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TREX-01356A

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BP-HZN-MBI00021460

DRILLING CONTRACT

RBS-8D SEMISUBMERSIBLE DRILLING UNIT

VASTAR RESOURCES, INC.

AND

R&B FALCON DRILLING 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

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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

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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.

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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 from 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 #4159757897
ABA Number 1210-0024-8
SWIFT Number WFBIUS6S

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.

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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 14.3. 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-1.

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

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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

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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. 146.210.

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

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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 COMMENCEMENT 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 DOLLARS (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 BENEFICIAL 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.

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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.

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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

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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
TELEPHONE: (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.

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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.

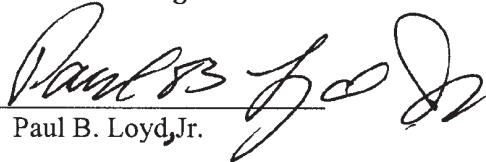
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35.4 ARBITRATION

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.

BY: 
Paul B. Loyd, Jr.

TITLE: Attorney-in-Fact
(Chairman R&B Falcon Corporation)

Vastar Resources, Inc.

By: 
Charles D. Davidson

TITLE: President and CEO *P. J.*

PJ

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 16.5 m (@ WL)	55.8 ft. x 54.1 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 *)

	OPERATION (DP Mode)	SURVIVAL (transit / future moored)	
Condition	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 m/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)
<u>Current:</u>			
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.



WEIGHT AND CENTER OF GRAVITY

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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A handwritten signature in black ink, appearing to be 'DM' followed by a stylized 'G'.

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 pe	: 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 capablit	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 a 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 / RETRIEVE 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

Main Hoist	Seastate Lift	4 lines	Radius	Metric
			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

Main Hoist	Platform Lift	2 lines	Radius	Metric
			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

Main Hoist	Seastate Lift	2 lines	Radius	Metric
			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	Metric
	Meters	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 (fron	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 cathhead type : Refer D 2.1.7
Breakout cathhead 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

Make/Type : N/A
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
Quantity : 1
Size " 49 1/2 x 37 1/2
Quantity :

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. CENTRAL CONTROL ROOM
 (AC and DC), located at the following p: 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: 7 1/4" x 4" provisional
Make up torque	Ft/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	: Pinchrome (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

Quantity	2
Make	: SMF (provisional)
O.D/ I.D	no.: TBA (Team to review & advise)
Connection type	: HT 55
Working Pressure	15000
Quantity	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
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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 TORQUE	
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 RO' 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 TI
Type (single/double) : Double x2 , Single x 1
Stack Configuration : A1, 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 outlets 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 advise

E.2.4 STACK CONFIGURATION

(Blind/Shear/Pipe/Variable)

Upper Shear r: Cavity 5 SSCSR (Less than or equal to 13-5/8")
Lower shear r: 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 (A1)
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 Accumulator Unit)

Quantity	no.: 17 (team to evaluate)
Useful capacity per accumulator (w/o pUS 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 pres:	yes/no: YES
Spare control pod	yes/no: NO
Deadman system	yes/no: YES
Pressure & temperture 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 12,710psi

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 F 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
 62,311 for 5k buoyancy, 54,424 for 3k buoyancy, 31,620
 Weight of one complete joint (in air) lbs: 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
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E.6.9 Marine Riser Gimbal

Make/Type	: VETCO
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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" Nomimal
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/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
 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 valve 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 : SYNIFLEX (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 SYSTEM N/A

E.13 SUBSEA AUXILIARY 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. TC 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 hp: 100
Discharge/Suction line ID inch/inch 5" / 10"
M.P. Pulsation Dampener type: White Rock
Soft Pump : 1 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 MUD SYSTEM

F.2.1 MUD TANKS

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



Quantity	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.)	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

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 :

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 lt: 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



F.3.5 CEMENT DAY TANKS

F.3.6	SURGE TANK FOR CEMENT	Third party
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F.3.7 BULK TRANSFER SYSTEM (See also C.1.8 - Compressed Air Systems)

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

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	

G.1.6 CASING SLIPS (Hand)

G.1.7 CASING BOWLS

Dr. [Signature]

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 (Swed) 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	lbs:	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
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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	
Make/Model	Doppler Current Profiler
Located at	TBA
Recorder	Lower Hull Penetration
	TBA
H.9.5 WEATHER FACSIMILE RECOI	
Make/Model	Yes
Located at	: JRC / JAX - 9A
Recorder	: Radio Room
	yes/no: Yes
H.9.6 RADAR	
Quantity	YES Yes
Make/Model	1 1
Located at	Norcontrol / Databridge 2000 BL
Bandwidth	Bridge
Quantity	cm: X-Band
Make/Model	no.: 1
Located at	: Norcontrol / Databridge 2000 BL
Bandwidth	: Bridge
	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 :

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 at 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 barge 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 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

I.5 FIXED LINES FOR WELL TESTING

I.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.

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 : 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

Quantity	YES
	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
Equipped 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
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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	0
C/W attached toilet	N/A

K.2.4 GALLEY

Quantity	1
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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 hats (contractor only/everyone/no	: CONTACTOR ONLY
Safety boots (contractor only/everyone/n	: CONTACTOR ONLY
Safety clothing (contractor only/everyon	: CONTACTOR ONLY
Ear protection (contractor only/everyone	: EVERYONE
Rubber gloves (contractor only/everyone	: CONTACTOR ONLY
Rubber aprons (contractor only/everyone	: CONTACTOR ONLY
Fullface visors (contractor only/everyone	: CONTACTOR ONLY
Eye shields (for grinding machines, etc.)	
(Contractor only/everyone/not supplier	: CONTRACTOR ONLY
Dust masks (contractor only/everyone/ n	: CONTACTOR ONLY
Rubber gloves - elbow length for chemical handling	
(Contractor only/everyone/not supplier	: CONTACTOR ONLY
Explosion proof handtorches c/w batteries	
(Contractor only/everyone/not supplier	: CONTACTOR ONLY
Safety belts c/w lines (contractor only/ev	: CONTRACTOR ONLY

L.1.2 EYE WASH STATIONS

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



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



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
Make/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



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 M¹ 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 SY 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
----------	----------

Make/Model	: HAMMORTHY (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.

A handwritten signature in black ink, appearing to be 'AT' followed by a stylized 'D' or 'W'.

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 than \$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, including Collision 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.

A handwritten signature in black ink, appearing to be 'Drew' followed by a stylized initial or mark.

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 be 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 Toufeeq 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 Toufeeq

Title: Vice President

Signature: Ron Toufeeq

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:

- a.) The repayment will be reduced by the eighty percent (80%) of the fixed cost not already paid by COMPANY.
- b.) The repayment will be reduced by an amount equal to five percent (5%) as an incentive for CONTRACTOR to actively market the Drilling Unit.
- c.) 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	
2 nd 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.



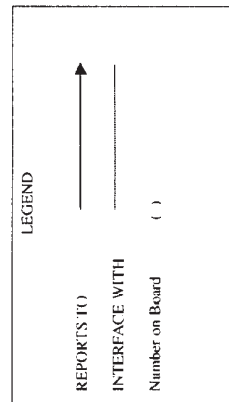
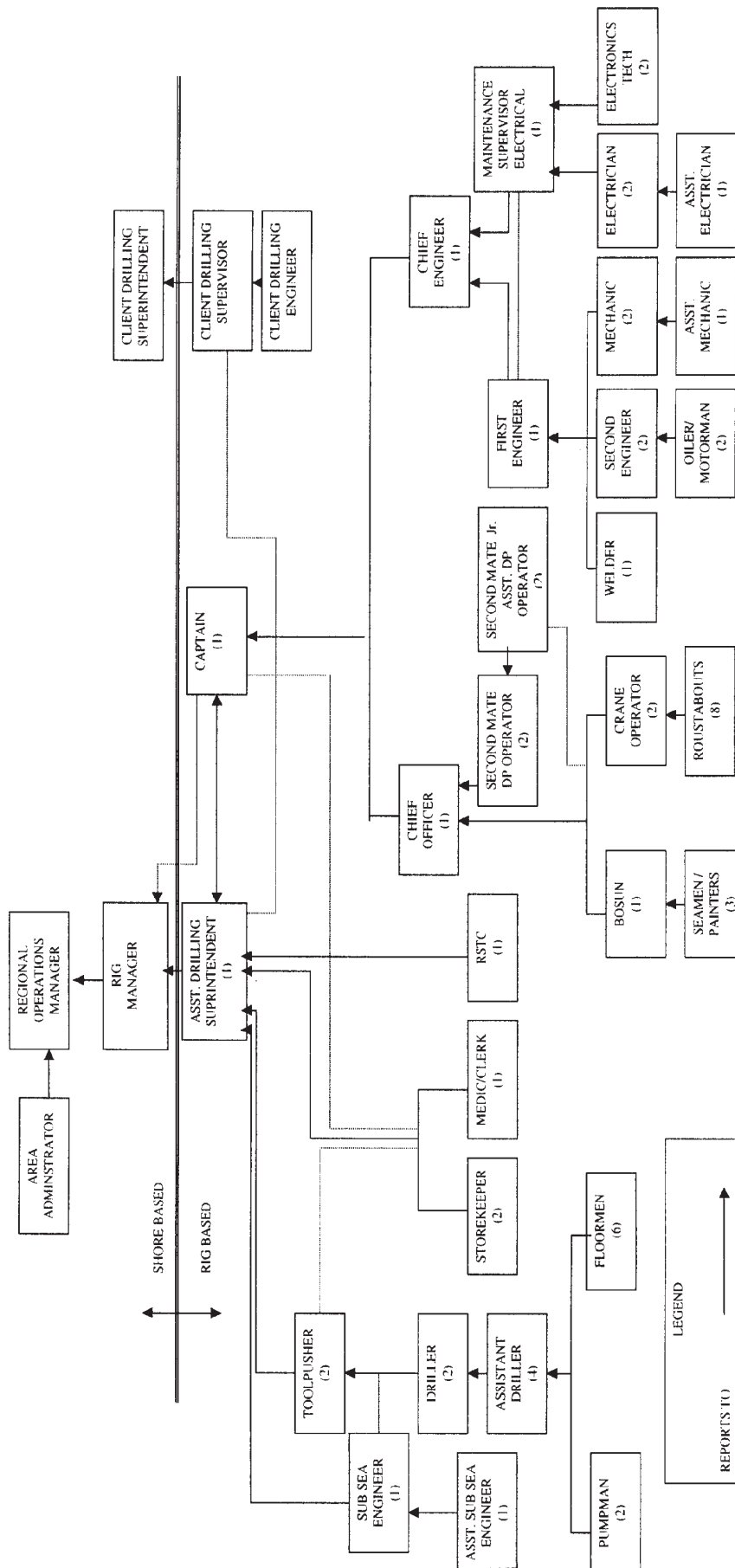
EXHIBIT F-2

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
2 nd 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			

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RBS8-D REPORTING ORGANIZATION CHART



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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.



RBS8D PROJECT

PROJECT EXECUTION PLAN

Revision 1

April 7, 2000

© 1998 R&B Falcon Drilling Co.

Handwritten signatures and initials:
- A large signature, possibly "H. Thompson".
- Initials "RBC".
- A signature "Dew".



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Acronyms

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- 2.0 Objectives / Priorities / Philosophy**
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- 5.0 Project Controls**
- 6.0 Quality Principles**
- 7.0 Safety and Environmental Management Plan**
- 8.0 Design Plan**
- 9.0 Fabrication and Construction, Testing, and Pre-Commissioning**
- 10.0 Operations Interface, Integration and Turnover**
- 11.0 Project Administration**
- 12.0 Document Control**

Attachments

- | | |
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| Attachment 1 | Houston Engineering / Procurement Organization Chart |
| Attachment 2 | Ulsan Engineering / Procurement Organization Chart |
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Acronyms

ABS	American Bureau of Shipping
AFC	Approved for Construction
AFE	Authority for Expenditure
AFG	Approved for Guidance
API	American Petroleum Institute
API RP	American Petroleum Institute Recommended Practice
BFE	Builder Furnished Equipment
CO	Change Order
CTR	Cost Trend Report
FAT	Factory Acceptance Test
HAZOPs	Hazard and Operability Studies
HHI	Hyundai Heavy Industries
IDC	Interdiscipline Checks
IHI	Ishikawajima-Harima Heavy Industries
ISM	International Safety Management
ISO	International Standardization Organization
MODU	Mobile Offshore Drilling Unit
MR	Material Requisition
OFE	Owner Furnished Material
PDN	Project Deviation Notice
PEP	Project Execution Plan
PHA	Preliminary Hazard Analysis
PO	Purchase Order
QA	Quality Assurance
QC	Quality Control
QRA	Quantified Risk Assessment
RBF	R&B Falcon
RBS8M	Project designator for Deepwater Nautilus
RBS8D	Project designator for Deepwater Horizon
TPP	Technical Position Paper
TQ	Technical Query
VCR	Vastar Change Request



SECTION ONE

Project Execution Plan

1.0 INTRODUCTION AND EXECUTIVE SUMMARY

1.1 Purpose (Rev. 1)

This Project Execution Plan (PEP) documents the RBS8D Project Team's strategic quality plan for executing the design, engineering, procurement, and construction of a completely outfitted, tested, and equipped Dynamically Positioned Semi-submersible Drilling Vessel, RBS8D. The purpose of the PEP is two-fold; first, it is used to demonstrate to corporate management that the Team's priorities are aligned with company business objectives and that sufficient planning and controls are in place to efficiently proceed. Secondly, it is used by the Team as a roadmap and communications tool to help achieve the project objective.

Because the PEP is a strategic level document, it is complimented by companion documents such as Contract Design Basis, project procedures, shipyard specifications, etc.

The PEP is intended to be a living, working document which can be updated as necessary. Revision 1 of the PEP is issued at the completion of the design commencement of the construction phase of the project.

1.2 Format

This document is structured as follows:

- | | |
|-----------|---|
| Section 1 | <u>Introduction and Executive Summary</u> - includes the purpose of the PEP, a summary of the main sections of the PEP, a description of the Project, summary presentations of the project schedule, budget and organization. |
| Section 2 | <u>Objectives / Priorities / Philosophy</u> - addresses the broad business objectives, or "What the Team wants to accomplish with this project". |
| Section 3 | <u>Project Organization</u> - defines the Project Team and shipyard Site Team organizations, and their functional responsibilities for the various aspects of the project. |

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- Section 4 Procurement, Contracting and Materials Management - provides broad guidance, considerations and general strategies for contracting and procurement.
- Section 5 Project Management and Control - summarizes general strategies for cost control, schedule control, change control, weight control, interface control, document control, status reporting, and PEP/Design Basis revision procedures.
- Section 6 Quality Plan - summarizes the policy and philosophy of the program whose objective is to establish and maintain the confidence that materials, products, services, design, construction and documentation are in conformance with the project requirements, specifications and drawings and all applicable regulatory requirements.
- Section 7 Safety and Environmental Management Plan - provides a systematic approach to identify and manage safety and environmental hazards in design and construction of the vessel.
- Section 8 Design Development / Review Plan - summarizes the policy, philosophy and general procedures that will be used to ensure the optimum use of experience and knowledge in planning, design, procurement, fabrication and construction to achieve overall RBS8D project objectives.
- Section 9 Fabrication and Construction, Testing, and Pre-Commissioning - Summarizes the policy, philosophy and general procedures that will be used to insure structures, systems, sub-systems and components fabricated at the shipyard, or specialized facilities to be integrated into the Vessel by the shipyard, comply with the Quality, Safety, Environmental and Design Plans in view of interdisciplinary and systems integration requirements.
- Section 10 Operations Interface, Integration and Vessel Turnover – Summarizes the philosophy and procedures that will be used to ensure the optimum use of operational experience and knowledge in the design and construction of the Vessel, the integration of operations personnel into the Team, and the hand over to Operations of the completed Semi-submersible.
- Section 11 Project Administration – summarizes the policies and procedures used to provide support to the RBS8D Project in Houston and Korea in terms of general accounting, AFE



budgets and forecasts, contract administration, information services, office services, personnel, and timekeeping.

Section 12 Document Control – summarizes the policies and procedures used in the Project. The section discusses the Project File Code System, internal controls for technical and vendor data, the Document Distribution Matrix, final documentation compilation, document reproduction, the Inter-disciplinary Check procedure, and archiving and storage.

1.3 Project Description

The Project Team has completed Basic Design and OFE Procurement for the first (moored) vessel, RBS8M. The Detail engineering for the hull structure has also been completed and shipyard construction is well under way. Delivery of the RBS8M is scheduled for November 30, 1999.

The RBS8 shipyard project team has been assembled in Ulsan to supervise construction and liase residual engineering efforts. The RBS8 Houston team has been reorganized to focus on RBS8D project, together with Ishikawajima-Harima Heavy Industries (IHI) Tokyo in order to implement all basic engineering changes for the RBS8D design, all in accordance with attached Organization Charts, which should ensure a negligible learning curve for many of the staff on the new project. The same can be said about the shipyard construction team. Numerous R&B Falcon employees will be involved in the construction of both vessels, with construction of the RBS8D beginning approximately 12 months after the RBS8M, which should enhance efficiency and quality construction.

