman. Hand signals should be clearly understood by everyone involved in the lifting operation.

Check the area around the load to be lifted is clear and the load is not attached to the deck, transportation cradle, or adjacent equipment.

The banksman shall not be both banksman and slinger. The banksman is in charge of the lift and is there solely to direct activities and operations.

If using hand signals stand in a position where the crane operator can clearly see him and he can maintain visual contact with the load.

All hooks used on the traveling blocks, fast line and slings shall have safety latches fitted that are in good working order.

Routine maintenance of the crane will be in accordance with the planned maintenance system. A crane log book shall be maintained and should include maintenance records, wire rope installation dates, safety device inspection dates, including calibration, certificate and reel number of the wire currently in use.

Fork Lift

Fork lifts will be rated and maintained to meet the area classifications of the area in which they are to operate. Fork lifts shall be fitted with: an audible warning for reversing, a visual warning in noisy areas, a reversing mirror and a caged driver enclosure.

When parking a forklift the forks should be six inches off the deck and the mast tilted forward until the forks rest on the deck. The engine should then be switched off and the keys removed. In cold climates, fork lift trucks may be left with power on, subject to local controls.

Air Winches

Operators should have clear visibility of the operation and operating instructions clearly displayed, Air winches shall be operated according to manufacturer’s instructions, fitted with drum guards and control levers marked up and down.

HSSE Standard 06 – Waste management

Please note – This standard outlines the minimum conditions that shall apply on all BP operated drilling rigs. This standard should be considered and applied in conjunction with Contractor management systems, local legislative requirements and industry standards.

Waste management involves monitoring of emissions, wastes and discharges as well as surveillance of the receiving environment both within and outside the Well-site, against set targets, using proper disposal practices. Developing a waste minimization plan should be a fundamental part of the overall well planning process and should integrate BP and Third Party requirements with those of the Drilling Contractor.

At each Well-site, there shall be adequate storage facilities to provide containment of hydrocarbons and chemicals. Transfer of these substances will be subject to control measures that have been developed using risk assessment techniques. A system shall be in place to ensure that relevant personnel have been trained in those control measures.

At each Well-site, all discharges arising from drainage shall be monitored to prevent sea or land contamination by substances harmful to the environment. Similarly, prior to their discharge, either to sea or to landfill sites, all substances shall be evaluated for their potential effect on the environment.

Emergency response plans shall include contingencies for effectively managing and responding to chemical and hydrocarbon spills, all of which shall be reported through both BP and Contractor reporting systems.

Rig equipment, primarily including, but not limited to, engines used for power generation, and refrigeration / fire-fighting systems, shall be maintained to prevent excessive emissions (gases) to the atmosphere. Excessive is defined as any generation of emissions greater than expected within manufacturers operating parameters. Systems shall be in place to ensure that expected performance is being maintained.

Leakage of halons and other chlorinated fluorocardons (CFCs), considered to be ozone depleting chemicals shall be minimized through effective air emissions tracking and prevention programmes. Halons and other CFCs may be used to replenish existing systems, but new systems shall not employ the use of ozone depleting chemicals where environmentally friendly alternatives are available.

Contractor waste management systems and processes shall be a consideration during the BP rig selection process.

HSSE Standard 07 – Maintenance

Please note – This standard outlines the minimum conditions that shall apply on all BP operated drilling rigs. This standard should be considered and applied in conjunction with Contractor management systems, local legislative requirements and industry standards.

Well-site facilities shall be maintained within their design envelope to ensure safe, healthy, and efficient and environmentally secure performance. The Contractor shall have in place a planned maintenance system (PMS) for the equipment. All safety critical, load bearing, lifting, hoisting and pressure containing equipment shall be included. The system shall be rigorously applied and details of any overdue items shall be reported on a periodic basis to senior Contractor management. The BP Well-site supervisor shall periodically take an overview of the application of the PMS and shall be kept informed of critical maintenance overdue items.

Third party equipment on long-term hire and located at the Well-site shall also be subject to a formal system of planned maintenance and inspection. Third Party equipment on short-term hire shall have been subject to formal maintenance and inspection checks prior to transport to the Well-site. All third party equipment should have appropriate certification prior to transportation and during the storage on the offshore installation.

Clearly defined and documented maintenance and inspection procedures shall be in place to maintain technical integrity. Personnel shall be trained in the use of these procedures and fully understand their application. Maintenance personnel must be trained and competent in their maintenance discipline.

All lifting equipment shall have been certified for use within the previous twelve months and shall be visually examined before each lifting operation by a competent person.

The most recent equipment certification should be available at the Well-site for inspection at all times.

Registers and systems shall be maintained for safety critical equipment, well control equipment, temporary equipment, lifting equipment, hoses, pressure gauges and pressure relief valves.

HSSE Standard 08 – Dropped Objects

Please note – This standard outlines the minimum conditions that shall apply on all BP operated drilling rigs. This standard should be considered and applied in conjunction with Contractor management systems, local legislative requirements and industry standards.