The RBS8D Team has been responsible for the developing the preliminary Contract Guidance Plans and Shipyard Specification for the construction of the RBS8D dynamically positioned semi-submersible drilling vessel, and has assisted with shipyard negotiations. The Team will be responsible for finalizing the Basic Design, jointly with IHI, and procurement of OFE as identified in the equipment list, and integration with our major sub-contractors to ensure the vessel is constructed to approved specifications and in compliance with all applicable regulatory and industry requirements. A contract to construct the vessel will be executed between R&B Falcon Drilling Co. and Hyundai Heavy Industries Co. The vessel is scheduled for delivery in February 2001.

Upon completion of the Basic Design, the focus of the RBS8D project team will shift from Houston Engineering and OFE Procurement to the Ulsan shipyard to monitor and liase the Detail Engineering and construction process. The RBS8D Team will interface as owner's representatives between HHI, RBF and ABS, and with HHI sub-contractors. In this role the Team will review

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preliminary and detailed engineering, procure OFE as identified in the contract, review BFE specifications and approve all BFE prior to purchase. They will also oversee construction at the shipyard site to ensure compliance with all applicable specifications and standards.

The Team will also assist with developing a detailed schedule that will enable them to effectively monitor progress and track costs associated with the project.

1.4 Project Schedule (Rev. 1)

The RBS8D Project has several important target milestones to achieve during project execution.

<u>Overall Project Contract Milestones</u>	<u>Original Contract</u>	<u>Current</u>
• Contract Award (C/A)	December 16, 1998	December 16, 1998
• Steel Cut (W/C)	September 1, 1999	October 1, 1999
• Piping Spool Fabrication	October 1, 1999	October 1, 1999
• Block Setting - Pontoon	December 20, 1999	February 9, 2000
• Block Setting – Upper Hull		April 9, 2000
• Upper Hull Lift	May 3, 2000	August 5, 2000
• Start of On-Board Testing	August 1, 2000	November 1, 2000
• Launch and Start of Sea Trials	September 15, 2000	December 15, 2000
• Contract Delivery FOB Shipyard	November 1, 2000	February 1, 2001

1.5 Project Budget

The cost estimate includes a detailed cost breakdown by various cost categories and reflects a total RBS8D cost of approximately \$300MM. The total authorized value of the contract may change as a result of cost adjustments connected with changes in the authorized scope of work. All changes to budget require appropriate levels of approval as defined in the administrative section. The Project Team's goal is to complete the RBS8D in a cost effective and timely manner while adhering to stringent quality standards.

Detailed cost estimates may be found in the RBS8D project AFE and associated documents.

1.6 Project Organization (Rev.1)

The RBS8D Project employs a team approach towards the successful completion of the project. Employees from Vastar, R&B Falcon Drilling Co., IHI, HHI, and various sub-contractors and consultants will jointly coordinate activities relating to the overall completion of the project. Open communication and interaction is encouraged at all times and the successful completion of the



project is largely dependent on our ability to communicate and work together to resolve any problems that may arise.

The Project Team is goal-oriented towards the safe completion of the vessel on schedule and within budget without compromising safety, quality or performance characteristics

The Project Organization is described in Section 3.0 with an organization chart for the Team provided in Attachment 2.

1.7 Project Execution

An overview flowchart describing the RBS8D Project Execution is shown in Attachment 3.

1.8 PEP Status

Revision 1 of the PEP incorporates recommendations from Vastar as agreed with RBF as beneficial to the mutual success of the project. Revisions to the December 1, 1998, Rev. 0, PEP are noted as "(Rev. 1)" herein.

Rev. 1
Done



SECTION TWO

OBJECTIVES/PRIORITIES/PHILOSOPHY

2.0 OBJECTIVES/PRIORITIES/PHILOSOPHY

2.1 Project Mission (Business Objective)

2.1.1 Mission

To engineer, construct, test, and commission a safe, environmentally sound, cost effective, operable, and maintainable Semi-submersible Drilling Vessel with deepwater and dynamic positioning capabilities, that maximizes project economics within approved budget constraints.

2.1.2 Vision

Be a model for all R&B Falcon projects through cost effective construction and management using teamwork. Demonstrate industry leadership in design and construction.

2.1.3 Method Philosophy (Rev.1)

Maximum project economics will be achieved by constructing a safe, operable and maintainable Semi-submersible Drilling Vessel at the capital cost justified by operational economics, delivered from the shipyard February 2001.

Minimum capital cost will be achieved by aggressive pursuit of cost saving ideas, developing a comprehensive, clear, and concise shipyard contract specification package, employing value engineering principles to aid design decision making, using fully integrated project controls systems and closely managing shipyard, subcontractor and OFE vendor engineering and construction work.

The Team's mission is also to execute the project in a manner that will enhance the relationships between the Team and selected subcontractors. This will be accomplished by working toward win-win solutions and a quality product.



2.2 Priorities and Objectives

2.2.1 Priorities

- 1st: Personnel safety
- 2nd: Environmental protection
- 3rd: Quality
- 4th: Economics
- 5th: Schedule

Other Project Priority Considerations:

2.2.1.1 (Rev.1)

Capital costs and schedule are the project variables that most strongly drive the economics. If delivery at HHI is projected in February 2001 or earlier, minimizing capital cost will be the most significant economic driver. If HHI delivery is projected beyond February 2001, schedule may become a primary economic driver. If this case develops, point-forward economic analysis will be used to make cost versus schedule decisions.

2.2.1.2

The employed technology must use equipment designs that are safe, operable and maintainable offshore.

2.2.2 Objectives

Key objectives for the RBS8D Project are:

2.2.2.1

High personnel health and safety and environmental protection standards will be maintained during engineering, construction and operation of the Semi-submersible Drilling Vessel. These standards will meet the requirements of the field operator, Vastar, R&B Falcon Drilling Co. and all applicable governmental rules and regulations.

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OK



2.2.2.2

The RBS8D Project will deliver a product that is safe, maintainable, and operable, considering the anticipated crew's training and experience and offshore operations support infrastructure.

2.2.2.3

In order to maintain or enhance project economics, the cost objective is to deliver the Semi-submersible Drilling Vessel at a cost of less than \$300,000,000.

2.2.2.4 (Rev.1)

To meet Vastar's Field Development schedule, the Semi-submersible Drilling Vessel must be delivered at HHI by February 2001. Given the value of project economics, special effort will be given to meeting the target cost objective and to meeting the schedule objective. Project economics may be enhanced by earlier delivery.

2.3 Philosophy

2.3.1 Integrity

The Team shall be committed to integrity in all of its actions. All activities shall be conducted in full compliance with all applicable laws, rules, and regulations. The highest business ethics shall be maintained and conflicts of interest avoided in all areas.

2.3.2 Project Decisions

Minimizing capital costs is the most significant economic driver which the Team can control. However project delays could adversely impact profitability or make contract penalties / cancellation or lease jeopardy an issue. The cost/schedule trade-off must be assessed with each project decision that has a significant impact on these factors.



2.3.3 Value Engineering

The Team can improve the project's profitability by adopting a philosophy of "value engineering". The essence of value engineering is the evaluation of stated requirements and design alternatives to determine if they are the most cost effective way of satisfying the business objectives.

2.3.4 Project Controls

Great care will be devoted to controlling the project's critical development aspects, such as cost, schedule, changes, weight and interfaces. Project controls will be implemented by the Team to support the general strategies contained in Section 6.

2.4 Deliverables

The RBS8D Team has been responsible for the developing the preliminary Contract Guidance Plans and Shipyard Specification for the construction of the RBS8D dynamically-positioned semi-submersible drilling vessel, and has assisted with shipyard negotiations. The RBS8D Houston Team will be responsible for finalizing the Basic Design, jointly with IHI, and procurement of OFE as identified in the equipment list, and integration with our major sub-contractors to ensure the vessel is constructed to approved specifications and in compliance with all applicable regulatory and industry requirements

Specific Basic Design "Deliverables" have been identified in the Contract Specifications and will be finalized jointly in accordance with the IHI (Ishikawajima-Harima Heavy Industries) agreement and schedule. Detail Engineering will be completed by Hyundai Heavy Industries (HHI) in accordance with the Construction Schedule.

The RBF Project Team will interface with HHI Engineering as the Owner's representative. In this role the Team will review the detailed engineering, procure the identified Owner Furnished Equipment (OFE), expedite transfer of OFE technical information to HHI, coordinate OFE inter-vendor interface, and coordinate OFE vendor interface with HHI's engineering design department.

The RBF Project Team will oversee the Semi-submersible Drilling Vessel construction and testing at HHI's shipyard for compliance with the shipyard contract and OFE purchase order specifications.

R&B Falcon Drilling Co. will operate the Drilling Vessel, under contract to Vastar, upon delivery.

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SECTION TWO

OBJECTIVES/PRIORITIES/PHILOSOPHY

2.0 OBJECTIVES/PRIORITIES/PHILOSOPHY

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The Team's mission is also to execute the project in a manner that will enhance the relationships between the Team and selected subcontractors. This will be accomplished by working toward win-win solutions and a quality product.

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- 3rd: Quality
- 4th: Economics
- 5th: Schedule

Other Project Priority Considerations:

2.2.1.1 (Rev.1)

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The employed technology must use equipment designs that are safe, operable and maintainable offshore.

2.2.2 Objectives

Key objectives for the RBS8D Project are:

2.2.2.1

High personnel health and safety and environmental protection standards will be maintained during engineering, construction and operation of the Semi-submersible Drilling Vessel. These standards will meet the requirements of the field operator, Vastar, R&B Falcon Drilling Co. and all applicable governmental rules and regulations.

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2.2.2.2

The RBS8D Project will deliver a product that is safe, maintainable, and operable, considering the anticipated crew's training and experience and offshore operations support infrastructure.

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In order to maintain or enhance project economics, the cost objective is to deliver the Semi-submersible Drilling Vessel at a cost of less than \$300,000,000.

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The Team can improve the project's profitability by adopting a philosophy of "value engineering". The essence of value engineering is the evaluation of stated requirements and design alternatives to determine if they are the most cost effective way of satisfying the business objectives.

2.3.4 Project Controls

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Specific Basic Design "Deliverables" have been identified in the Contract Specifications and will be finalized jointly in accordance with the IHI (Ishikawajima-Harima Heavy Industries) agreement and schedule. Detail Engineering will be completed by Hyundai Heavy Industries (HHI) in accordance with the Construction Schedule.

The RBF Project Team will interface with HHI Engineering as the Owner's representative. In this role the Team will review the detailed engineering, procure the identified Owner Furnished Equipment (OFE), expedite transfer of OFE technical information to HHI, coordinate OFE inter-vendor interface, and coordinate OFE vendor interface with HHI's engineering design department.

The RBF Project Team will oversee the Semi-submersible Drilling Vessel construction and testing at HHI's shipyard for compliance with the shipyard contract and OFE purchase order specifications.

R&B Falcon Drilling Co. will operate the Drilling Vessel, under contract to Vastar, upon delivery.

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SECTION THREE

PROJECT ORGANIZATION

3.0 PROJECT ORGANIZATION

3.1 Team Roles (Rev.1)

The design, procurement, construction, commissioning and operation of a world class "state-of-the-art" Mobile Offshore Drilling Unit (MODU) is a specialized and complex process. Inherent in the design, construction and use of the unit is a wide array of comprehensive regulatory requirements from national and international authorities in addition to the Classification Society that specify certain operational criteria for safety. The desired operating capabilities are to be achieved within the applicable regulatory framework.

Construction and operation of the Deepwater Horizon (RBS8D) represents a major commitment by both parties (owner and operator). The cost to design and build the unit is a major corporate decision by the management of R&B Falcon. Likewise, the use of the unit for exploration and development of oil and gas properties is a strategic element of Vastar Resources long-range business plan. Therefore the vested interest of both parties are closely aligned.

Changes in cost, delivery date or operating capability have substantial impacts for both parties. Therefore, it is in the best interest of both parties to work closely in a united TEAM effort to facilitate the design and construction of a high-quality unit that optimizes the resources (human, financial and facilities) to achieve the common objective.

One task facing the TEAM is to minimize misunderstanding and confusion as the process of detailed design, procurement, construction, commissioning and acceptance testing proceed. The distances between the design engineering effort performed by Ishikawajima-Harima Heavy Industries (IHI) in Tokyo, Japan and the fabrication facility (HHI Shipyard) located in Ulsan, Korea while the majority of the engineering project team members are located in Houston, Texas is representative of this task. Added diligence will be required by all parties involved to endeavor "to get it right the first time" as uncontrolled or untimely changes can add to the complexity and afford additional opportunities for errors or significant problems to occur that could impact the outcome. A heightened awareness to details and in-depth evaluations of reliability with a focus on avoiding major failures are important aspects of the design and construction effort.

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The use of this Project Execution Plan (PEP) by the TEAM provides guidance and understanding of how to effectively deal with the complexities and interactions between various members and emphasizes Contractor / Operator desire to work together to achieve the contracted objectives. The theme of "Together We Succeed" is key to this concept.

The focus on working together is finding the best and most cost effective solution within the project schedule and create the best value without allowing personalities or "hidden agendas" to impact the best answer. Project Cost will be viewed from the "big picture" of "life-cycle-cost" (sometimes called the "real cost") and not necessarily what is the lowest acquisition cost.

A culture and environment where ideas, solution-oriented thinking and action can be achieved is encouraged. Major effort is required of all parties to focus on a philosophy of WE rather than you and me (or us and them). This PEP, along with the understanding of members of the TEAM in utilizing it, will clarify and guide the overall communication process.

Commercial and organizational benefits are expected to flow from the use of this PEP to guide the TEAM members as they handle the day-to-day activities. Some of the expected benefits include:

- An improvement in quality consciousness and management skills
- Establishment of a quality culture encouraging continuous improvement
- Cost savings resulting from the improved efficiency and productivity through the minimization of disruptions and rework.
- Increased confidence in the end product by all parties involved
- Enhanced individual morale associated with a job well done.

3.1.1 Responsibilities

The RBS8D Team is responsible for managing the Semi-submersible drilling vessel construction project in accordance with provisions and authority provided for in the:

- Shipyard Contract
- Construction Specifications
- Drilling Contract (Exhibit H – Project Execution Plan)
- Contract Guidance Plans

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3.1.2 Commitment from the Top (Rev.1)

The communication and implementation of the PEP philosophy depends upon complete commitment of senior decision makers within each organization. The commitment of all levels of management within both organizations to support the project activities will insure a minimum of wasted efforts, overlooked details and results less than intended.

Top level management will be actively involved in eliminating barriers and supporting quality processes. Creating high reliability and creating value must be considered when making decisions. Senior management needs to be accessible and open to ideas and approaches throughout the project as well as motivate others to contribute to the objectives. Without this support, there will invariably be wasted efforts, overlooked details and results less than intended.

3.1.2.1 Allocation of Adequate Resources (Rev.1)

Senior management of both companies will provide adequate human, physical and economic resources such that individuals can perform effectively without being overloaded to the point that mistakes or omissions are made. Realistic timeframes and targets will be set to avoid de-motivating effects of non-achievement.

Staff contracted to the Project Team shall remain employees of their respective companies; however, they will report through the project team organization.

A key element for the success of this project will be achieved by retaining the collective knowledge gained from previous efforts of a similar nature and the knowledge developed as the process for this particular project unfolds. Many of the systems and components intended for use on the project are highly technical in nature. Therefore, every effort will be implemented to minimize changes of key personnel – both within the project team organization but also extending to major third party vendors, suppliers and consultants.

3.1.2.2 Project Team Continuity (Rev.1)

To ensure continuity, enhance efficiency and minimize disruption, the Senior Management of R&B Falcon will endeavor to retain key members of the project team throughout the project. All reasonable efforts will be made to avoid the reassignment of individuals that could have negative consequences to the effective implementation of the project. As part of the ongoing communication process, any proposed changes in "Key RBF Personnel" will be communicated



well in advance of the change to Vastar. If it is deemed a change will impact the project adversely, then a recovery plan to promptly replace the key individual with a qualified individual will be proposed to the project team.

3.1.2.3 Vendor Support (Rev.1)

The concept of "key representatives" will be emphasized to and requested of the major suppliers and vendors supporting the project. Furthermore, efficiency is reduced and an increased risk for miscommunication is added if there is not continuity in dealing with the same key technical representatives of a given component or system. Often there may be multiple components that need to routinely interact which only contribute to the complexity.

The Project Manager or designated representative will maintain a list of those individuals within each vendor or supplier organization considered as "key" to the success of the project. Proposed changes by the vendor of their key support personnel will be communicated well in advance to RBF. Major changes within this area will be communicated to the project team at regularly scheduled meetings. If it is deemed a change will impact the project adversely, then a recovery plan will be proposed to the project team by the vendor. An important factor in this process is timing and not waiting until "after the fact" to respond.

3.1.2.4 Lessons Learned (Rev.1)

Since the RBF has constructed at HHI a unit of similar design and function, significant "lessons learned" are expected from the design / build process. These "lessons learned" will be documented and transmitted to the Project Team of the RBS8D to improve the process and end product of the second unit.

The following are key items in this effort:

- Documentation of the "lessons learned" with the greatest potential for schedule improvements and avoidance of problems.
- A list of the "lessons learned" identifying the area or issues where problems were evident along with any solutions used to overcome the situation will be developed. Many team members directly involved in the first effort are involved with the RBS-8D new build. What could be done differently to avoid or at least minimize the re-occurrence of a problem / situation will be documented as "lessons learned" recognizing a solution used at the time might not be the "best solution"
- This list of the "lessons learned" that worked well and were a real asset will be built upon or transferred to other situations.
- To maximize the effectiveness of the feedback from this effort, a commitment of time by key individuals involved is required, so that details and questions

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can be discussed to understand and clarify a situation or issue. The added benefit of these discussions will be to generate additional ideas or suggestions that were not originally noted.

3.1.3 Project Manager and Engineering Manager

3.1.3.1 Project Manager (Rev.1)

The **RBF Project Manager** is based in Ulsan, Korea. He will also function as Deputy Engineering Manager for the duration of this project. Decisions rendered by the Project Manager will supercede those rendered by the Engineering Manager.

RBF Project Manager duties include overall project management in accordance with the Project Execution Plan; essentially all activities related to the successful construction of the RBS8D vessel on time and within budget. Specifically, these duties include project cost control, schedule, OFE procurement, engineering & construction, personnel, vessel delivery, transport to GOM and start-up of operations.

The Project Manager is not authorized to amend, alter or modify the contract between the owner and operator. Only the designated individuals in the contract may make contract modifications.

The **Vastar Project Manager** is based in Houston, Texas, USA. Vastar Project Manager duties include liason with the RBF Project Manager to assure that the vessel is constructed in accordance with the Vastar Construsction Contract.

Only the Vastar Project Manager shall have the authority to make a request for a change to the unit specifications or equipment. This will be documented through the Vastar Change Request (VCR).

3.1.3.2 Engineering Manager (Rev.1)

The **RBF Engineering Manager** is based in Houston, Texas, USA. He will function as Deputy Project Manager in the absence of the Project Manager during the Basic Engineering and OFE procurement phase.

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The **Vastar Engineering Coordinator** is based in Houston, Texas, USA. His duties include liason with the RBF Engineering Manager to assure that vessel design and OFE procurement are executed in accordance with the Vastar Construction Contract. Upon completion of the Basic Design, he will be based part-time in Ulsan, Korea, during the final construction and commissioning phase.

3.1.4 Operator Designated Key Representatives (Rev.1)

Vastar has instituted a concept of "key representatives" supporting the project. Key Representatives are expected to be actively involved in the design, inspection, construction oversight, commission activities and acceptance testing to provide accurate and timely assessments and updates to Vastar management. A listing of individuals and their area of primary responsibility and a designated back up will be maintained and provided to the Team. (Attachment A -- Vastar Representatives / Subcontractors and Areas of Responsibility).

Primary roles of the Key Representatives are:

3.1.4.1

Keep their respective management informed of project status and impending information / actions / approvals, required of Vastar.

3.1.4.2

Attend key project meetings, review documentation, consult as appropriate with Project Manager, e.g., regarding sub-contractor selection.

3.1.4.3

Obtain Vastar technical support for special issues as requested by the Project Manager.

3.1.5 Effective Management (Rev.1)

To manage the project effectively, minimize rework, maximize value, and "get it right the first time", Vastar's key representatives shall contribute to project engineering so to maximize the experience brought to bear and to obtain buy-in. Every attempt will be made to attain buy-in for drilling contractual issues from the beginning. Once buy-in is obtained, it is the role of the Vastar key representatives to actively help support these strategies.

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3.1.6 Communication (Rev.1)

Communication at every level is the key component for a successful project organization to function. Developing a Team opinion and a Vastar opinion, and passing it up and down the organization must be avoided to prevent false starts, sluggishness, rework, added costs and delays. Vastar key representatives are a part and contribute as a part of the ProjectTeam.

3.2 RBS8D Team Project Organization

3.2.1 Organization - Pre-Shipyard Phase (Rev.1)

The RBS8D Project is organized into functional and other natural work teams. Work teams are integrated, including R&B Falcon Drilling Co., Vastar key representatives and various subcontractor personnel. Refer to the attached organizational charts for specific information. Job descriptions for project positions are available through the project administrator.

3.2.1.1 Team Leader and Responsible Engineer (Rev.1)

*Project Roles /
Job Description
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The concept of "Team Leader" and "Responsible Engineer" are introduced to facilitate management of the technical part (engineering and construction) of the Team's scope of work. The Team Leader's role starts with the system design and development of the specifications for the shipyard / equipment package and the development of the Request for Quotation (RFQ) for all OFE. The role ends when the Drilling Unit is delivered by the shipyard. The "Responsible Engineer" assumes "Ownership" of a particular design and OFE item and follows it for the entire path from design, procurement, FAT, delivery, installation and commissioning.

The Team Leaders roles and accountability include the following:

- Take ownership of selected design development and resulting shipyard contract / equipment bid package Specifications and manage the process of development of Specifications and related drawings on time.
- Take responsibility for management review/approval of Specifications during shipyard contact / equipment bid package development.

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- Support the contract negotiation / bid process by answering shipyard / bidder's questions/clarifications. Assist in technical Qualitative and Quantitative evaluation.
- In the shipyard / manufacturer's facility, assist/guide contractor in performing their scope of work of related Specifications.
- Manage the general OFE process related to each Specification, starting with RFQ development, resulting in PO issue, and subsequent inspection, FAT acceptance for delivery, installation, and shipping.
- The Team Leaders report to the Engineering Manager during the pre-shipyard phase.

3.2.1.2 Vastar Key Representatives (Rev.1)

The designated Key Representatives will work with the owner's project team members in the specification and selection of equipment components, resolution of technical issues and problems that develop during the design and construction of the unit to achieve a mutually agreed solution. Vastar will endeavor to work closely with RBF to utilize existing "spare equipment" where reasonable and feasible to do so. The Key Representatives will act as conduits and facilitators to resolve any problems or disputes that may arise between the operator's third party providers of equipment and services (ROV, Logging Unit and Cementing Unit) and owner.

3.2.1.3 Technical Position Papers (Rev.1)

To document and expedite the communication of technical issues between the owner and operator, Technical Position Papers (TPP) will be developed. TPPs will normally be prepared by the operator, but may be developed by owner if deemed appropriate. Technical Position Papers are generally intended to provide the insight of the operator into intended operations or objective for use and may provide the design basis for a critical system or component.

The TPP provides the technical background, experience in use and operational preference by Vastar for the selection of a piece of equipment, system or service vendor as part of the design selection process. In some cases, the TPP may specify a preferred vendor or piece of equipment is required, what are the expectations and what are the operating parameters of mutually agreed equipment. The TPP may be used as a technical justification for a given vendor or provide an

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understanding of design capabilities which was not fully detailed in the original contract specifications. TPPs also serve as a final documentation tool between the owner and operator to communicate understanding, acceptance and concurrence of items noted as Mutually Agreed.

TPPs can be the initiating or supporting document if a major deviation from the original plan and understanding is required. In most cases, it will serve to clarify and expand on a subject or piece of equipment to provide everyone a clear understanding of what is expected or desired. Only the Vastar Project Manager shall have the authority to make a request for a change to the unit specifications or equipment. This will be documented through the Vastar Change Request (VCR). Furthermore, neither the RBF Project Manager nor Vastar key representatives shall be authorized to ammend, alter or modify the contract between the owner and operator. Only the designated individuals in the Drilling Contract may make contract modifications.

3.2.1.4 Mutually Agreed Equipment

At the time of the signing of the Drilling there existed equipment and systems where the vendor or equipment design details were undetermined. These items are noted in the Exhibits to the Drilling Contract as "to be determined" or "to be mutually agreed" and indicated below. The Key Representatives working with the owner's project team members will develop specifications for the listed equipment and systems and participate in mutually agreed solutions to technical issues that develop during the design and construction of the unit. The Key Representatives will endeavor to utilize owner's existing "spare equipment" where reasonable and feasible to do so. The Key Representatives will act as conduits and facilitators to resolve any problems or disputes that may arise between the operator's third party providers of equipment and services (ROV, Logging Unit and Cementing Unit) and owner.

Once specifications have been mutually agreed, no changes will be made without mutual approval of R&B Falcon and Vastar and a revised Technical Position Paper presented supporting the change.

- Dynamic Positioning System
- Auxiliary Derrick and Drawworks System
- Drawworks and Drill Line
- Derrick, Accessories and Tuggers



- Top Drive and Raised Back-up System
- Crown and Traveling Block
- BOP Stack, Test Stump and Wellhead Connector
- BOP Control and Accumulator System
- BOP Deadman System
- Choke and Kill Manifold with Remote Panel
- Vertical Mud Gas Separator System
- Vacuum Mud Degasser
- Diverter System
- Marine Riser and Buoyancy
- Riser Tensioning System
- Communication System
- Drilling Instrumentation Systems and Driller's House
- Drill String (Drill pipe, drill collars, pup joints, subs, and crossovers)
- Handling Tools for Drill String
- Automatic Vertical Pipe Racking System
- Casing Handling Equipment
- Mud and Cement High Pressure Valves
- Rotary and Cementing Hoses
- Bulk Materials Handling System
- Mud Mixing and Treatment Pumps
- Mud Processing Equipment (shale shakers, flowline and mud cleaners)
- Main Generator Control Switchboard (2 kV for Mooring Windlass)
- Windlasses and Fairleaders
- Supply Vessel Mooring System

3.2.1.5 Approval of Drawings by Vastar (Rev.1)

Key Representatives will have the opportunity to review design, construction or installation drawings as they are developed in a timely manner involving issues relative to the construction and intended use of components or systems. The role of the Key Representatives will be that

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of an interested end user. Key Representatives will not normally participate in the actual "approval" of the drawings. Particular interest will be focused on Contract Mutually Agreed Items. In the event, Key Representatives note equipment or design discrepancies from the original intended objective, then a copy of the drawing will be returned with the concerns clearly noted.

Key Representatives or designated alternate will be in attendance when inter-discipline design checks (IDCs) or design reviews are conducted. It is during the review process when "interference issues or design discrepancies" are often identified.

3.2.1.6 Meeting Attendance by Key Representatives (Rev.1)

During the design phase in Houston, Key Representatives will attend and participate in the meetings involving design concerns to fully understand the issues and proposed solutions. The meetings are normally to be held at the RBF offices but may require attendance at a vendor's facility or offices when participation of various subcontractors, vendors and suppliers is required. The Key Representatives will provide timely clarification of the operator's performance requirements for systems that are part of the unit.

3.2.2 Organization - Shipyard Phase

Project organization for the shipyard phase will adjust from the pre-shipyard phase in that there will be two geographically separate organizations - the Houston organization and the shipyard organization.

The overall project organization will principally remain unchanged from that established during the pre-shipyard phase of the project, with some personnel relocating to the shipyard during the construction phase. However, the remaining Houston-based Team may be altered to fit the tasks of providing the support and documentation required by the shipyard Team.

Job descriptions for project positions are available through the project administrator.

3.2.2.1 Vastar Key Representatives (Rev.1)

While in the shipyard, an individual will be designated a "lead representative" to provide a central focus for coordinating issues or



communication. The Key Representatives will have no authority over any of the owner's personnel or HHI Shipyard personnel. Key Representatives shall act in the capacity of "observer(s)" with the expressed interest to monitor progress of the design and construction to insure timely and complete delivery.

As inspections of the vessel, its machinery, equipment and outfitting are conducted by the Classification Society or other regulatory body or at other times appropriate for the purpose of ensuring that the construction and commissioning activities are in accordance with the specifications, the Key Representatives will be in attendance.

In the event a Key Representatives (or a designated Vastar third party representative) discovers, or perceives, that materials, equipment, equipment installation or construction practices do not or will not conform to the intended requirements and specifications of the contract, the RBF Project Manager, or his designated representative, will be notified in addition to the Vastar Project Manager. The information or situation of concern along with supporting details for the concern shall be communicated in confidence to the owner for resolution. This shall be done in a discreet manner so as not to be disruptive (issue will not be raised directly with representatives of the shipyard or vendor). In the unlikely event an issue cannot be resolved at the shipyard, the appropriate designated representatives of both parties in Houston shall handle such dispute resolution.

3.2.2.2 Meeting Attendance by Key Representatives (Rev.1)

When the focus shifts from design to construction at the shipyard, access to meetings will continue to be provided at all times and in accordance with the provisions in the shipbuilding contract for the purposes of observation and visual inspections of the work in progress.

The objective of Key Representatives attendance at the meetings is to ensure the completeness and timeliness of information originating from the construction site. The Key Representatives and owner representatives will endeavor to prevent misinformation or conflicting information regarding the construction process or progress and will instill a spirit of open communications.

During construction, outfitting and commissioning, the Key Representatives shall not hinder, alter or obstruct the construction progress or procedures. Furthermore, they will comply with the safety regulations in effect at the shipyard.

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Key Representatives will have the opportunity to attend all meetings, which involve issues relative to the construction and scheduling of construction and commissioning activities for the unit. The following provides additional guidelines:

- The role of the Key Representatives during meetings with the shipyard will be that of an interested observer. Key Representatives will not normally "participate" in subject discussions between RBF and the shipyard unless specifically requested.
- RBF may limit the number of Key Representatives at meetings with the shipyard if deemed appropriate, such limitation shall not be reasonably abused.
- In the event, there are commercial cost issues requiring further discussion between the RBF and shipyard that do not directly relate to a Vastar initiated change order, RBF may ask the Key Representatives to leave, at RBF's sole discretion, that portion of the meeting.

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3.2.2.3 Commissioning, Acceptance Tests and Sea Trials (Rev.1)

Prior to commencement of commissioning activities and eventually performing acceptance tests and sea trials, a review of appropriate procedures will be required. Procedures for commissioning, acceptance and sea trials will be formally submitted for Vastar review at least 30 days prior to commencement of the respective activity.

The following listing identifies equipment or systems in which Vastar has a particular interest.

- Dynamic Position System and Controls
- Power Management System
- Drilling Equipment Systems
- Subsea Equipment and Subsea Controls
- Riser Recoil and Deadman System
- Marine Systems (Ballast Control, Fire and Gas Alarms, etc.)

Vastar will be actively involved in the review and concurrence of the plans to test the equipment or system to verify performance to specifications and intended use as outlined in Exhibit G of the Drilling Contract. Such plans will be submitted for review at least 30 days prior to commencement of any such activities.

Commissioning of Equipment and Acceptance Tests are not the same activity.

- Commissioning consists of preparing a system or piece of equipment for operation and ensuring that the appropriate support systems are in place and function so that acceptance tests can be completed.
- Acceptance Testing involves the integration of any and all systems/equipment working together to achieve the intended function. Acceptance tests will verify the performance parameters and capabilities to the specifications.
- Where reasonable and feasible, acceptance tests may be conducted in conjunction with commissioning to minimize time, effort and cost required to perform the acceptance tests.



3.3 Key Interfaces and Coordination

3.3.1 Interface Personnel

The Team has assigned the primary project interface/coordination responsibilities to certain individuals. (Individuals responsible for interfacing with the Vastar and regulatory agencies, for example).

3.3.2 Roles

The Team's role is to ensure that overall strategies are consistent with objectives established herein, to insure that Vastar's experiences are included in day-to-day decisions and to insure all products of the RBS8D Project meet construction contract specifications, performance and drilling contract requirements.

3.4 Project Location

3.4.1 Street and Mailing Address (Rev.1)

The RBF Houston Team will be housed at R&B Falcon Drilling Co. offices:

Street and Mailing Address

R&B Falcon Drilling Co.
901 Threadneedle St.
Houston, TX 77079

The RBF Shipyard Team will be housed at HHI offices in Ulsan, Korea.

Street and Mailing Address

R&B Falcon Drilling Co.
C/o HHI Plant and Offshore Division
1 Cheonha-Dong, Dong-Gu
Ulsan 682-062
Republic of Korea

The Vastar Team will be based at Vastar Resources offices:

Street and Mailing Address

Vastar Resources, Inc.

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15375 Memorial Drive
Houston, TX 77079

In addition, RBF will maintain temporary liason offices for Vastar representatives at the RBF Houston and Ulsan sites.

3.4.2 Off-site Relocation

It is possible that some staff members will need to relocate to consultant engineering offices or construction sites outside the primary location. Such relocation will be approved by the appropriate Team management before being implemented.

3.5 Manpower Sources and Mobilization (Rev.1)

3.5.1 General

Staff will be assigned to the team as required to handle the workload and will be considered "dedicated staff" for the duration of the project unless transferred or replaced by mutual consent of the Team Leaders, Engineering Manager and Project Manager. Emphasis will be placed on providing expert staff from within the respective organizations to assure continuity and accountability throughout the project, as well as assure continued development of personnel.