The potential for dropped objects/falling objects from within drilling derricks and from other areas around the rig is high. The problem is common to fixed installations, mobile drilling units and land rigs. Dropped objects prevention has been the subject of various cross-industry initiatives over the years. Within BP, the DROPS campaign provides an example of dropped objects prevention best practice and covers derricks/masts, lower substructures and BOP areas.

The following standard draws from cross industry Drilling Contractor input to the DROPS programme

DROPS standards/expectations should be included at the facility design review/assessment stage.

Raise awareness by alerting individuals to the potential and consequences of dropped objects. This should be done at an individual level, safety meetings, tool-box talks and other related forums.

The second step is to divide the derrick and sub-floor level into different zones and compile an inventory of equipment. Fastening methods should be identified, tag numbers recorded (where applicable). The time and effort spent initially compiling this list will be beneficial as it will indicate every item within the derrick and sub-structure. In addition, it should highlight any item that has the potential to drop. Remove all redundant equipment that which will not impact on essential items.

For all remaining essential items, controls and standards should be in place based on associated risk. A periodic inspection process should be put in place to ensure that these controls and standards continue to be adequate and to assess the necessary actions required to prevent items from falling.

Third party hoisting and lifting surveys should be checked for their effectiveness. Follow-up of inspection findings should also be checked. Third party equipment handled and used in the derrick should be viewed in the same way once all rig owned equipment has been considered.

A primary cause of dropped objects over recent years has been winch operations. The operation of the winch must be such that the people are knowledgeable of the system, are trained banksmen and operate the winch within the design criteria.

The principles as described above for preventing dropped objects do not change in the automated environments of remote controlled drilling systems. Stringent inspection routines and familiarity with the proper use of automated systems must be maintained at all times.

In order to keep the system live, it needs to be updated whenever changes are made to the inventory or to the structure itself.

HSSE Standard 09 – Risk Management

Please note – This standard outlines the minimum conditions that shall apply on all BP operated drilling rigs. This standard should be considered and applied in conjunction with Contractor management systems, local legislative requirements and industry standards.

Risk Management at the Well-site involves control of risks arising from the complete cycle of activities ranging from the selection of resources, the design and operation of working systems, the delivery of services and the control and disposal of waste.

Risks shall be reduced to a level deemed to be "As low as reasonably practical" (ALARP). The principle of ALARP allows effort to be focused to where it will have most impact. At each Well-site, an established risk assessment process shall be in place that is documented, effective, and auditable and is communicated throughout the organization. This process shall be based on:

- **Hazard identification** – *identifying hazards which are the potential causes of harm*
- **Risk assessment** – *assessing the risk which may arise from the hazards*
- **Risk Control** – *deciding on suitable measures to eliminate or control risk*
- **Implementing and maintaining control measures** - *implementing standards and ensuring that they are effective*

The following is a summary of the preferred hierarchy of risk management principles:

- **Eliminate risks by substituting the hazardous with the less hazardous** – *e.g. by using a less hazardous substance or by substituting a type of machine that is better guarded to achieve the same end result*
- **Combating risks at source by engineering controls** – *e.g. by protecting the dangerous parts of a machine by guarding or by designing machinery that reduces the amount of manual handling (iron roughneck)*
- **Minimise risks by the design of suitable systems of working**
- **Minimise risks by the use of personal protective equipment**

The hierarchy reflects that risk elimination and risk control by the use of physical engineering controls can be more reliably maintained than those, which rely solely on people.

There are several risk assessment tools available and the level of the risk assessment will depend on the complexity and nature of the hazards involved in each particular operation.
The BP Golden Rules of safety define the minimum Permit to work, Confined Space Entry and Energy Isolation requirements. At each BP Well-site, these formal systems shall be supplemented by risk assessment tools, which shall include:

- **Safety Observation Programme** - *e.g. STOP/START*
- **Task based risk assessment/Job safe Analysis** – a simple, systematic assessment undertaken by persons with the knowledge and experience of both the specific task and the location where the task will be undertaken
- **Inspection and Audit Programme** – Both BP and the Drilling Contractor shall follow a formal system of inspection and audit covering all aspects the rig and the management systems in place
- **Toolbox Talks** - Pre-Job meetings where all personnel involved (including Third Party) gather to discuss and understand the nature of the work to be performed and the controls to be exercised to reduce risk to ALARP
- **HAZID (Hazard Identification)** – Structured and systematic assessment of an activity split into a number of steps with each step being reviewed in sequence asking "what could go wrong?" e.g. drilling a high temperature/high pressure well
- **HAZOP (Hazard and Operability)** - generally used when identifying equipment hazards at the design stage

- **Health and Safety Method Statements** - Effective way of providing information to employees about how work is expected to be done and the precautions that should be taken
- **PHSER (Project Health Safety Environmental Review)** - To assure the client Business Unit that HSE sensitive areas have been identified and that appropriate project engineering and operational systems have or will be developed to control identified HSE risks.
- **Major Accident Hazard Identification and Assessment** – Structured and systematic assessment of all major accident hazards that may affect the drilling rig e. g. Escape of hydrocarbons leading to possible fire, explosion, or toxic gas release; collisions offshore; structural/mooring foundation failure; Major mechanical/electrical failure; Loss of stability/buoyancy.