3.5.2 Consultant Staff

The RBS8D Team will be responsible for contracting qualified consultants/contract staff for the project as required. The Team should make known to management any particularly qualified consultant who might make a contribution to the effort so proper consideration may be given to contracting the individual(s) if needed.

3.5.3 Team Building

The Project Manager will conduct one or more team building workshops to create an awareness of, and reinforce, the key principles for effective team functioning.

A very basic principle is that each member must understand the team's mission, goals, roles and work practices. It is expected that trust and a

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sense of belonging will develop as members work together and fairly and candidly deal with all issues.

3.6 Operator Office Space (Rev.1)

RBF will provide office space for use by the Key Representatives or designated representatives at RBF offices in Houston. At the shipyard, offices will be in proximity to owner's offices for the operator and staff (4 to 6 individuals at construction site standards) to facilitate ease of communication. The offices are expected be reasonably close to the owner's offices and could be co-located if separate. Office space will be secured with locks and include desks, chairs, worktables, drawing racks, file cabinets, phone service, copier and other services normally found in the owners office. The offices will be maintained / cleaned on a regular basis.

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SECTION FOUR

Procurement, Contracting, and Materials Management

4.0 PROCUREMENT, CONTRACTING AND MATERIALS MANAGEMENT

4.1 Philosophies and Principles

The Project Materials Management Group goal is to provide the project with a materials management program that results in a timely and economical supply of materials and services that meet or exceed the technical, quality and safety standards of the project, provide maximum value while remaining within the project budget and adhere to accepted industry, company and client ethical standards.

Vendor selection, bid evaluations, and the ultimate award of purchase orders, will rest with the Project Materials Management Group. This Team consists of the Project Manager, Engineering and Construction Managers, Team Leaders, VP Materials Management, and representatives of the Materials Department.

4.2 Materials Management

A Materials Management Plan will be implemented where R&B Falcon Drilling Co. will provide procurement services. All project equipment and materials will be purchased, fabricated and shipped in accordance with project quality and schedule requirements. The Materials Management Procedures will assure that vendor's facilities, capability, and quality systems are evaluated and that equipment and materials are received, stored, handled, and controlled properly while in transit and on site and will be supported by the following functions:

4.2.1 Expediting

The buyer/expediter(s) will maintain regular contact with the vendors to ascertain the status of all outstanding equipment and materials. The expeditor, responsible engineer or designated representative will visit the suppliers at critical production milestones to ensure the suppliers are providing accurate production and delivery information.



4.2.2 Receipt, Control and Storage of Equipment and Materials for Shipment to Construction Site

4.2.2.1 Receipt

The Materials Department will use an established freight forwarding and packing network. All material purchased in the U.S.A. will be delivered to the Team's designated packing facilities. The shipment will be inventoried against procurement records and shipping documents. Non-conformity reports will be issued to document any discrepancies and directed to the Materials Department for resolution.

4.2.2.2 Control and Storage

All equipment and material for the project will be received by the on-site materialsman then stored in a secure location separate from other materials, per contract specifications, in compliance with applicable Quality Assurance guidelines and vendor recommendations.

4.2.2.3 Identification of Equipment and Materials

All items purchased for the project will be marked to facilitate traceability through fabrication, shipment, erection, installation, repair, modification and use of the item. Each item will be identified according to the purchase order number, purchase order item number, PM Code number, and drawing number if applicable.

4.2.2.4 Shipment

The Materials Department will be responsible for the coordination of shipment of all OFE equipment and materials to the job site including export documentation, and the management of all freight forwarders and customs clearance agents. Shipments will be packed in accordance with accepted industry standards. When necessary, materials or project personnel will attend all shipments of critical and/or oversized material to ensure that correct procedures for lifting, loading and shipping are in practice and appropriately sized equipment and lifting/loading devices are in use.



4.2.2.5 Receipt, Control, and Storage of Materials in the Shipyard

The shipyard will be contractually responsible for the receipt, handling, storage and issuing of Owner Furnished Equipment (OFE) and Builder Furnished Equipment (BFE) in the shipyard and will be responsible for any loss or damage to OFE occurring after receipt. Appropriate material receipt and control reports will be implemented to enable efficient tracking of all material in the shipyard's control. The shipyard will be contractually obligated to ensure that the equipment and material is stored properly, in accordance with vendor/manufacturer recommendations and good industry practice.

4.3 Identification of Critical Path Items

Accomplishing the Team goals and objectives depend on certain critical activities. Engineering, procurement, and construction activities that directly impact project goals and objectives are Critical Items. The performance of engineering vendors and subcontractors responsible for providing critical equipment, materials and services must be closely monitored. This monitoring will focus on cost, schedule, quality, constructability, safety, and operability.

The Engineering, Construction, Procurement and Project Control staff will work together to identify Critical Items. Special expediting and inspection visits will be included for Critical Items.

The Critical Path is the longest sequence of connected activities in the project schedule. A delay of any critical path activity will cause the project finish date to be equally delayed. Identification of Critical Path activities will be primarily the responsibility of Project Controls and the RBS8D Management Team. Traditional critical path methods will be used to identify and analyze the critical paths.

Some examples of Critical Path items for the RBS8D Project are as follows:

- Model Testing
- Thruster Sizing & Stationkeeping
- Riser Analysis for 10,000 foot operations
- Power Generation and Distribution Equipment
- Shipyard Contract Specifications
- Shipyard Construction Schedule
- Drilling and Subsea Systems



4.4 Information Systems

The Team shall use an R&B Falcon Drilling Co. designed and furnished software package to formulate and approve Material Requisitions. This program generates Purchase Orders out of the Material Requisitions and keeps associated tracking.

The Houston-based export packers and freight forwarders are "on line" with R&B Falcon Drilling Co. This facilitates electronic information transfer concerning receipt and shipment of materials resulting in very current receiving and shipping reports with a minimum risk of error. Material or equipment receipts not input through these facilities will be electronically input by the Materials Department using ISO-approved procedures, resulting in the same shipping/ receiving records.

4.5 Procurement Approvals

4.5.1 RFQ Material Requisitions

All RFQ Material Requisitions for rig equipment or construction services are to be approved by the following Team members prior to issuance of a Request for Quotation:

Responsible Engineer
Engineering Team Leader

4.5.2 Final Material Requisitions

All final Material Requisitions for rig equipment or construction services are to be approved in advance of commitment or payment by the following Team members prior to the issue of a Letter of Intent or Purchase Order:

Responsible Engineer
Engineering Team Leader
Project Administrator
Project Manager
Project Sponsor



4.5.3 Miscellaneous Material Requisitions

All Material Requisitions for items other than rig equipment or construction services such as office supplies, furniture, etc. are to be approved in advance of commitment or payment by the following Team members:

Project Administrator

4.5.4 Purchase Orders

All Purchase Orders for rig equipment and construction services are to be issued by the Materials Department on the basis of Final Material Requisitions and in accordance with Team vendor recommendations. The Materials Department is responsible for negotiating and finalizing commercial arrangements with the Purchase Order vendors.

4.5.5 Purchase Order Change Orders

All Purchase Order Change Orders for rig equipment and construction services are to be approved in advance of commitment or payment by the following Team members:

Responsible Engineer
Engineering Team Leader
Project Administrator
Project Manager

4.5.6 Project Deviation Notices and Cost Trend Reports

Purchase orders and Purchase Order Change Orders may cause the need for a Project Deviation Notice (change in work scope) and/or a Cost Trend Report (change in project budget). If this is the case, the Project Deviation Notice and/or Cost Trend Report must be approved in advance of approval of the Purchase Order or Purchase Order Change Order.

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4.6 Procedures

Procedures will be implemented by the Project Materials Management Group for every phase of the Procurement and Material Control process. The RBS8D Management Team will review and approve all procedures and maintain a current copy of these procedures.

The following Procurement Procedures will be implemented:

- Preparation and Approval of Specifications
- Selection and Qualification of Bidders
- Preparation of Bidder's List
- Approval of Specification with Recommended Bidders
- Approval of RFQ MR
- Issuance of Bid Packages
- Bid Evaluation
- Bid Recommendation and Approval
- Approval of Final MR
- Placement of Purchase Order
- Spare Parts Procurement
- Purchase Order Change Orders
- Procurement in Shipyard and Off-site Locations
- Procurement of Third Party Service for Equipment Start up and Commissioning

The following Material Control Procedures will be implemented:

- Issuing of Certified Data
- Expediting and Inspections
- Corrective Action Strategies for Resolution of Project Deviation Notices
- Transportation of Materials and Equipment to Export Facilities
- Receiving, Control and Storage at Export Facility
- Shipping to Construction Locations
- Receipt and Inspection at Shipyard Location
- Control and Storage at Shipyard Location
- Shipyard Use of Owner Furnished Equipment and Materials



SECTION FIVE

Project Controls

5.0 PROJECT CONTROLS

5.1 Objective

5.1.1 Control Procedures

The Team has the responsibility to implement control procedures that effectively facilitate the monitoring and reporting of project execution. In general the objectives of these procedures are summarized below:

- Insure Team activities function smoothly and procedural problems are minimized.
- Provide strategic data which allows management to exercise necessary control and make informed decisions.
- Document the history of the RBS8D for future lookback studies.

5.1.2 Organization and Responsibilities

The Project Scheduler shall develop and maintain all project schedule activities, and publish periodic updates for the approval by the Project Manager. Major areas of control are addressed in the following sections.

5.2 Project Scheduling

5.2.1 Baseline Schedule

Schedule control is accomplished by the development and stewardship of a baseline schedule. This baseline schedule will be developed by the Shipyard prior to the start of design and kept as a reference for comparison throughout the project life.

A detailed baseline schedule for OFE (Owner Furnished Equipment) procurement will be developed by the Team.



5.2.2 Current Schedule

A detailed current schedule, using the same form as the baseline schedule, will be kept to indicate the current estimate of project activity durations. At a minimum, this schedule will be updated at major milestones in the project and when major schedule changes are identified. The schedule will be routinely updated through feedback from Team members, the shipyard, and OFE equipment vendors.

A recovery plan for off-schedule items shall be created by the RBF Project Manager with input and consent from the Vastar Project Manager. Off-schedule items are defined as those items which fail to meet key milestone dates, e.g., vendor data delivery or schedule delivery. This plan shall be maintained by the Project Scheduler.

5.2.3 Summary Schedule

A single page summary schedule will be prepared to provide a project overview. This summary schedule addresses all major components and aspects of the project including key milestones. It will contrast the control and current schedule. It will be updated monthly and included in project status reports.

5.2.4 Progress Measurement

The Project Manager will specify the method(s) for measuring progress of the project components and of the overall project. These progress measurements shall include, but not be limited to, a bi-monthly update and a quarterly major review. A milestone review should also be included.

5.3 Cost Control

5.3.1 Control Budget

Cost control will be accomplished by the development and stewardship of a detailed AFE to assist in accomplishing cost control. The detailed control budget will be developed prior to the start of design and will be kept as a reference for comparison throughout the project life. Any changes to the AFE must be documented via the PDN (Project Deviation Notice) and Change Order (CO) process and must have the approval of the Project Manager, as well as the Construction and Engineering Managers.



5.3.2 Current Budget

A current budget will be kept which reflects current anticipated project costs. As a minimum, this current budget will be totally updated at major project milestones and when major cost deviations are encountered. Monthly routine updates will be handled through tracing purchase orders, change orders, and invoices on the cost control program.

5.3.3 Reporting

A detailed project cost report will be produced monthly for use by the Team members. The report should include the control budget, current budget, current commitments, actual expenditures to date and anticipated final expenditures. In addition, a summary of the project costs broken down by major categories will be produced. This summary will be included in a monthly project status report.

5.4 Weight Control (Rev.1)

RBF will take steps necessary during the design and construction of the unit to ensure that the operational capabilities specified in the Drilling Contract can be fulfilled.

Weight control will be accomplished through a formal weight management plan, administered by HHI. The plan will consider vessel structure, OFE weights, and BFE (Builder Furnished Equipment) weights.

The shipyard will record all weights of materials constructed, installed or removed from the vessel. To ensure the operational capabilities specified in the Drilling Contract are met, the project Team will monitor the HHI weight management plan and validate HHI assumptions and margins. The shipyard will provide the Owner with an estimate of light ship weight and center of gravity, quarterly after basic design, and monthly for three months prior to the inclining experiment. This will include summaries and worksheets showing detailed calculations. HHI will report actual module weights versus calculated weights for overall weight control confirmation.

5.5 Interface Control



5.5.1 Introduction

Interface control will be done by implementing procedures to ensure communication throughout the project organization.

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5.5.2 Procedures

The Interface Control will be exercised on three levels: (1) a designated person from the Team (ie. Project Engineering Manager or delegated assistant) will coordinate interface control in each engineering discipline, (2) each discipline Team Leader, Materials Man and Rig Manager will be responsible for Interface Control within their respective disciplines, (3) Document Control will receive and distribute interface materials to the appropriate person in the Team.

Each Interface Level will be responsible for ensuring that design data, drawings, documents, and other information required to execute the work, are exchanged in a timely manner.

Document Control will receive and distribute interface materials to the appropriate person in the Team. Document Control will also gather and transmit interface materials properly documented to the Contractors working on this project, as designated by the discipline Team Leader and direct interface materials through the appropriate person depending on the specific interface requirement. This will be done internally within the Team organization, leaving a single point of contact where vendors and sub-contractors can direct and receive interface materials.

5.5.3 Table 1

Interface Coordination

	CATEGORY	COORDINATOR
a.	Safety and HAZOP reviews	Risk Engineer
b.	Commissioning Plan	Construction Manager
c.	Field Certification and Regulatory activities	Discipline Team Leader
d.	Planned Maintenance and Inventory System	Materials Man
e.	Design and Capacities	Engineering Manager
f.	Operational Procedures	Rig Manager

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5.6 Strategic Issues Management Plan

5.6.1 Definition

Strategic issues are those aspects of the project which have the potential to cause significant (favorable or unfavorable) deviations from the business objectives, or for requiring significant changes in the planned project execution. These issues can result from internal project execution difficulties or from external influences.

5.6.2 Examples

5.6.2.1

Project tasks/issues which require immediate attention to keep the project within its objectives (a strategic path task which threatens to slip, for example).

5.6.2.2

Changes in functional criteria.

5.6.2.3

Weight growth beyond allowances.

5.6.3 Management Plan (Rev.1)

5.6.3.1 Strategic Issues

Each member of the Team is responsible for identifying issues within his or her area of responsibility that need to be considered by the Project Manager for strategic issue status. Strategic issues are reviewed weekly, resolved clearly, and their history maintained.

A list of Strategic Issues will be published as part of the monthly status report, along with the specific action plans developed to address and resolve the issues. The person(s) responsible for action and stewardship will be clearly identified, along with the target schedule for resolution. The completed resolution of Strategic Issues will also be documented in the monthly status report.



5.6.3.2 Management of Change (Rev.1)

Management of Change is key to controlling the impacts that may occur when "changes" are initiated without proper consideration. Inherent with this concept is an understanding and appreciation by the operator relative to the sensitivity of capital costs for the owner. Likewise an understanding by the owner of the desire of the operator for a unit that operates efficiently with high reliability and minimal downtime is required.

Because of the complex nature of the project and physical limitations, changes are to be expected and cannot be completely eliminated. In fact, some changes are expected to reduce the cost, improve schedule and enhance reliability. So change should not necessarily be considered a negative, but it is important to manage change to ensure benefits are achieved or impacts are minimized. The method to achieve the desired process and end product is a systematic approach considering that changes will be required.

There are three types of changes to understand.

1. First are the "changes" which occur as drawings are reviewed and revised or specifications modified which are not expected to impact costs since they are not considered major. These are inherently a part of the "process" of converting conceptual plans into design documents that detail just how an item is to be built or used. These changes are a quality control (QC) issue (are drawings correct or are there 2 sets of drawings that have the same control number but contain differences). Inter-discipline checks (IDCs) are very important to catch what may seem a small change, but could have major impact on some other aspects of the project (i.e. routing of piping and structural interferences is a classic example).

The IDCs are further reinforced with periodic "Design Reviews". Design Review meetings are scheduled at various stages in the design process. Design reviews provide the opportunity to check the entire process; make sure individuals involved are fully aware of recent changes and identify course corrections as needed.

Additionally, a Design Safety Assessment (PEP Section 7.2.2) will be discussed and included as an integral element of the design process.

Similarly, the Pre-Start Up Safety Review (PEP Section 7.2.3) will be addressed prior to the initiation of commissioning / acceptance activities.



2. The second type of "change" are those items which are expected to significantly impact the project cost, schedule or unit weight. The administrative procedures for documenting project scope and design changes of this nature are detailed in PEP Section 5.9 -- Change Control.
3. The third type of change is where the operator evaluate potential use or performance characteristics of equipment or systems and desires a change. This process is described later in Vastar Change Requests (VCR) and could involve the use of Technical Position Papers (TPP) to define the reason for the proposed change.