All personnel at the worksite should be aware of which level of risk assessment is applicable to given tasks. In particular, personnel must be aware of the day to day risks associated with **Routine tasks** and must not rely on predetermined or standard assessment sheets.

Where the Well-site work may impact other activities e.g. ongoing production operations, a simultaneous operations review shall be held and the risks and control measures documented and communicated to all relevant personnel.

Further information and guidance can be found within the key HSE processes that support Getting HSE Right expectations (**Key Process Number Three – HSE Risk management)**

HSSE Standard 10 – Ventilation

Please note – This standard outlines the minimum conditions that shall apply on all BP operated drilling rigs. This standard should be considered and applied in conjunction with Contractor management systems, local legislative requirements and industry standards.

Well-site environmental problems may arise due to the presence of airborne pollutants such as dust, gases or vapours, or due to an uncomfortable or stressful thermal environment. Consideration to these potential problems should be given initially at the design stage where, as far as reasonably practical, equipment and facilities shall be designed to minimize the presence of airborne pollutants. Where such pollutants are unavoidable and in addition to other controls that may be required on the basis of risk assessment, Well-site ventilation shall be provided to control emissions, exposures, and chemical hazards.

Ventilation may be deficient in:

- confined spaces; e.g. mud storage tanks and enclosed vessels
- facilities failing to provide adequate maintenance of ventilation equipment; e.g. around shale shaker areas
- windowless areas; and
- areas with high occupant densities.

Ventilation systems can be employed in three ways:

- Local Extract Ventilation (LEV) should be used as close to the source of pollutant as possible to minimize the escape of the pollutant into the atmosphere. The extraction devices can be either hoods, enclosures or fume cupboards coupled to a system of ducts, fans and air cleaners.
- Dilution Ventilation should be used to reduce the concentration of the pollutants to a safe level.
- Heating, ventilating and air-conditioning systems (HVAC) should be used to convey heat or cooling in order to control temperature and maintain reasonably comfortable conditions.

As part of the Well-site Safety Management System, there shall be a process for ensuring that a competent person tests airborne concentrations of pollutants, and that suitable and adequate ventilation is provided where necessary. Where ventilation has been fitted, it shall be included within the Well-site planned maintenance system and be tested to ensure that design criteria are being met and that efficiency is being maintained. All Third Party equipment brought onto the Well-site, shall also be subject to these controls.

Many working environments are uncomfortable due to excessive heat or cold in one form or another. Expected temperatures, the rate of work and the type of clothing to be worn shall be taken into account when considering thermal environment ventilation controls.

Health surveillance programme

As part of the ongoing health surveillance programme, all ventilation systems should be tested annually by competent Occupational hygienist.

HSSE Standard 11 – Lighting

Please note – This standard outlines the minimum conditions that shall apply on all BP operated drilling rigs. This standard should be considered and applied in conjunction with Contractor management systems, local legislative requirements and industry standards.

Well-site lighting systems shall provide a sufficient level of illumination in all areas likely to be manned and where apparatus is installed. Working areas, drilling derricks/masts, corridors, stairways, ladders, walkways and landings shall be especially well lit.

Lighting systems shall be provided so that escape routes, embarkation areas (where applicable) and any control panel or operational station which would need to be manned in the event of loss of normal electrical power can be supplied from the emergency power source.

The twenty-four hour nature of Well-site activities requires natural lighting to be supplemented by artificial sources. When work is conducted under artificial light, the effects of glare, an excess of natural and artificial lighting and of lighting deficiency shall be considered and assessed. Both extremes shall be avoided.

Dust, dirt and use will progressively reduce the light output. Attention to general cleaning and maintenance and a realistic lamp replacement policy will help maintain the required standard of illuminance. Sufficient spare parts for Well-site lighting shall be maintained at the Well-site.

During the facilities design stage, adequate and secure means for accessing and maintaining lighting systems should be accommodated.

All light fittings to have a secondary means of fixing to minimize dropped objects.

HSSE Standard 12 – Work Time

Please note - This standard outlines the minimum conditions that shall apply on all BP operated drilling rigs. This standard should be considered and applied in conjunction with Contractor management systems, local legislative requirements and industry standards.

The purpose of this standard is to avoid the need for Well-site personnel to work excessive hours that could lead to fatigue and subsequent impairment of mental alertness.

For fulltime Well-site personnel e.g. Rig Crews, BP Drilling Supervisors and Catering crews, work rotas should normally be based on an equal time rotation, (e.g. 2/2 or 4/4 week rotation) the length of time depending on area of operation. The normal maximum work period is twelve hours (Operations may be based on shorter work periods e.g. eight hours, with less time spent away from the work location). Where possible, the shift patterns should avoid “short changes.”