5.6.3.2.1 Vastar Key Technical Issues (Rev.1)

A Key Technical Issues log will be "managed / maintained" by Vastar in addition to RBF's Strategic Issues (PEP Section 5.6). This listing allows the issue or item to be "tracked" as technical resolution is achieved. The focus is earlier in the design process than the Technical Query (TQ) discussed in PEP Section 5.9 Change Control. The Technical Query (TQ) typically focuses on the clarification or revision of existing design plans with a vendor or the shipyard.

The benefit of a Key Technical Issues log is that it provides a concise location for many ongoing items of concern or technical issues that have been or are being resolved without having to read through multiple meeting minutes to determine the status. It also provides a cross-reference tool for other functional areas that may interact or be dependent on a component or system that is still in question. It also provides a trail of resolution (at least in a brief form) of those items that are included in the log.

As a supplement to the Project Team weekly meeting minutes, the Key Technical Issues Log will be reviewed and updated in conjunction with the review of the meeting minutes. Individual items for the Key Technical Issues log are expected to come from several sources or groups as details of design are being worked through. As selected disciplines or technical groups identify an issue that needs to be followed and resolved, it is fed to the coordinator (one who maintains the Key Technical Issues log). These same individuals continue to feed updates of progress towards resolution and the final decision.

The listing will include a general description of the "issue" (grouped by equipment/system types – BOPs, drill pipe, riser system, etc. as there are likely to be multiple individual items within a "group").

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An individual will be assigned and noted on the log as the primary focal point to follow the evolution of the fact finding and decision process. A target date will be assigned based on when it is critical for resolution to either place a purchase order for equipment, start fabrication, or is needed for another design phase. As items are "closed", they are shaded or marked in some way to note closure has been achieved and are moved to the "completed section".

As construction proceeds, a similar listing for Key Construction Issues will be maintained in the shipyard by Vastar and communicated to the Vastar Project Manager weekly. A similar list (Key Commissioning / Acceptance Issues) will be initiated as the transition from construction to commissioning, acceptance testing and sea trials occur.

5.6.3.2.2 Approval of Operator Changes

Occasions will arise where the operator determines or identifies that an upgrade, modification or additional piece of equipment or service is required. The formal method to initiate this process is for Vastar to submit to R&B Falcon a Vastar Change Request (VCR) form signed by the Vastar Project Manager requesting an evaluation (feasibility, cost impact or schedule impact). The VCR might include a Technical Position Paper (TPP) as supporting material to aid in the definition of the potential change. This first step is only an inquiry and not authorization to proceed with the change. Any significant Costs incurred by RBF for evaluation of a VCR shall be for Vastar's account as agreed prior to commencement of the evaluation.

Upon the receipt and clarification of any questions, the owner will obtain the relevant costs from the vendor and/or shipyard to determine the cost or schedule impact. When the total installed cost is determined along with any schedule impacts, the owner will provide this detailed supporting information along with the original VCR request for final approval (or not approved) by Vastar.

A copy of the approved and authorized VCR will be returned to the owner to have the appropriate internal Change Orders issued to vendors/shipyard as appropriate. If Vastar decides to not proceed with the proposed change, a copy will be returned to the owner clearly stating that the proposed change will not be implemented. Viewed in the overall scheme of the process the VCR is similar to the Project Deviation Notice (PDN). There may be occasions where the requested change has no cost or schedule impact. The VCR can still be approved and becomes

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the documentation for the mutual understanding and reason for the change.

Approved Changes will be added to the day rate based on a "factor" per million dollars of documented incremental cost. This factor will be applied as \$850 per day per \$1,000,000 of authorized incremental cost including required maintenance.

If there are consequential schedule impacts resulting from the requested change, Vastar understands this impact and will acknowledge in writing that the delay is acceptable.

If Vastar elects to have equipment installed on the unit (at the sole cost of Vastar), then upon termination of the Contract, Vastar will evaluate and determine if it is in Vastar's best interest to retain or remove the "add-on" if the subject item can reasonably be retained. Vastar may offer the option of leaving such equipment on the drilling unit if deemed in the best interest of both parties. Vastar will return the drilling unit to it unmodified condition if so requested by RBF. The individuals authorized in the Contract will mutually agree on any cost adjustments.

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5.7 Meeting Guidelines

5.7.1 Meeting Frequency and Purpose (Rev.1)

Weekly Project Review Meetings will be held to review progress of the ongoing design and procurement activities, transmit new information, address major concerns and offer solutions to previously stated problems. These meetings are independent of any departmental or specialized meetings. These meeting will aid in the identification of areas that require further efforts. Additional meetings to address specific items may be determined during the weekly meeting and a time established. The weekly meeting is not where solutions are achieved – this is accomplished in the individual meetings (some of which may require a weekly frequency).

5.7.2 Quarterly Management Meetings

Quarterly Management meetings between Vastar and R&B Falcon will be held in conjunction with the issuance of the Quarterly Progress Report. This will provide the opportunity for senior management of both companies to discuss activities in detail.

5.7.3 Meeting Agenda and Minutes

Each meeting will be preceded by an agenda, transmitted to all requested attendees and interested parties. Minutes will be taken by the host, copied to all attendees, saved on a network directory for future reference, and sent to Document Control for record keeping purposes.

5.7.4 Presented Data

New technical information presented to the meeting, or transmitted by the meeting, shall be documented in the minutes. This shall be done either by attaching the information or by referencing its file name and location. This information is considered preliminary until it is followed up by appropriate action.

5.8 Status Reports

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5.8.1 General

Status reports will be prepared to provide necessary information to the Team members, Sponsors, and Corporate Management.

5.8.2 Project Status Report

5.8.2.1 Design Phase Report (Rev.1)

During the design phase, a Quarterly Report documenting the activities and progress for the past quarter will be issued. Items to be included are:

- Brief overview of progress in project activity and the current schedule and any variances from original plan.
- Strategic Issues along with specific action plans, where appropriate, to mitigate concerns.
- Actual costs to date comparison to estimated costs (owner only)

This report will be a basis for discussion during the Quarterly Management Meetings between the owner and operator.

5.8.2.2 Construction Phase Reports (Rev.1)

As construction activities commence in the shipyard, additional reports will be provided.

- Weekly Update (module or block progress in a tabular format plus selected photographs of activities in the shipyard)
- Monthly Report -- One or two page summary of past months progress to include:
 1. Highlights -- overview of progress in project construction activity
 2. Issues -- items that require action to resolve
 3. Look Ahead -- identification of upcoming events (i.e. Super Lift, etc)
 4. Actual Progress -- progress compared to plan (S-curve)

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- Quarterly Reports will continue be issued during construction.



5.8.3 Interface Status

The Interface Register shall be maintained by the Project Secretary with input from each discipline Team Leader. The Interface Register tracks the status of all generated interfaces. Each interface will be governed on the basis of closure status. Senders responsible for closed interfaces shall freeze the design/data on the specific interface information. Changes to **closed** interfaces, as a result of error or unplanned tolerances, shall be managed on a case-by-case basis. Affected parties shall be notified immediately so that any consequences can be evaluated by the Team Leader. Changes to **open** interfaces are accommodated contingent on general agreement among the affected parties.

The Project Secretary will issue updates to the Interface Register to the Team Leaders on a weekly basis.

5.9 Change Control

5.9.1 Introduction

This section details procedures for handling significant project scope and design changes and the associated impact on schedule, cost and weight. The design changes referred to could be changes from the design basis, equipment specifications, Approved For Guidance (AFG) or Approved For Construction (AFC) drawings.

The Project Manager is responsible for implementing procedures that quantify the total effects of proposed changes prior to proceeding with the change. These effects may include:

- Impacts on other areas of design
- Impacts on the project schedule and/or milestones
- Impacts on operability, maintenance, and safety
- Impacts on commercial or contractual issues
- Impacts on project cost

Change control is a coordinated documentation procedure that provides a means for communicating, evaluation and approval of potential project actions that would result in a variances in project scope of work, schedule and/or cost.

There will be occasions when a PDN (Project Deviation Notice) will be preceded by a Technical Query (TQ), or the PDN will be the result of a

TQ. The TQ can be originated by a member of the Team or by the shipyard (HHI). To a much lesser degree TQ's may also originate at IHI. The TQ may only be a clarification resulting in no commercial or schedule impact in which case a PDN would not be required. The TQ may be a deviation from contract or specification and this could result in a PDN requirement if there is an impact on budget or schedule. The TQ could also address a change in material, equipment or construction, in which case a PDN would be required. A key element of the TQ process is to identify the impact of the query resolution. This impact is evaluated and incorporated into the PDN as deemed appropriate.

The Construction Manager will act as the coordinator of the project deviation process. This provides a central point of control and ensures deviations are addressed in an efficient and timely manner with minimal duplication of effort.

There are three parts to the change control process. The originating documentation effort is the PDN, which initiates an evaluation of potential deviations and estimates their impact on scope of work, schedule and cost. The second part is the Cost Trend Report (CTR), which requests management approval of budget changes. The third part is the Change Order (CO), which is an amendment to an agreement with a third party vendor (shipyard, equipment vendor, etc.).

All Cost Trend Reports and Change Orders must be supported by approved, quantified Project Deviation Notices. The only exception to this is for minor Purchase Order Change Orders that are not a Change in Scope, but are more administrative in nature.

Chart 5.9 flowcharts the change control process.

5.9.2 Project Deviation Notice (PDN)

The Project Deviation Notice is intended to capture all changes in content or scope of work, and is the originating effort in identifying potential cost and schedule variances.

The PDN process requires active involvement by all Team members in both the identification of potential deviations and the quantification of the impact on the project. All Team members must be an active party in documenting potential deviations as soon as they are identified and submitting them to their supervisors for consideration as soon as possible. For this reason, the process of originating a PDN must be

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simple and straightforward, and be similar in process to a suggestion box.

All PDN's are to be submitted to the Construction Manager for review, logging, and evaluation. If the Construction Manager believes the PDN warrants quantification, support will be requested from relevant project staff to complete this step.

After a PDN is quantified and approved by the Construction Manager, it will be submitted to the relevant Team Leader, Project Administrator, Project Manager, and Project Sponsor for approval.

If the cost impact does not initiate the need for a CTR, a project-approved PDN can be acted upon immediately to incorporate changes in cost, schedule and contractual change orders (shipyard, equipment vendor, etc.). If a project-approved PDN does initiate the need for a CTR, action on the PDN must await approval of the CTR.

5.9.3 Cost Trend Report (CTR)

Significant AFE line item cost variances, as well as added line items and deleted line items, require CTR approval by the corporate capital committee in advance of commitment. It is the Project Administrator's responsibility to coordinate securing this approval if the AFE impact meets corporate guidelines.

Project CTR's are always initiated on the basis of, and supported by, approved, quantified PDN's.

5.9.4 Change Orders

The purpose of a Change Order (CO) is to secure approval of a change in the commercial arrangement with a vendor after the primary agreement is in place. There are two primary groups of Change Orders, one involving the shipyard construction agreement, and the second involving purchase orders with other vendors.

Control of Shipyard Change Orders is strategic to controlling the cost and schedule of a shipyard construction project. The Project Manager has ultimate project responsibility for change orders, but the Construction Manager is responsible for managing this process on a day to day basis. The Shipyard Change Order begins with a Technical Query (TQ) originated either by the shipyard or the RBF Team. Approval of the TQ (and the accompanying cost and schedule impact) by both parties is not a binding document but represents a

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recommendation by the project teams to their management to originate and approve a Shipyard Change Order. On the RBS8D project, the R&B Falcon Project Manager has been given the authority to approve individual Shipyard Change Orders of less than \$25,000 up to a cumulative total of \$500,000 over the entire project. All Shipyard Change Orders exceeding \$25,000 and all individual Shipyard Change Orders of less than \$25,000 beyond the cumulative \$500,000 limit must be approved in advance by the Project Sponsor.

Once the TQ for a Shipyard Change Order has been approved, a Project Deviation Notice (PDN) must be initiated by the Construction Manager to quantify the internal impact on construction cost and schedule, since that impact may vary from the impact in the Shipyard Change Order. On receipt of an approved PDN, the Project Administrator is responsible for initiating a CTR for formal AFE budget revision approval.

Managing Purchase Order Change Orders is also strategic to controlling the cost and schedule of a shipyard construction project. Approval of minor Purchase Order Change Orders may be delegated to Purchasing or Administration, but approval of all Purchase Order Change Orders for rig construction equipment and services that impact cost and schedule must be approved by the:

Team Leader
Construction Manager
Project Administrator
Project Manager

If a Purchase Order Change Order exceeds capital eligibility limitation of authority guidelines, the Project Administrator is to originate a CTR, and the CTR must be approved by company management in advance of approval of the Purchase Order Change Order.

5.10 PEP and Specification Revision Procedures

5.10.1 Responsibility

The Project Manager is responsible for development and revision of procedures for the PEP and Specifications. Stewardship may be delegated to one of his direct reports.

5.10.2 Approval of Changes

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Major changes to the PEP or Specifications must be approved by the RBS8 project management. Changes which significantly impact schedule or cost or performance must be approved by the Project Manager. Prior to submittal, any changes requiring Project Manager approval must include an estimated impact on schedule, cost, or performance compared with the potential benefit. Minor changes may be approved by the Engineering Manager or Construction Manager.

5.10.3 Distribution of Documents

A distribution list for the documents shall be maintained for the project and updated as required. As a minimum, distribution of the PEP and Specifications shall include the Team leaders, Sponsors and other personnel as deemed necessary.

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SECTION SIX

Quality Principles

6.0 QUALITY PRINCIPLES

6.1 Objective

The Project Execution Plan is used to maintain a standard of quality which ensures that R&B Falcon Drilling Co. receives a vessel and OFE constructed and produced within the specifications, using generally accepted engineering standards, practices, and principles. The approach herein ensures the quality practices of R&B Falcon are reflected and material, products, services, design, construction, operations and documentation conform with all applicable regulatory requirements, codes, standards, specifications, drawings, etc. as required and identified by the contract.

6.2 Philosophy

The Project Execution Plan represents a Project Specific Quality Plan that generally describes the measures, checks, and controls to assure materials and/or services provided by the Shipyard, sub-contractors and/or Team are of sufficient quality to meet or exceed the associated contract specifications.

6.3 Standards

This Plan is consistent with the International Organization for Standardization (ISO) 9000 model and the ISM Code.

All systems of the RBS8D will be designed, modified, constructed, and installed according to the Contract Specifications and all applicable regulatory requirements.

6.4 Quality Responsibility and Authority

Quality will be part of the work process throughout all phases of the project. Quality will be verified through the Procurement and Engineering Quality Control Inspection/Test Procedures and Certifying Survey Agency.

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6.5 Design Reviews

Quality Assurance Activities during engineering and design will include monitoring and auditing of engineering procedures to verify control of engineering procedural requirements and processes.

QA Activities will also confirm that design verification reviews are performed in a planned and controlled manner and the results are documented in accordance with the approved engineering procedures.

6.6 Sub-Contractor Quality Plans

Specific quality plans for shipyard, major vendors and sub-contractors will be requested for review and incorporation into the overall project quality plan as appropriate.

6.7. Certifying Survey Agency (CSA)

A single Certifying Survey Agency will be responsible for the classification, certification and verification services of the RBS8D. This agency will be the American Bureau of Shipping (ABS).

The vessel will be certified to the requirements of ABS under the flag of the United States of America. ABS will certify the RBS8D and its equipment is designed, constructed and installed in accordance with applicable statutory and classification requirements for general international operations and those specific U.S. regulatory requirements required for certification for operation in U.S. territorial waters. The vessel shall be classed as a MODU so that it will be approved to operate worldwide. There will be an ABS statement of fact for UK/DEN/HSE compliance and Drilling System Compliance.



SECTION SEVEN

Safety and Environmental Management Program

7.1 Objective

This section describes the strategy to assure that the design and construction aspects of the RBS8D project are conducted in a safe and environmentally sound manner. Project policies and procedures are intended to meet the minimum recommended practices stipulated in the ISM Code and API RP 75.

The Project Manager will have overall responsibility for implementation of the Safety and Environmental Management Plan.

7.2 Hazard Management Plan

The project's Hazard Management Plan requires three essential reviews of the design including Concept Safety Evaluation, Design Safety Assessment, and Pre-Startup Safety Review.

7.2.1 Concept Safety Evaluation

Concept Safety Evaluations are undertaken early in a project to distinguish the best rough design criteria to take forward into the detailed design phase. These type studies are typically coarse in nature and examine a proposed facility from a global perspective.

Potential hazards for each type of facility under consideration are developed and then ranked for risks using either qualitative or quantitative methods. The lowest risk concepts that achieve the project's goals are then selected for further design.

7.2.2 Design Safety Assessment

Design Safety Assessments are undertaken after the basic design concepts are firm enough to begin the detailed design phase. At this stage of the project specific operations and systems on the rig are examined using methodologies to identify potential hazards and to propose means to reduce the risks of these hazards to as low as reasonably practical.

A systematic, structured examination of the potential hazards will provide an understanding of the possible sequences of events that

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could result in a major accident. To ensure safe operation, measures should be put in place to prevent the start of each of these sequences. In cases where preventive measures are not possible or practicable, control mechanisms that intervene at some point in the sequence to control and/or contain the developing situation should be specified. In cases where it is not possible to intervene sufficiently in the sequence of events to avoid a major accident, measures should be taken to minimize or mitigate the consequences. The measures for prevention, control and minimizing hazards are to be included in the overall safety plan.