Add-hoc Well-site personnel e.g. Service Hands and occasional visitors will normally comply with the normal maximum work period of twelve hours.

Where it is identified at the planning stage that the work cannot be completed within the twelve hour period, additional hours may be worked when authorized by the Well-site Supervisor e.g. Senior Toolpusher. Where the operation exceeds twelve hours on an ongoing basis, either additional resource must be made available, or the operation should be suspended and resumed on the next shift period.

Working hours shall be monitored and where necessary additional hours shall be authorized on the following basis by the Well-site Supervisor:

- 0 – 12 hours - no additional authorization required
- 12–16 hours - only with the agreement of the line Supervisor, who shall advise the Well-site Supervisor.
- Over 16 hours – only with the permission of the Well-site Supervisor (hours to be recorded in log)

Personnel shall have a minimum eight hour rest period after each twelve hour shift.

Work time may need to be considered as part of the risk assessment process. When this is the case, factors to be considered should include:

- The nature of the demands (both physical and mental)
- The working environment
- The work activity
- Sleep deprivation e.g. off duty call out
- Travel aspects e.g. travel time to rig, possible weather delays
- Back-up for “no-shows”

The above applies to all Well-site personnel.

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HSSE Standard 13 – Hazardous materials

Please note – This standard outlines the minimum conditions that shall apply on all BP operated drilling rigs and should be considered and applied in conjunction with Contractor management systems, local legislative requirements and industry standards.

All materials and substances that may have an adverse effect on health or the environment are considered hazardous. Personnel who are required to work with hazardous materials and substances shall be made aware of the hazards and given adequate training and instruction to include; the nature of the material and the risks created by exposure; the precautions to be taken; how to use relevant personal protective equipment; emergency procedures.

At each well-site there shall be:

- A system to maintain hazardous chemicals inventory & Material Safety Data Sheets (MSDS). Third Party suppliers e.g. mud companies will be made aware of and shall follow this system
- A person responsible for controlling and co-ordinating hazardous substances
- An understanding and application of the hierarchy of risk controls (elimination, substitution, engineering, procedural, PPE as last resort)
- An assessment process which identifies any requirement for exposure monitoring &/or health surveillance
- A means of informing the workforce of health risks and precautions for tasks involving hazardous substances e.g. Right to Know Law in US and duties under Health and Safety at Work Act in UK
- Contractor & Third Party alignment on Hazardous Substances management

Only approved personnel shall handle explosives, radioactive materials, dangerous liquids and gases. The Permit to Work System shall be used to control the handling of these items.

A process summary is outlined on the following page which should be used as a guide to managing hazardous materials at the Well-site.

Hazardous Material Process Summary

STEP1

Hazard & Task Identification

Gather information on the :-

- individual tasks
- chemical agents present
- hazardous effects (MSDSs etc.)
- exposure potential by inhalation, ingestion & skin contact.
- existing controls

STEP2

Risk Assessment

Make a balanced and informed judgement on the:-

- risks to health for each task
- adequacy of existing controls

Utilise any or all of the following techniques to assist with this step :-

- observation
- inquiry
- workplace monitoring (where appropriate)

STEP3

Additional Measures

Specify any additional measures necessary to:-

- prevent or adequately control the identified exposure potential
- meet any additional regulatory requirements, such as:-
  - ⇒ maintenance of control measures
  - ⇒ exposure monitoring
  - ⇒ health surveillance
  - ⇒ provision of information, instruction and training to persons likely to be exposed.

STEP4

Record Keeping

Record the Risk Assessment, and its findings and recommendations, in a format suitable for easy use, retrieval and long term archiving.

STEP5

Review

Risk Assessments are 'living' documents and must be reviewed when no longer valid, i.e. due to

- any changes to chemical agents, tasks, controls, people etc.
- the defined review frequency, e.g. every 3 years

CONTRACTOR'S Initial _____ COMPANY'S Initial _____

GoM Specific HEALTH, SAFETY, SECURITY, AND ENVIRONMENTAL REQUIREMENTS

The following constitute Health, Safety, Security, and Environmental (HSSE) Requirements for Contractor and any subcontractors performing work on Company Sites (real estate owned or leased by Company, where Company is the operator) and on Company Project Sites (where work is performed exclusively for Company). HSSE Requirements encompass compliance with all applicable federal, state/provincial, maritime, and local statutes, regulations, enforceable agreements, agency orders, permits, and contract documents. HSSE Requirements also include specific Company requirements as disclosed below and any site-specific requirements not specified below. Each contractor will ensure that any subcontractor it employs meets these HSSE Requirements. Contractor will take any additional precautions necessary to prevent harm to personnel or damage to the environment or, property.