7.2.3 Pre-Startup Safety Review

A team will be formed to conduct a pre-startup safety review prior to commissioning. This team will consist of the appropriate members of the Team, operations representatives, and if required client representatives. The review will verify the following:

1. Construction is complete and in accordance with the design.
2. Critical documentation is complete.
3. Changes to the design subsequent to the Design Safety Assessment have been analyzed for safety implications.
4. All safety issues identified in the Design Safety Assessment have been adequately addressed.
5. Safety, Operating, Maintenance and Emergency procedures are in place and adequate.
6. Training of operations personnel has been completed and documented.

The pre-startup safety review will be conducted with assistance from specialists in hazard identification, if required. The team leader will be experienced in various hazard identification techniques.

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7.3 Risk Management

7.3.1 Scope

The scope of the Risk Management program includes the following: drilling facilities, utilities, accommodations, electrical generation and distribution, drilling / vessel controls, safety shutdown systems, emergency response equipment, safety and life at sea equipment, vessel systems, structure and the interaction between systems.

Where possible the risk management program will draw upon the experience gained and lesson learned from prior risk assessments in the fleet. Emphasis will be placed on systems, operations, and technology on the RBS8D that differ from those on rigs in the fleet with a proven safe working record.

7.3.2 Roles and Responsibilities

A Risk Management Engineer will be designated to implement the Risk Management Program. He will work under the sponsorship of the RBS8D Project Manager.

7.3.3 Risk Management Objective

The objective of the Risk Management Program is to identify hazards in the RBS8D design development and to mitigate those hazards on a cost/benefit basis.

7.3.4 Risk Management Goals

The goals of the Risk Management Program are to provide recommendations from safety studies that can be implemented in the detailed design in support of:

- A semi-submersible free of design defects (non-conformances).
- An integrated hazard warning / shutdown system
- Appropriate manual or automatic shutdowns, or intervention systems to warn of incidents occurring and to prevent them from escalating.
- A design with appropriate levels of redundancy in the warning / shutdown systems to minimize the risk of incidents.

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- A rig with layout, equipment, and materials of construction which minimize the chances of incidents occurring / escalating.
- Emergency response capabilities to contain and control major incidents.
- A drilling facility with adequate means of safe escape for personnel.
- A drilling facility that minimizes conditions which contribute to human errors.

7.3.5 Risk Management Methodologies

The following Risk Management Methodologies are useful tools for conducting safety studies. These are to be used as considered appropriate in the Concept Safety Evaluation and the Design Safety Assessment.

- Preliminary Hazard Analysis.
- Hazard and Operability Studies.
- Fire Fighting/Emergency Response Planning.
- "What If" Analysis on the hull and Mooring / Dynamic Positioning Systems.
- Quantified Risk Assessments on limited issues.

The project will also make use of the following in support Risk Management goals:

- Preliminary design based on prescriptive type requirements.
- Management of change.
- Risk management documentation.

7.3.5.1 Preliminary Hazard Analysis (PHA)

A PHA will be conducted under the direction of the Risk Management Engineer upon completion of the preliminary Layout Drawings. The output of the PHA will be a list of potential hazards complete with a subjective rating of risk level and potential mitigation actions. A subjective risk reduction will be identified with each potential mitigation action. The risk mitigation items will be delivered to the RBS8D design teams for cost/benefit analysis and incorporation into the design as appropriate.

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7.3.5.2 Hazard and Operability Studies (HAZOPs)

HAZOPs will be coordinated by the Risk Management Engineer and conducted by multi-disciplinary teams including Team members, R&B Falcon technical specialists, Operations specialists and other appropriate parties. The HAZOPS will begin upon completion of the preliminary Piping and Instrumentation Diagrams. HAZOPs recommendations will be delivered to the project design teams for incorporation, or with management approval excluded as cost ineffective. The Risk Management Engineer will be responsible for follow-up on all HAZOPs issues and final documentation of HAZOPs recommendations and actions.

7.3.5.3 Hull "What If" Analysis

A "What If" analysis will be conducted under the direction of the Risk Management Engineer. The purpose is to identify hazards to the hull and analyze their severity, and mitigate if cost effective.

7.3.5.4 Fire Fighting/Emergency Response Planning

A fire fighting/emergency response plan will be developed by an operations specialist under the direction of the Risk Management Engineer and under the sponsorship of the RBS8D Operations Manager. A fire fighting plan and other emergency response scenarios will be delivered to RBS8D Operations Manager and a list of required fire fighting and emergency response equipment to implement the plan will be delivered to the RBS8D design team.

7.3.5.5 Quantified Risk Assessment

Quantified Risk Assessment (QRA) will be conducted under the direction of the Risk Engineer, on an exception basis for high impact issues where PHA and HAZOPS applied in a cost benefit mode do not resolve the issue. QRA use will focus on developing the most cost effective means of mitigating the issue. Changes to the RBS8D design will be additionally submitted to the Risk Engineer upon completion of the QRA.

7.3.5.6 Prescriptive Preliminary Design Documents

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SECTION EIGHT

Design Plan

8.1 Strategy

8.1.1 Overall Strategy

The Team will be made up of functional groups, which will be directed by line managers who, in turn, report to the Project Manager. The line managers for the technical portions of the project are the Engineering Manager, Construction Manager, and Drilling Superintendent.

The Engineering Manager will be responsible for coordinating the engineering work, which will be divided into three areas: engineering and design, procurement support, and construction support.

8.1.2 Engineering Team Strategy

The Engineering Team will be organized in four core engineering areas listed below. Each Team Leader has the primary responsibility for developing contract specifications and overseeing the detailed design work insuring work is completed on time and within budget (i.e., with a minimum of re-design) while delivering a high quality product.

Vastar, as the Operator, will be allowed to have input by participating with the Engineering Team. The Team will adopt reasonable design margins to minimize re-work and "the design spiral."

The responsibilities for each group and interfaces between the groups will be identified. The groups are:

- Naval Architecture & Station Keeping
- Vessel Structure & Mechanical Systems
- Drilling & Subsea Systems
- Power & Control Systems

The Interface / Classification / Project Control / Quality Assurance functions will reside with the specific discipline Team Leader.



The Engineering Team will:

1. Prepare and approve:
 - a. Specifications for procurement of all Owner Furnished Equipment (OFE).
 - b. Specifications and concept engineering required for drilling systems.
2. Guide and assist in the detailed engineering work done by the shipyard and its subcontractors.
3. Supervise, perform, or witness inspections, tests, and QA activities at vendor facilities and the shipyard, as required.

8.1.3 Engineering Design Strategy

As appropriate, designs will use one or more of the following:

- Industry or national standards
- Regulatory body requirements
- Certifying agency guidelines

8.2 Design Basis

The documents that define the engineering work to be done and the premise for that work are:

- Marine Performance Book
- Shipyard Construction Contract and Specifications
- Drilling Contract

8.3 Operability and Maintainability

A primary Team goal is to assure that equipment and systems design allows for the convenient, efficient, economical, and safe operation and maintenance of the Drilling Vessel. Operability and maintainability will be a major consideration throughout the engineering and design work. Key elements to be considered are ensuring limited downtime, access to equipment and facilities, efficient use of personnel, and safety of vessel and personnel.

Rev DPW



Engineering Group members have field operations experience and will further solicit input from and design reviews by other operations personnel as part of the operability and maintainability program.

8.4 Constructability

The technical members of each engineering group will be responsible for seeing that constructability input is included throughout the design phase. All design, specification, and material procurement decisions will take into account the impact of fabrication, installation, and commissioning activities.

A handwritten signature in black ink, appearing to read "RUB DPHW", is written vertically in the bottom right corner of the page.



SECTION NINE

Fabrication and Construction, Testing, and Pre-Commissioning

9.1 Fabrication and Construction

Fabrication and construction of equipment and facilities for the RBS8D will be accomplished with methods that are safe, protect the environment, are consistent with the project schedule, enhance overall project economics, allow sourcing of services and materials that meet the quality, experience, and delivery requirements of the project.

Fabrication and construction quality shall be ensured by adhering to the guidelines of this Plan.

9.2 Construction Contracting Strategy

The fabrication and construction activities of the RBS8D will generally take place in the shipyard. However, per contract agreement, some components of the RBS8D may be fabricated at specialized facilities elsewhere, shipped to the shipyard, and integrated into the total RBS8D facility by the shipyard. Any fabrication or construction that is undertaken at external facilities will be subject to RBS8D Project management approval, inspection and final acceptance.

During construction, the RBS8D Site Team will utilize knowledge, experience, good judgment and discretion to monitor and maintain progress, control changes and ensure maximum utilization of all resources to enhance overall quality of the vessel.

Strict adherence to specifications will be maintained and any variances will be reviewed and accepted by project management prior to approval for implementation. All changes will be documented and managed via the change control process as outlined in Section 5.

The project schedule must be maintained to ensure timely completion and any delays or deviations must be identified as quickly as possible in order to develop and implement recovery plans. Progress measurement will be an integral part of schedule monitoring and our objective will be to highlight any disparities between shipyard progress reporting and RBS8D team observations and reports.

Rec Drew



Resource allocation will be monitored to ensure that adequate personnel and material are assigned to the project to achieve schedule milestones. Again, the objective will be to identify problem areas and avoid any delays by prompt application of appropriate remedial action(s).

Regular (weekly) meetings will be held between RBS8D SiteTeam members and HHI to review project progress, identify technical issues and propose resolutions as required. Meeting minutes will be recorded; action items identified and responsibility assigned to resolve all action items in a prescribed time period.

Constant monitoring of fabrication, erection and assembly throughout the construction phase will ensure compliance with all project guidelines and specifications. All work will be conducted in accordance with sound engineering principles and practices and will meet or exceed all specifications, contract and applicable regulatory requirements.

All project team members will work in cooperation with HHI and vendor personnel as required to ensure that all work is carried out to our specifications and manufacturer's recommendations. Good communications will be maintained and open dialogue will be encouraged.

9.3 Testing, and Pre-Commissioning

Testing and pre-commissioning will be planned to support the delivery and startup schedules. At this time, RBF operations personnel will become familiar with the RBS8D facilities during this phase.

Testing and pre-commissioning of the RBS8D will generally take place in the shipyard. However, some large components may be subjected to factory acceptance testing (FAT) at their point of manufacture.

Detailed plans for testing and pre-commissioning will be developed and finalized during the construction phase. These plans will include but not be limited to the following points:

- A detailed test / commissioning schedule. The schedule can be comprised of extracts from the master schedule and supplemented with details specific to each component and system.
- Integration of appropriate RBF operational personnel to assist with the operational testing of equipment and systems. This will be good experience for operations people and help familiarize them with the vessel as well as provide valuable assistance to the Project Site Team and shipyard personnel.



- Eventual handover to operations will be an integral component of the testing and commissioning exercises as equipment and systems are tested and accepted. A formal sign-off or acceptance procedure will be developed and an operations representative designated as signatory to the document. This document will then become part of the vessel records and serve as the start point for the ongoing maintenance program.
- Total commissioning of vessel equipment and systems is not practical in all cases in the shipyard environment. Certain operations or functions cannot be adequately performed or simulated until the vessel is in an operational situation. Members of the Project Team will be designated to complete any such testing and commissioning activities and to assist as required prior to and during start-up on the drilling location.

Upon completion of construction the vessel will be manned and loaded out for transit to the Gulf of Mexico (GOM) in the self-propelled mode. The transit time is estimated at 90 days. The Project Team will be responsible for all preparation and arrangement to facilitate the transit. RBF Operations will be responsible for manning the vessel and installation at the GOM site. The RBF Project Team will assist in final start-up and commissioning, as may be required.

Operations interface, integration and turnover is further described in Section 10 of this document.

Rev Draw



SECTION 10

Operations Integration, Interface and Turnover

10.1 Operations Integration

Integrating Operations and Engineering experience has been emphasized with regard to the selection of many of the team members for the RBS8D project. Some Team members have been mobilized from various operations throughout the world to contribute in their specific areas of expertise. Many of these individuals have extensive deep-water semisubmersible experience and will incorporate improvements made to other vessels into the RBS8D design. Many of the Engineering / Construction team members have field operations experience which facilitates good communication with Operations personnel throughout the design and construction stages.

One goal has been to gather input from as many operating areas as possible including the North Sea, West Africa and Gulf Coast, in an effort to utilize the diverse pool of experienced personnel throughout the R&B Falcon fleet. In addition, input will also be solicited from Vastar and from third party services companies. Suggestions from all of these sources will be evaluated and those deemed beneficial to the overall operational efficiency of the RBS8D incorporated into the design.

Developing the RBS8D Drilling Operations and Marine Operations manuals, Safety Plans, Preventative Maintenance Plan, HAZOP Analysis, Pre-commissioning Plan, and Commissioning and Operational Spare Parts lists will be a joint effort on the part of relevant personnel.

10.2 Operations Interface

This section shall define project interfaces, define Interface Control, and develop a plan to track project interfaces.

Senior operations personnel will be integrated into the RBS8D construction team during design, plan approval and shipyard construction phases. The majority of Operations personnel will become familiar with the RBS8D during the testing and pre-commissioning planning and execution effort. During this period, the Operations superintendent will coordinate with the Construction team to ensure efficient manpower utilization and to facilitate timely delivery of the vessel.

Project interfaces include issues or details in which two or more parties must exchange information to design, build, test, install, and/or maintain equipment

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Draw



within the scope of responsibility and within the project requirements and schedule.

The Interface Control is to see that this information is recorded and tracked as a project interface. Interface Control is outlined in Section 5. The Interface Control will be exercised on three levels: (1) a designated person from the Team (ie. Project Engineering Manager or delegated assistant) will coordinate interface control in each engineering discipline, (2) each discipline Team Leader, Materials Man and Rig Manager will be responsible for Interface Control within their respective disciplines, (3) Document Control will receive and distribute interface materials to the appropriate person in the Team.

Each Interface Level will be responsible for ensuring that design data, drawings, documents, and other information required to execute the work, are exchanged in a timely manner. Document Control will also gather and transmit interface materials properly documented to the Contractors working on this project, as designated by the discipline Team Leader and direct interface materials through the appropriate person depending on the specific interface requirement. This will be done internally within the Team organization, leaving a single point of contact where vendors and sub-contractors can direct and receive interface materials. Each team Leader also works with team members to identify critical interface issues, helps facilitate timely information distribution to appropriate personnel/departments, maintains open lines of communication within the project, and assists in insuring that no issues are left unaddressed or unresolved.

10.3 Managing the Project Interface

This section defines the Interface Management Procedure in step form. Each step is followed by a detailed description.

1. An interface is recognized.

Any team member, recognizing specific information needed to reach the RBS8D Project goals, initiates an interface (see section 10.5 for definitions).

2. The Interface Engineer is notified of the interface and given detailed information.

The team member initiating the interface notifies the affected parties and the RBS8D Interface Engineer of the interface details. Interface details include the team member who supplies the information, the team member(s) who receives the information, a detailed description of the requested information, the interface initiation date, the date the team member is committed to supply the information, and the interface status (open or closed).

Rev Done

**3. Log the interface into the Interface Register**

The RBS8D Interface Engineer records the interface into the Interface Register and issues an index number for the specific interface.

4. Project Team Leaders track the interface.

Project Team leaders track open interface items. Wherever possible, they facilitate the flow of information.

5. Interface information is transferred to the team member requesting the information.

The requested information is transmitted by fax, e-mail, phone conversation followed by written communication, meeting attendance (information passed on, logged into the meeting minutes), or in person. The transmittal procedure can be found in Section 12 of this document. The Interface Engineer and Team Leader shall be notified of the information transmittal.

6. Respective parties complete closure form, closing the interface.

The Interface Engineer insures that the respective parties receive the Interface Closure form. This form is to be completed, signed, and then returned to the Interface Engineer. The interface is considered closed at this point.

10.4 RBS8D Handover

The RBS8D will be delivered from the Engineering / Construction Team to Operations immediately upon acceptance and departure from the shipyard.

Operations management will be responsible for vessel manning in accordance with operational and applicable regulatory requirements. Operations will also assume responsibility for vessel loadout in preparation for drilling operations.

It is likely that there will be outstanding testing and commissioning items due to the nature of certain equipment and systems which precludes complete functional and operational testing in the shipyard. Appropriate project personnel will be designated and assigned to complete all such remaining work and assist as required with vessel startup at the drilling location. However, ultimate control and responsibility of the unit will remain with the Operations organization and the statutory semisubmersible command structure.

The Project Team will be responsible for the completion of outstanding construction and engineering tasks and subsequent revisions to manuals or other vessel documents as required. All such work will be coordinated with operations management and carried out in a manner satisfactory to all parties

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so as to minimize disruption of operations and to ensure safe conduct of all activities. Project personnel will continue to liaise with vendors and manufacturers representatives as required to resolve any problems encountered during startup.

The Builder and OFE (Owner Furnished Equipment) vendors warrant the RBS8D for a period of one (1) year. Coordination of BFE (Builder Furnished Equipment) warranty items will be through a Shipyard Guarantee Engineer to be designated.

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10.5 Interface Definitions

Interface: An issue or detail including issues or details in which two or more parties must exchange information to design, build, test, install, and/or maintain equipment within the scope of responsibility and within the project requirements and schedule. It is critical that interface issues are resolved within the committed timeframe. Interface information includes, but is not limited to:

- Equipment enveloping dimensions, weights and centers of gravity
- Piping or tubing tie-in locations and identification
- Electrical cabling and tie-in locations and identification
- System tolerance stack-ups
- Cathodic Protection details
- Shipyard construction, fabrication, assembly, or installation/demolition plans
- Equipment construction, fabrication, or assembly plans
- Special procedures required during flushing and/or hydrotesting
- Transportation and lifting requirements
- Installation, maintenance, or operating procedures
- Delivery times (change) and any special delivery procedures or instructions

Interface register: A database that identifies and tracks the project interfaces, their requirements, status, the deliverables which satisfy them, and responsible parties.

Closed: An interface status (as opposed to "open"), indicating the information shared between the parties is final and agreed upon, allowing fabrication initiation, testing, or equipment components or structure installation and/or maintenance.

Interface Engineer: A designated engineer who maintains the Interface Register and facilitates the distribution of applicable information in a timely manner.

Team Leader: An engineer who heads an RBS8D Project department. Each department covers all aspects of a certain type of equipment or design.

Index Number: A unique tracking number logged into the Interface Register. This number identifies each project interface.

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SECTION 11

Project Administration

11.0 Project Administration

The goal of Project Administration is to provide support to the RBS8D Project in Houston and Korea in the following areas:

- General Accounting
- Project AFE Budgets and Forecasts
- Contract Administration
- Information Services
- Office Services
- Personnel
- Timekeeping

11.1 General Accounting

Project Administration is responsible for providing an accounting system that operates under generally accepted accounting principles, adheres to R&B Falcon Drilling Co. accounting policies and procedures, and provides adequate levels of internal controls both in Houston and foreign locations.

In Houston, Project Administration will be networked directly into R&B Falcon Drilling Co. AS400 mainframe computer system. All accounting for the Project will utilize Software 2000 Financial - Management modules. Using these modules will facilitate accurate and efficient Project accounting and provides the tools necessary to administer the Project.

In foreign locations, the local administration will utilize the Computerized Accounting Reporting System (CARS) program to perform routine accounting functions and manage cost account data. The CARS program was designed to interface with the Software 2000 General Ledger System, thus the transfer of local accounting information from foreign location to Houston Accounting is done in a very effective and efficient manner.

Following is a brief overview of the major areas of responsibility for General Accounting:

Accounts Payable is responsible for processing all service, equipment or material invoices. This is accomplished through the use of the R&B Falcon



AP2000 module which provides a clear audit trail for each invoice from processing to payment.

General Ledger Review is performed by General Accounting to insure accurate accounting for all costs incurred by the Project.

11.2 Project AFE Budget and Forecasts

11.2.1 AFE Budget Development and Changes

All costs related to the RBS8D Project are capitalized and controlled through the R&B Falcon AFE (Authorized For Expenditure) system. No commitment or expenditure on the Project are allowed without an approved AFE. Development and approval of the Project AFE's will be coordinated by the Project Administrator.

Significant changes in estimated costs, higher or lower, from the approved AFE must go through the AFE CTR (Cost Trend Report) process for approval prior to commitment or procurement. The same applies for items not included in the approved AFE and for items to be deleted from the AFE. This is a corporate policy, not a Project policy, and corporate policy provides guidelines as to what is considered significant.

11.2.2 AFE Budget Approvals

The original project AFE must be approved in accordance with R&B Falcon AFE Limits of Authority, which includes senior corporate management.

All AFE CTR's must be approved in accordance with R&B Falcon AFE Limits of Authority which includes the company capital committee.

11.2.3 AFE Budget / Forecast

It is the Project Administrator's responsibility to summarize and report expected variances from the AFE budget. It is the responsibility of each member of the Team, with lead responsibilities for an AFE line item, to monitor estimated expenditures against their approved AFE budget items. They must also originate the proper documentation when a significant variance from the approved AFE budget is expected.

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The Project Administrator will utilize the MS Access Project Forecasting software module to prepare detail and summary management reports on AFE budgets, committed costs, actual costs and forecasted costs.

11.3 Contract Administration

11.3.1 Subcontractor Staff Agreements

The Project Administrator is to negotiate consultant, personnel, and technical service agreements for RBS8D Project subcontractors. In addition to the negotiations, Project Administration insures these contracts are in compliance with R&B Falcon Drilling Co. legal and insurance guidelines, and that the sub-contractors remain in compliance.

11.3.2 HHI Shipyard Agreement

The Project Administrator is to assist in administering the vessel construction agreement between R&B Falcon Drilling Co. and HHI. This applies to those terms and conditions that pertain directly to Project Administration and to those areas in which Project Administration assistance is requested.

11.4 Information Services

11.4.1 Computer Hardware and Software

Project Administration is responsible for planning, organizing and overseeing the installation, setup and maintenance of the office network, personal computer hardware and software, and providing end user support and training. The Corporate Information Services Department is responsible for the setup and maintenance of the network and personal computer hardware and software along with security.

The network has 2 servers; RB1 at the Threadneedle office and DEVCO1 at the Dairy Ashford office. RB1 is used for electronic communications and DEVCO1 is used for all Project software and data. All Project-related electronic data is to be maintained on the network in the RBS8D directory. Exceptions to this must be approved by the Project Administrator.

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Most of the Houston Project office workstations are Dell Pentiums, desktop and laptop, tied into the company's network. All workstations utilize the MS Windows 95 operating environment.

Project Administration is also responsible for monitoring compliance with the corporate software policies (licensing and standardization).

11.4.2 On-Line Documentation

The corporate IS department is responsible for maintaining on-line corporate policies and procedures. Project-specific policies and procedures will be provided on line in a MS Word format as they are developed and approved.

11.4.3 Forms

The corporate IS department is responsible for maintaining on-line corporate forms. Project-specific forms will be provided on-line in a MS Word or MS Excel format as they are developed and approved.

11.5 Office Services

Project Administration is responsible for providing telecommunications, mail, furniture and fixtures, office equipment, office supplies, security, and space planning in a timely and cost effective manner. When possible, purchases of office equipment and supplies will be arranged through the corporate Purchasing Department.

In order to maintain the integrity and consistency with the Project, office services will standardize and coordinate all Project efforts as they relate to office services.

11.6 Personnel

Project Administration is responsible for providing efficient delivery of personnel services including recruitment, salary administration, benefits administration, personnel records, employee relations, and developing personnel policies and procedures.

11.6.1 Policies and Procedures

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The corporate Human Resources and Employee Benefit department is responsible for corporate personnel policies and procedures. These are applicable only for direct R&B Falcon Drilling Co. employees. Project Administration is responsible for administering those policies and procedures.

Development and administration of Project specific personnel policies and procedures is the responsibility of Project Administration, with final approval from the Project Manager/Project Sponsor and Human Resources.

11.6.2 Recruitment

A good employment policy and its administration has both employee relations and public relation value. Such a policy helps to assure the employment of the best available personnel as well as securing the goodwill of many applicants who do not qualify as employees or for whom no vacancies are available.

Thus, it is Project policy when it is necessary to hire new staff to recruit and select those of high ability, character, and potential to meet approved manpower requirements and place them in work assignments which maximizes their talents and provides them the opportunity to develop.

All job applicants and consultants are considered for selection, with the Project choosing the most qualified personnel meeting established job specification or requirements without regards to sex, race, color, age, creed or national origin.

11.6.3 Relocation

Project Administration will coordinate the relocation of all employees to and from Korea, and be responsible for adherence to all corporate and Project policies regarding such moves.

11.6.4 Travel Services

Business Travel should be coordinated through the Project travel coordinator to minimize costs and take advantage of available savings and scheduling and making arrangements for air travel. The guidelines provided in the Commercial Air Travel policy attempt to control the substantial expense resulting from commercial air travel, car rental, hotel expenses and, other related services.

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DPW



It is probable that situations will arise which either will not be covered in sufficient detail, or for which there may appear to be a more desirable solution. Such matters should be presented to the Project Administrator, who will be responsible for the interpreting the policies when such situations occur.

Air business travel will be approved by the Project Manager in advance of any reservations.

11.7 Timekeeping

The purpose of Timekeeping is to maintain record keeping and generate reports on Project man-hours for Management, Project Control and Accounting. The system will also track rates, cost centers, employee information and Project codes.

All Project staff members, R&B Falcon Drilling Co. employees or subcontractor staff, on site or off site, are required to submit weekly timesheets (Saturday-Friday) to Project Administration on a weekly basis. Each timesheet is to be signed by the staff member and approved by the staff member's team leader and that individual's manager. It is the team leader's responsibility to coordinate all timesheets within his/her group, and to submit them to Project Administration with all approvals.

Rev Draw



SECTION TWELVE

Document Control

12.0 Document Control (Rev.1)

- Establish, implement and maintain Project File Code System
- Implement internal controls/systems to obtain the status of all design and shipyard (construction) data/ vendor data, which may have been ordered, received, processed, filed, checked out, etc.
- Archive, distribute, and consolidate final documentation and equipment manuals directly related to Project Files

12.1 Project File Codes (Rev.1)

1 Communications

- 1.1 Basic Engineering Contractor (IHI)
- 1.2 Shipyard Contractor (HHI)
- 1.3 Regulatory
- 1.4 Interoffice Memoranda
- 1.5 Vendor
- 1.6 RB Document Transmittals and Document Control Routing Forms
- 1.7 Meeting Minutes
- 1.8 Progress Reports

2 Administration

- 2.1 Contracts and Agreements
- 2.2 Technical Queries (also in TQ database)
- 2.3 PDN's – Georgianne Johnson
- 2.4 Change Orders – Deborah Bowden

3 Purchasing - Phyllis Shuff

- 3.1 RFQ's and Responses
- 3.2 Material Requisitions
- 3.3 Purchase Orders



- 4 Engineering Files**
- 5 OFE Equipment Files (see PM component list)**
- 6 Marketing**
- 7 Scheduling**
- 8 Project Management**
 - 8.1 PEP
 - 8.2 Project Procedures
 - 8.3 Organization Chart
- 9 Reference Library**

There is a Document Control e-mail address for the Deepwater Horizon (RBS8D). All project-related e-mails, created and received, should be forwarded to the this mailbox:

RBS8D Document Control

Please reference the Project name and the applicable PM Component number in the subject line.

Document Control will print and file in appropriate files.

12.2 Document Transmittals

12.2.1 Outgoing Documentation

Technical documents (drawings, specifications or reports) transmitted to an external recipient shall be transmitted utilizing the Document Transmittal Form. Document Control will complete the preparation of the transmittal form for all external document transmittals. Document Control will ensure that the appropriate Team personnel are indicated in the cc: on the transmittal in accordance with the standard document distribution requirements.

A transmittal log indicating log number, subject, date sent/received, originator, and recipient shall be maintained for internal, external, regulatory and vendor transmittals.

Document Control is responsible for maintaining the document log. The transmittal log will be created in the Microsoft Access database.

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Document Control will be responsible for copying, distribution and filing documents being transmitted.

12.3 Documentation Review/Approval Process

12.3.1 Basic Engineering Drawing Approval Procedures (Ref. Table 12.3.1)

1. RBF or IHI prepares and submits 8 sets of documents in accordance w/SY Spec., Ch. 21 and IHI agreement. Only IHI documents listed in SY Specs., Ch. 21 are to be sent to Ulsan. Other IHI design documents (reflecting IHI Proprietary Calculation Methods) are to be reviewed by RBF Houston and ABS only.
 - 2 sets – RBF Ulsan
 - 6 sets – RBF Doc. Ctrl. Houston (1 set for IDC review, 5 sets to ABS for Approval or Review)
2. RBF Ulsan
 - Forwards 1 copy to HHI for information only. HHI sends any comments to RBF Ulsan.
 - Fax to Houston Document Control copy of Transmittal to HHI (Houston DC will add this transmittal to database)
 - Reviews 1 copy – sends copy of comments , including HHI comments to RBF Houston
3. RBF Houston
 - Forwards 5 copies to ABS if applicable and to be determined by Engineering Manager.
 - Reviews 1 copy for IDC
 - Receives and evaluates comments from IHI, HHI or RBF Ulsan, including ABS'.
 - If comments are accepted, these will be incorporated in next Revision and submitted in 2nd review cycle after ABS has completed their 1st review, along with any comments that were generated by ABS.
4. ABS
 - Receives 5 copies for review & approval and returns 3 sets to RBF Houston, marked approved, approved w/comments or disapproved.

Rev Draw



5. ABS Approved or Approved w/Comments Documents
 - Two sets to RBF Ulsan
 - RBF Ulsan will forward one set to HHI Ulsan for Detail Engineering
 - One set to IHI & RBF Houston for Information (No comments) or Re-issue w/ comments from ABS, RBF, or HHI)
 - Repeat steps 1-4 for revised & re-issued documents from either RBF or IHI
6. ABS Disapproved Documents
 - Process is same as under 5, except disapproved drawings are NOT sent to Ulsan in order to avoid confusion.

Note: Documents and comments received by RBF Document Ctrl. Houston are coordinated with TL's for distribution and appropriate action.

RBF DMW



PROJECT EXECUTION PLAN

R&B Falcon Drilling Co.
RBS8D Project

Microsoft Access - [RBI Documents.mdb]

File Edit View Insert Format Records Tools Window Help

Project: RBS8D

RBI Doc Number: 87-000-E-01 RBF Doc Number:

Title: Electric (Design) Load Analysis

Comments:

RBI Xmital	REV	Rev Date	Issue Pur	Issued to	RBF Xmital	Xmital Da Return	ABS Xmital	Status	Xmital to RBI

Records: 34 of 34 1 of 1

Records: 34 of 34 1 of 1

Form View

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Table 12.3.1

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12.3.2 Shipyard Documentation Review/Approval Process (Engineering Phase) (Refer to Flow Chart Shipyard Documentation Review & Approval – (Construction Phase) & Table 12.3.2)

HHI

- Submits four (4) sets of data for approval
 - Three (3) sets to RBF Houston Doc Ctrl – for review and approval
 - One (1) set to RBF Ulsan Doc Ctrl – for information only

Note to RBF Ulsan Doc Ctrl – 8D documents are being reviewed and approved by Houston. RBF Ulsan will be notified via email from Houston Engineer requesting involvement.

Houston Document Control

- Verify that all data received are listed on the transmittal
- Sign and date stamp transmittal and return confirmation of transmittal to HHI
- Log the data; if this is a re-submittal, pull the previous markups and forward all to Lead Engineer for final approval
- Prepare IDC Routing Form
- Route one (1) set of data for approval
- File two (2) set in Document Control file room

Ulsan Document

- File one (1) set in Document Control file room, please refer to flow chart (Shipyard Documentation Review and Approval (Construction Phase)).

Lead Engineer

- Assigns the IDC routing
 - * Lead Engineer will notify Ulsan Engineering (via email) if additional review is necessary

Document Control

- Make copy of IDC routing form for the tickler file
- Hand carry to the first person on IDC routing

Engineer

- Review and comment (initial all comments) directly on data
- Initial IDC Form (date in and date out); note on IDC Form NC (no comments) or AN (as noted)
- Forward to next person on list
- Last person to review should return to Lead Engineer

Lead Engineer

- Reviews all comments (including comments from site team engineers)



- Consults with other leads as required
- Signs and dates approval stamp
- Signs and dates IDC Routing Form
- Returns data to Document Control

Document Control

- Update the log noting status (approved, approved with comments or not approved, revise and resubmit)
- Pull the IDC form from tickler file and file original IDC Form in IDC binder
- Prepare transmittal and return one (1) "marked up" set to HHI; File one (1) "marked up" set in Document Control Files
- One additional set of "marked up" data will be copied and sent to Ulsan for file and information

All routine packages will have a due date of 10 days from date of receipt. Urgent packages will have a due date of 4 days from receipt. If review and comments are required from Ulsan Engineering please allow an additional 5 days unless comments are to be replied via fax or e-mail.