Contractor will strive to deliver an incident and injury-free work place. Contractor will provide, at Company's request, a monthly breakdown of hours worked by Contractor PERSONNEL on the DRILLING UNIT

Company Specific HSSE Requirements for all Contractors

In order to meet Company's specific HSSE Requirements, Contractor will have a HSSE Program with a focus on continual performance improvement (or utilize Company's program). Company has the right to audit Contractor's HSSE Program and documents. At a minimum, the following elements will be included in Contractor's HSSE Program:

1) Leadership

Contractor Leadership will actively communicate HSSE expectations and Company requirements, routinely monitor HSSE performance, develop action plans for continuous improvement, and actively take ownership of HSSE.

CONTRACTOR will ensure that CONTRACTOR'S employees understand COMPANY'S HSSE policy.

2) Behavior Based Safety

CONTRACTOR will have a behavior-based safety program which, at a minimum, will include a safety observation program (or utilize COMPANY'S program) with performance targets. CONTRACTOR will communicate to CONTRACTOR employees the expectation that everyone has an obligation to stop work that is unsafe.

In addition, CONTRACTOR will have a hazard identification and risk assessment process for completing a daily pre-job task hazard analysis and/or work permitting system to identify and control the hazards to an acceptable level. At a minimum, a process for completing daily Job Safety Analysis (JSA), or Job Safety Environmental Analysis (JSEA), is required to facilitate the daily task hazard analysis.

3) HSSE Meetings

CONTRACTOR will conduct or take part in regularly scheduled on-site or off-site HSSE meetings discussing, among other topics, facility and job hazards, incidents, near-misses, site-specific safety and health rules, and site-specific procedures.

4) Incident Reporting and Investigations

CONTRACTOR will immediately notify COMPANY of all CONTRACTOR or SUBCONTRACTOR incidents resulting in personal injury, spills or releases, security issues, loss or damage to property, or near-misses. COMPANY may require CONTRACTOR to conduct an investigation for any HSSE incident. COMPANY retains the right to participate or conduct its own incident investigation. For all incident investigations, CONTRACTOR will provide a written investigation report to the COMPANY. The

investigation report shall identify possible root causes associated with the incident as well as proposals for corrective action. When requested, CONTRACTOR will furnish COMPANY with a copy of non-privileged reports made by or on behalf of ONTRACTOR concerning an incident, including any non-privileged statements or other investigative material.

5) Personal Protective Equipment

CONTRACTOR will ensure CONTRACTOR'S employees have proper personal protective equipment (PPE) before work begins, and that PPE is worn as required. CONTRACTOR shall obtain and comply with individual site PPE requirements.

6) CONTRACTOR Employee Conduct

CONTRACTOR shall comply fully with the Substance Abuse Policy (Attachment 2 to this SECTION 8.0 of the CONTRACT).

COMPANY has the right to require CONTRACTOR to remove and bar from the COMPANY Sites or COMPANY Project Sites any personnel whose conduct (condition or action) jeopardizes the safety of any person. In addition, CONTRACTOR will not permit any barred person to work at any other COMPANY Site or COMPANY Project Site without prior COMPANY written approval.

7) Contractor Employee HSSE Competency

Contractor will ensure that regulatory required training for Contractor's employees has been identified and completed. . Company may require reasonable additional site-specific training and documentation.

8) Short Service Contractor Employee Policy

CONTRACTOR will comply with its own or COMPANY'S site-specific short service employee policy.

9) Preventative Maintenance Program

Contractor will have a preventative maintenance program that includes, at a minimum, the identification and prioritization of maintenance for safety and/or environmental critical items.

10) Chemicals Brought to Company Site

CONTRACTOR will ensure Material Safety Data Sheets (MSDSs) are available at the COMPANY Sites and/or COMPANY Project Sites for all chemicals CONTRACTOR brings to the site, and that the MSDS is reviewed as part of the JSA/JSEA discussion

CONTRACTOR's Initial _____ COMPANY's Initial _____

<u>Company Specific HSSE Requirements Specifically Selected for Certain Contractors (Company and Contractor will initial all those that apply). See web site for details:</u> http://nasupplierhsse.bpglobal.com.

<u>Initialled by: *(if applicable)*</u>

Contractor	Company	
☒	☒	1. CONTRACTOR'S will have a written Waste Management plan at the COMPANY project site for work performed that, at a minimum, requires identification of waste and disposal methods Waste Management
☒	☒	2. COMPANY requires CONTRACTOR to have an acceptable CONTRACTOR'S Environmental Management System (C-EMS).
☐	☐	3. Contractors will meet or exceed BP's Driving Standard.
☒	☒	4. CONTRACTOR will have and apply a Fitness-for-Duty program which includes assessment of the physical capability of employees to perform certain specific tasks and a physical agility testing component.
☐	☐	5. CONTRACTOR will supply COMPANY with a valid Certificate of Recognition applicable to Province of Operation certified by Petroleum Industry Training Service (PITS) or Contractor's Service Line certifying body.
☒	☒	6. CONTRACTOR must have a working knowledge of the Drilling and Well Operations Policy.

CONTRACTOR's Initial _____ COMPANY's Initial _____

SUBSTANCE ABUSE POLICY

COMPANY has a strong commitment to provide a safe work place for its employees and other persons working or visiting on its premises or projects. This “Substance Abuse Policy” (hereinafter this Attachment 2 “Substance Abuse Policy” is referred to as “Policy”), is established in order to assist in maintaining a safe working environment and to protect COMPANY property.

Contractors, subcontractors, and vendors who perform labor or services on COMPANY premises, on COMPANY Projects, or on whose premises COMPANY’S employees spend substantial time must have and administer a formal substance abuse interdiction policy, which informs employees about the risks of using illegal drugs or misusing prescription and over the counter drugs.

CONTRACTOR and SUBCONTRACTORS (hereinafter in this Attachment 2 “Substance Abuse Policy” referred to as “Contractor” or “Contractors”) must also implement a policy that includes substance testing of Contractor’s employees entering COMPANY premises. Contractors working on COMPANY’S premises shall be subject to testing under this Policy by COMPANY.

Contractors working on COMPANY Projects must implement a policy that includes substance testing of personnel consistent with the terms of this Policy. For the purpose of this Policy, a “COMPANY Project” refers to any work performed under this CONTRACT. .

COMPANY reserves the right to prohibit solicitation of bids from, deny entry to COMPANY premises, or cancel any project, or portion thereof, with any Contractor or vendor that fails to present a written policy that meets the COMPANY’S minimum standards as set forth in Section II herein below, or that fails to administer an acceptable policy.

SECTION I – POLICY STATEMENT

The use, possession, concealment, transportation, promotion, or sale of the following substances is strictly prohibited on COMPANY premises, including all property owned, operated, leased by, or under the control of COMPANY, as well as on the location of *any* authorized COMPANY Project, regardless of the physical location where such work is performed.(1)

- Prohibited substances are defined as: (a) any alcoholic beverage, the use of which is not authorized by the Company, (b) any substance that an individual may not sell, possess, use, or distribute under federal or applicable state laws, and (c) any otherwise legal but illicitly-used substances.

- “Otherwise legal but illicitly-used substances” include (a) prescription drugs obtained without proper medical authorization, and (b) prescribed drugs, over-the-counter drugs, and other substances not being used for their intended purposes or at intended dosage.

- Drug paraphernalia and similar items used for substance abuse are likewise prohibited on COMPANY premises.

Contractors and vendors shall submit a copy of their policy and program to the COMPANY employee designated to administer contracts or to such other individual as may hereafter be designated by

(1) *In many contracts, Company reserves the right to remove a contractor’s employees for any reason. In no way does this policy detract from that right.*

CONTRACTOR’s Initial _____ COMPANY’s Initial _____

Company. Such policy must provide for substance testing of Contractor employees and must meet the minimum standards as set forth in Section II below.

Any Contractor or vendor employee found to be in violation of this Policy shall, thereafter, be prohibited from entering COMPANY premises and prohibited from working on any COMPANY Project. Reinstatement of the access privilege may be made after one year upon request of the employing contractor. Such requests should be made to the COMPANY employee designated to administer contracts and will be evaluated on the merits of each case. A request will be granted only upon receipt of evidence that the employee successfully passed a substance test conducted within not more than thirty (30) days prior to the date of the request, and has successfully completed an assessment by a Substance Abuse Professional (SAP), and has complied with all recommended treatment or rehabilitation prescribed by the SAP.

SECTION II – TESTING

A. DEFINITIONS

For the purpose of this policy:

1. "Substance testing" means the analysis of urine, saliva, or breath; however, at times circumstances may warrant additional testing methods.

2. "Chain of custody" means the combination of procedures and documentation which provides a faithful and accurate written record of the custody of a biological specimen, from the time of initial collection of a specimen to final laboratory analysis.

3. "Negative test result" means a laboratory conclusion that the presence of a substance was not detected in a specimen at or above the screening and confirmation levels utilized.

4. "Screened non-negative result" or "presumptive positive result" means laboratory conclusion based on immunoassay that a specimen was found to contain one or more substances present at or above the screening cut-off level.

5. "Confirmed positive result" means laboratory confirmation using gas chromatography/mass spectrometry (GC/MS) of a positive substance test by a Medical Review Officer (MRO).

B. LABORATORY AND SAMPLING STANDARDS

1. Testing for the following substances, at the indicated screening and confirmation cut-offs, are recommended:

Drug	EMIT Screen	GC/MS Confirmation Levels
Amphetamines	1000 ng	500 ng
Marijuana	50 ng	15 ng
Cocaine	300 ng	150 ng
Opiates	2000 ng	2000 ng
PCP	25 ng	25 ng
Alcohol	.02 BAC	.02 BAC

CONTRACTOR's Initial _____ COMPANY's Initial _____

Contractors subject to DOT testing or state laws should abide by appropriate levels.

2. The specimens of applicants and current employees will be tested using an immunoassay. (Approved on-site testing is permissible.) In this testing scheme, a non-negative finding is called a screened non-negative. All screened non-negatives will be further tested using GC/MS. In this testing scheme, a positive finding is called a presumptive positive. All presumptive positives will undergo MRO review.

3. Alcohol screening testing may include utilization of either breath or saliva testing. Tests which are screened positive will undergo confirmation via the use of an evidential-quality breathalyzer for confirmation of positive alcohol test results. MRO review is not required for positive alcohol test results, unless otherwise required by applicable local, state, or federal law.

C. CONFIDENTIALITY

Company will require that contractors and vendors certify that each employee assigned to work on Company premises has passed a substance test that meets the standards of this policy. Contractors and vendors must maintain records related to substance tests conducted under this Policy, which are subject to audit by COMPANY as further set forth in Sections IV and VI of this Policy.

CONTRACTOR shall not have the obligation to disclose to COMPANY any individual results of tests conducted by CONTRACTOR. However, CONTRACTOR shall prohibit such individuals in violation of the Policy from entering COMPANY premises and working on any COMPANY Project CONTRACTOR shall certify to BP, upon request, that it has met the drug testing requirements of this Policy, including the removal of any staff who have received a positive drug or alcohol test..

D. TESTING

1. Contractors will conduct substance testing in these situations:

a. before any contractor employee may enter COMPANY premises or perform work on any COMPANY Project for the first time.

b. annual random drug testing of at least 25% of Contractor's employees engaged in work on COMPANY premises and on any COMPANY Project; this requirement will be met if Contractor covers the applicable employees under a larger drug testing pool that is subject to annual random testing of at least 25% of the pool population.

c. upon reasonable suspicion by the Contractor or COMPANY that a contractor employee on COMPANY premises or working on a COMPANY Project is under the influence of or has consumed any substance or item prohibited by this Policy.

d. when required by COMPANY management, immediately following any incident that results in a recordable bodily injury as defined by OSHA, or damage to COMPANY or Contractor-owned property, and/or when otherwise required by federal, state or local law. Additionally, any substance testing regulated and/or required by DOT (FHA, RSPA, USCG), must be strictly adhered to. (Note: Substance testing may also be required by the Contractor, vendor or COMPANY following a near-miss incident. A near-miss incident is any incident which, if it

had proceeded to a reasonably possible and more serious level of development, would have had the potential for personnel injuries, property damage, or serious liability claims).

2. Contractors will assume all costs associated with testing they conduct.

3. The refusal of a contractor's employee to sign a consent form or submit to any testing required by this Policy will result in revocation of the person's access privileges. A refusal to test shall include a failure to cooperate with any part of the testing process, including: (1) failing to remain until the process is completed; (2) failing to provide a sufficient or adequate specimen (without medical explanation); (3) failing to appear for testing (including failing to appear within a reasonable time after being notified of testing); (4) failing to submit to a re-collection or retesting when required; or (5) submitting a specimen that the MRO verifies as adulterated or substituted.

E. EXCEPTIONS

The following exceptions may be granted at the discretion of COMPANY management:

1. Contractors and Contractors' employees who are contracted or hired on short notice may be permitted to begin work on-site or on a COMPANY Project pending receipt of the results of pre-access substance testing. This permission will not extend beyond seven (7) calendar days from the first date after work starts by Contractor.

   Any person working under this provision must be removed from the work site immediately upon receipt of a positive test result, or at the end of seven (7) calendar days if test results have not been reported.

   This provision covers only employees needed for initial staffing and does not extend to those hired with sufficient time for pre-access testing (2-3 days after job begins).

2. Contractors or vendors who have a need for site access and whose work on COMPANY premises or on a COMPANY Project poses a minimal safety risk may be exempted in whole or in part from compliance with this Policy. Requests for an exemption should be made to the COMPANY employee designated to administer contracts, or to such other individual as may hereafter be designated by the COMPANY.

F. VALIDITY PERIOD

A pre-access substance test must have been administered within ninety (90) days immediately preceding access. This requirement may be waived by local authorized COMPANY management for persons who are regaining access after an absence of not more than ninety (90) days.

COMPANY will recognize a substance test conducted on a Contractor's employee while that employee worked for a different employer if (1) the test is conducted within the 90-day period required by this policy, and (2) the laboratory and sampling procedures meet the standards set forth in this Policy. COMPANY prefers that the testing requirements be verified by an independent agency such as the Contractor's Safety Council.

CONTRACTOR's Initial _____ COMPANY's Initial _____

SECTION III – SEARCHES AND INSPECTIONS

COMPANY reserves the right at all times on its premises to conduct unannounced substance screens, searches, and inspections of contractors, contractors' employees, vendors, and other persons, including their effects, lockers, baggage, desks, tool boxes, clothing, and vehicles located on COMPANY premises or worksites, as a means of enforcing this Policy.

Any controlled substances or items prohibited by this Policy, or any materials that are illegal to possess, will be retained by COMPANY and may be destroyed or turned over to the appropriate law enforcement agency.

The refusal of any person to submit to a search or inspection will result in the revocation of the person's access privileges.

SECTION IV – COMPLIANCE AUDITS

COMPANY reserves the right to periodically audit a Contractor's records to verify compliance with this policy. Such verification will include, but not be limited to:

1. examination of the Contractor's substance abuse policy and its implementing directives and procedures;

2. a determination that substance testing is being conducted in those situations where it is required and that the testing meets the standards of this policy;

3. examination of chain of custody procedures which ensure integrity of collected specimens; or

4. evaluation of laboratory services.

Audit results will be treated as confidential in order to protect the privacy of tested persons. Notwithstanding any other provision of this Policy, under no circumstance will CONTRACTOR GROUP be obligated to disclose to or discuss with COMPANY GROUP or any member of COMPANY GROUUP the test results or records of any individual or member of CONTRACTOR GROUP.

SECTION V – SUBCONTRACTS

In all cases where a Contractor is permitted to employ a subcontractor, the Contractor is responsible for ensuring that the subcontractor and subcontractor's employees are in compliance with this policy. Contracts between contractors and subcontractors must stipulate that COMPANY reserves the right to audit subcontractor's substance programs.

SECTION VI – CONSENT FORMS

The Contractor must obtain a signed consent demonstrating each employee's agreement to release to Contractor the results of any substance testing performed by COMPANY on COMPANY premises, unless prohibited by applicable federal, state, or local law.

COMPANY will look at substance test results only during occasional compliance audits as described in Section IV, or when testing is required by COMPANY as described in Section II.

CONTRACTOR's Initial _____ COMPANY's Initial _____

SECTION VII – NOTICE

The Contractor must ensure that each of its employees and employees of its subcontractors is informed of the provisions of this policy and of the Contractor's substance abuse policy. Notice will include the consequences of failure to comply, and will be made prior to entering COMPANY premises or working on COMPANY Projects.

SECTION VIII – CONCLUSION

Consideration for work on COMPANY premises or Company Projects will be conditioned upon contractor's and vendor's implementation of a policy that, in COMPANY'S sole judgment, conforms to the minimum standards expressed in this policy. Program development and implementation are the responsibility of the contractor.

The central goal of this policy is to provide a safe and efficient working environment for all persons on COMPANY premises, and to ensure that COMPANY Projects are performed in a safe and efficient manner. Cooperation is vitally important to the achievement of this important goal.

CONTRACTOR's Initial _____ COMPANY's Initial _____

Exhibit F-1
Personnel to be Provided
Deepwater Horizon

No. of Personnel					
On Board Rig	Assigned To Rig	JOB CLASSIFICATION	Daily Rate per person	Daily Overtime Rates	Hourly Overtime Rates
1	2	OIM			
1	2	Sr. Toolpusher			
2	4	Toolpusher			
2	4	Driller			
4	8	Assistant Driller			
2	4	Derrickhand			
2	4	Pumphand			
12	24	Floorhand			
1	2	Maintenance Supervisor			
1	2	Mechanical Supervisor			
2	4	Chief Mechanic			
2	4	Mechanic			
3	6	Motor Operator			
1	2	Electrical/Electronic Supervisor			
1	2	Chief Electrician			
1	2	Electrician			
1	2	Chief Electronic Tech			
1	2	Electronic Technician			
1	2	Sr. Subsea Supervisor - MUX			
1	2	Subsea Supervisor			
1	2	Master			
1	2	Chief Mate			
1	2	Bosun			
3	6	AB Seaman			
2	4	DP Operator III			
2	4	DP Operator II			
3	6	Crane Operator			
2	4	Deckpusher			
13	26	Roustabout			
1	2	Welder			
1	2	Sr Materials Coordinator			
1	2	Materials Coordinator			
1	2	Medic			
1	2	Radio Operator			
1	2	RSTC			
76	**152**	**Total**			

Notes:
1. Rates and Fees to be provided thirty (30) days prior to Commencement Date of Contract Extension.
2. Above manning assumes CONTRACTOR will not put CONTRACTOR Personnel onboard workboats to handle cargo.
3. CONTRACTOR to have a forty-eight (48) hour allowance (for each occurrence prior to the enactment of penalty) to replace CONTRACTOR Personnel that have to leave the drilling unit for emergency purposes or who fail to show up for crew change.
4. CONTRACTOR shall not be penalized when requested by COMPANY to reduce CONTRACTOR'S Exhibit F-1 Personnel in order to provide additional bed space to accommodate COMPANY Personnel. Record of such CONTRACTOR Personnel reductions shall be mutually agreed by CONTRACTOR and COMPANY with such agreement recorded in the daily IADC log.

Amendment No. to Contract No. 980249