Rev Plan



Microsoft Access - [R&B Documentation]

File Edit View Insert Format Records Tools Window Help

Project: RBS8D
Data Title: Accommodation Condition Air Distr. Plan 2nd Deck (3/5)
Data Number: HR85-L56-000-P0031
Description: Drawing
Data Type: Shipyard Drawings
Team Leader: John May
Discipline: Electrical PM Code:

Rev	Revised	Received Date	HHI Transmittal	Due Date	Issue Pur	Date Retu	RB Trans	IDC	Status
1	4/27/98	5/21/99	TR039	6/4/99	IFA	6/10/99	1713	802	Received, No action

Record: 1 of 1

Form View

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Table 12.3.2

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12.3.3 Vendor Data Process (Vendor Documentation Review & Approval)

Vendor

- Submits ten (10) sets of data as per PO requirements*
*If less than ten (10) sets are received, Purchasing will retain one (1) and forward the remaining set or sets to Document Control

Purchasing

- Logs data in system for their record keeping purpose
- Retains one (1) set of data in PO file
- Prepares transmittal and forward to Projects Document Control with remaining nine (9) sets of data and vendors transmittal
- Returns to Vendor a signed confirmation of received data

Document Control

- Verify that all the data received are listed on the Purchasing transmittal
*If less than ten (10) sets are received, Document Control will make the additional copies to satisfy required distribution
- Date stamp both the Purchasing and the vendor transmittal and note the PM Code on both
- Stamp the data with the date received stamp, the project stamp and the approval stamp
- Log the data into the Document Control Vendor Tracking System
- Prepare the transmittal to the Shipyard and RBF Ulsan Project Team (for their information to satisfy the contract requirement) and updates the Tracking System noting the transmittal number and date
- Separate one (1) sets for IDC routing (some projects route only one set – see below for instructions*)
- If review and comments and/or approval are being conducted by the Shipyard R&BF team – DC will transmit required sets
- Prepare the IDC routing Form for review and comments and/or approval and updates the Tracking System – attach the Purchasing and Vendor Transmittal to the IDC tickler file copy

Lead Engineer

- Assigns the IDC routing

Document Control

- Make copy of IDC routing for tickler file
- Hand-carry to the first person on IDC routing

Engineer

- Review and comments and/or approval (initial all comments)
- Initial IDC form (date in and date out)

Low Draw



- Note on IDC form NC – no comments or AN – as noted
- Forward to next person on routing
- Last person to review should route to Lead Engineer

R&BF Team at Shipyard Review

- Review and comments and/or approval
- Return to R&BF Document Control

Document Control

- Forwards Shipyard comments to Lead Engineer
- Files Transmittals in appropriate binder

Lead Engineer

- Reviews all comments
- Consults with other leads as required
- Signs and dates approval stamp
- Signs and dates IDC routing form
- Returns to Document Control

Document Control

- Update the Document Control Tracking system noting the status (approved, approved with comments or not approved, revise and resubmit)
- Pull the IDC form in the Tickler file and file the original IDC form in IDC Binder
- Return one “marked up” set to Purchasing for return to the vendor
- If only one set was routed for review and comment DC will copy the “mark ups” and return original set to Purchasing
- File “marked up” set in the PM file

Purchasing

- Transmits commented data to vendor or notifies Vendor of Approved Status
- cc Document Control on Vendor transmittal

VENDOR DOCUMENTS FOR RESUBMITS (Refer to flow chart Vendor Documentation Resubmission Process)**Vendor**

- Submits 10 sets of data as per PO requirements

Purchasing

- Logs data in system for their record keeping purpose
- Retains one (1) set of data in PO files

R&B



- Prepares transmittal and forward to Projects Document Control with remaining nine (9) sets of data and vendors transmittal

Document Control

- Date Stamps Purchasing and Vendor Transmittals
- Updates Document Control Tracking System
- Pulls previous "mark ups" from PM file
- Forwards to Lead Engineer

Lead Engineer

- Checks data for compliance against returned data

Document Control

- Distribute as per company and contract requirements
- Update PM file with new revision

Rev Draw



Microsoft Access - [Vendor Data Main (tbl)]

File Edit View Insert Format Records Tools Window Help

Project: RBS8D Description: Drawing Engineer: Robert G. Giddens Certified Data: ☐ Void: ☐

PD: 087-00020 PM: 142

Vendor: Hydrilift Data No: D-1209-G004 Comments:

Title: Foundation Plan - BOP Storage Electronic Files Received: ☐ No ☐ Yes

NOT FOUND: ☐

Rev	Rev Date	Date in DC	Issued To	IDC No	Date Due	Status	RB Trans	Transmittal Date
0	6/7/99	6/24/99	IDC	D007	7/7/99			
0			HFI				1704	6/25/99
*								

Record: 18 of 19 1 of 2

Form View

Start Send Data Microsoft O Microsoft Word - Basic Microsoft Access - Enclosing Procedures 9:47 AM

Table 12.3.3

Rev Draw



12.4 Reproduction Services

Document Control will provide reproduction services for all milestone issues for which it makes distribution. This includes all required copies of transmittal letters, drawings, reports, etc.

"Reproduction" includes reprints, scanning, and photo processing.

12.5 Archiving / Project File Retention

At project end the distribution of final documentation is:

- OFE final documentation:
 - 2 – Rig
 - 1 – CER
 - 1 – Operations Office
- As-built shipyard drawings and documentation inclusive of BFE data:
 - 2 – Rig
 - 1 – CER
 - 1 – Operations Office
- Original design drawings and documentation
- Original "mark-up shipyard drawings and documentation and BFE stored off site
- Original "mark-up OFE data stored offsite
- Extra OFE final Manuals stored offsite
- Working files from project personnel stored offsite
- Correspondence stored offsite
- Purchasing Files (Phyllis Shuff) stored offsite

12.6 File Room Access

Files containing all correspondence, technical documents, drawings and all other items are to be stored in a central area with controlled access. Check-in / checkout procedures will be maintained and a quick turnaround time provided for all items being sent to Document Control.

Items may be checked out to project personnel and remain the responsibility of that individual until returned to Document Control for refiling.

Draw
Rev



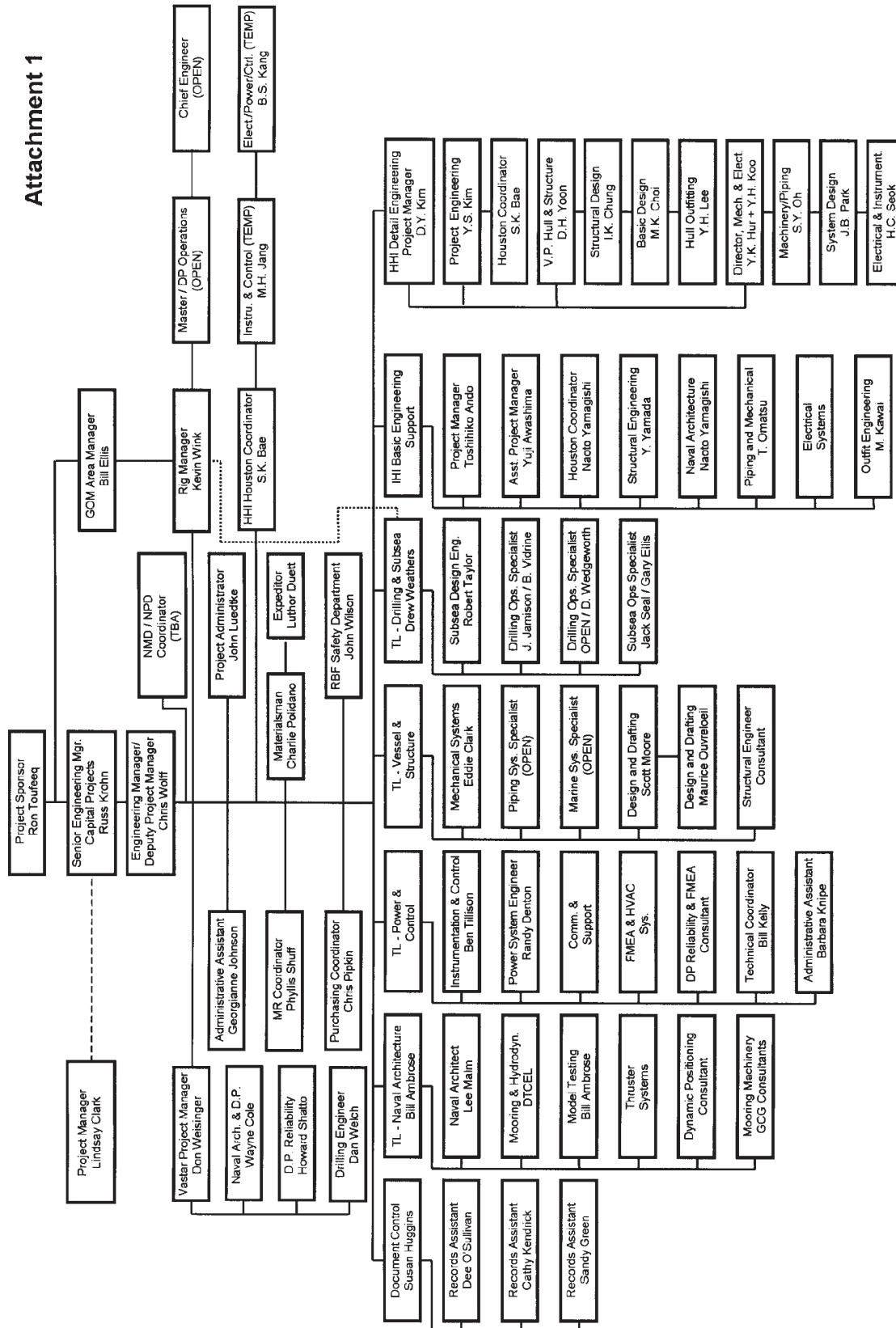
Attachment 1 Houston Engineering / Procurement Chart

Rev 01

RBS8D PROJECT - TEAM ORGANIZATION CHART

Houston Engineering and Procurement

Attachment 1



See Draw



Attachment 2 Ulsan Engineering / Procurement Organization Chart

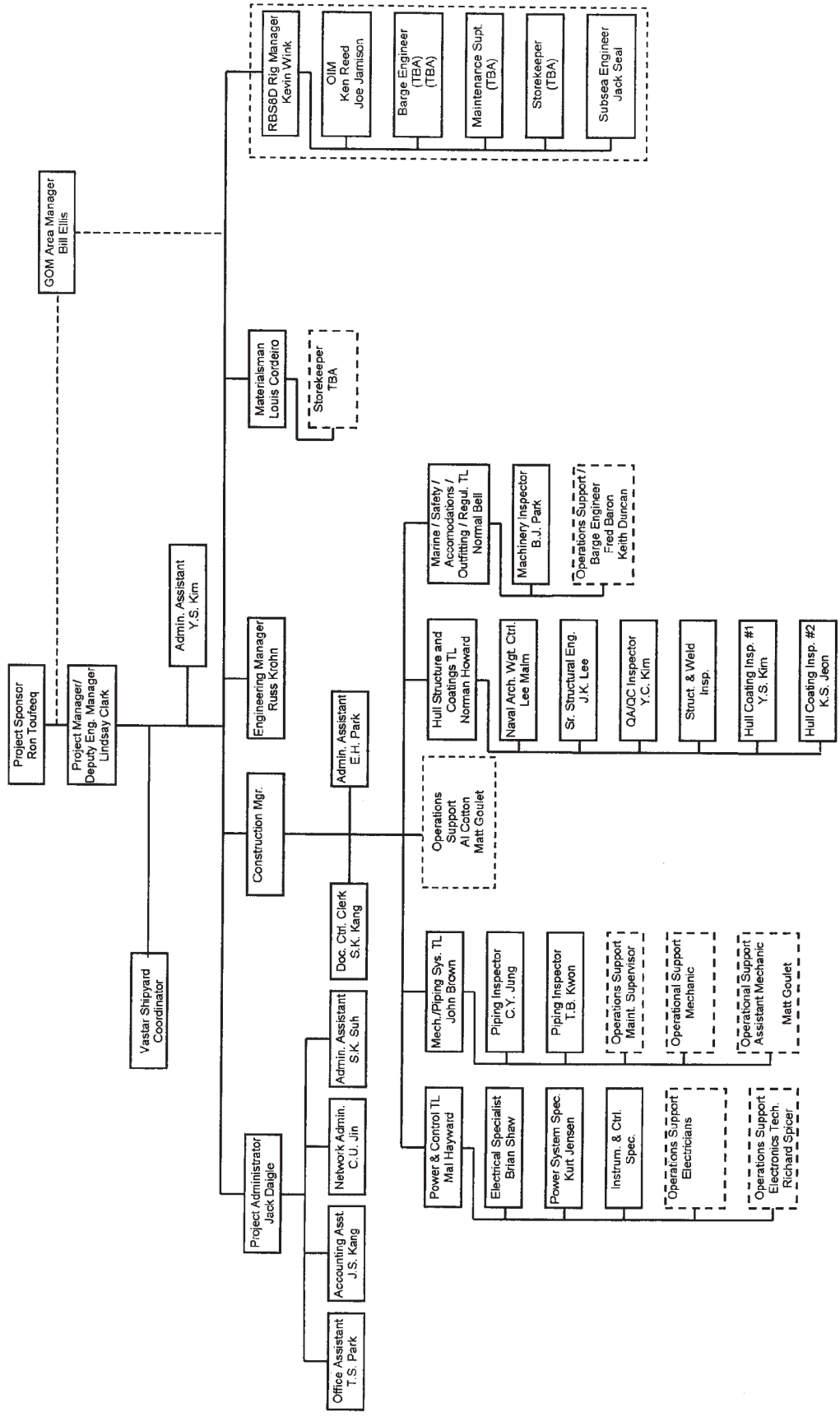
Rev. New

RBS8D PROJECT - TEAM ORGANIZATION CHART

Ulsan Shipyard Construction

(April 26, 2000)

Attachment 2



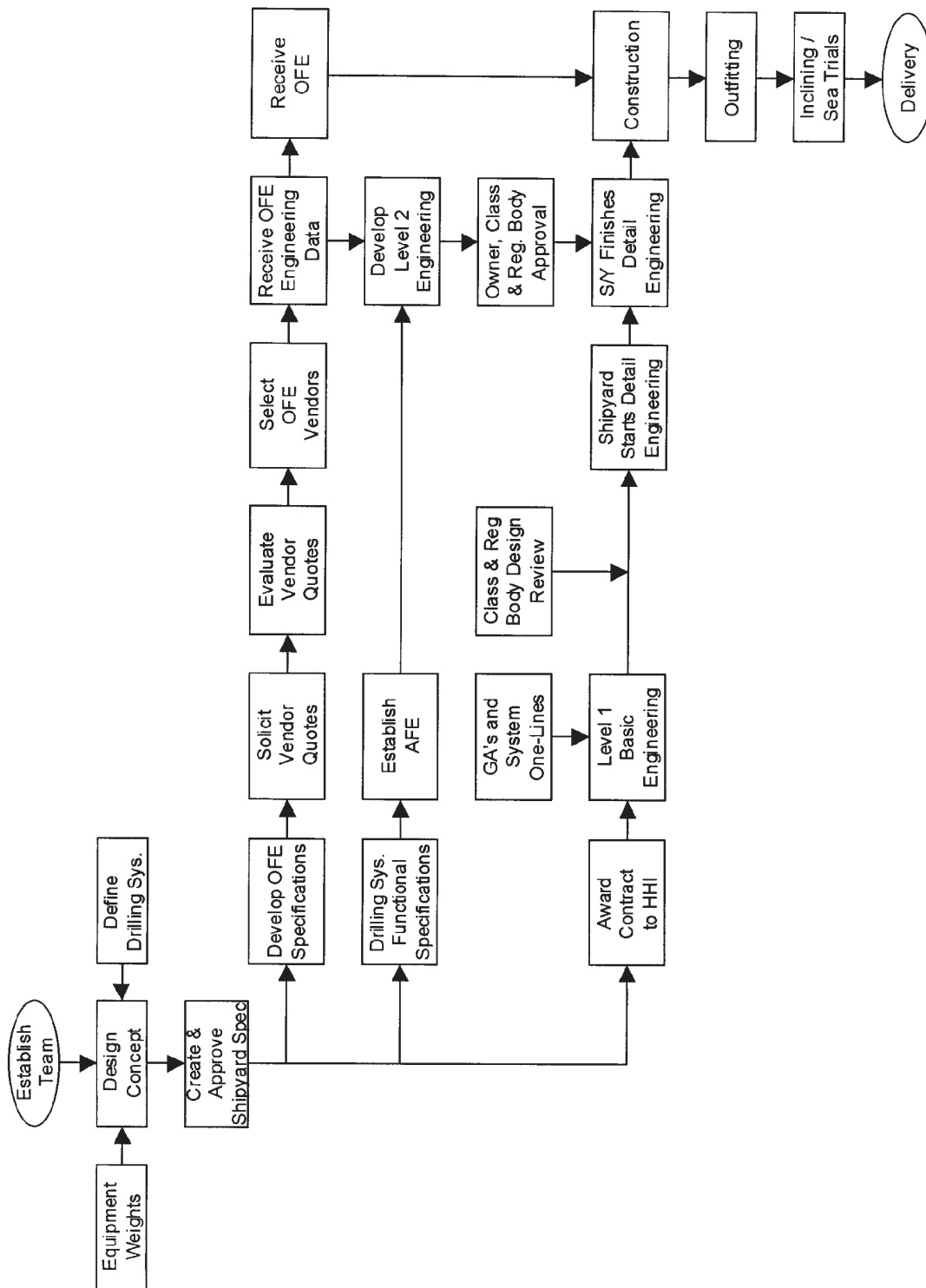
See Draw



Attachment 3 Project Execution Plan

Karl Daw

ATTACHMENT 3 - RBS8 PROJECT EXECUTION PLAN



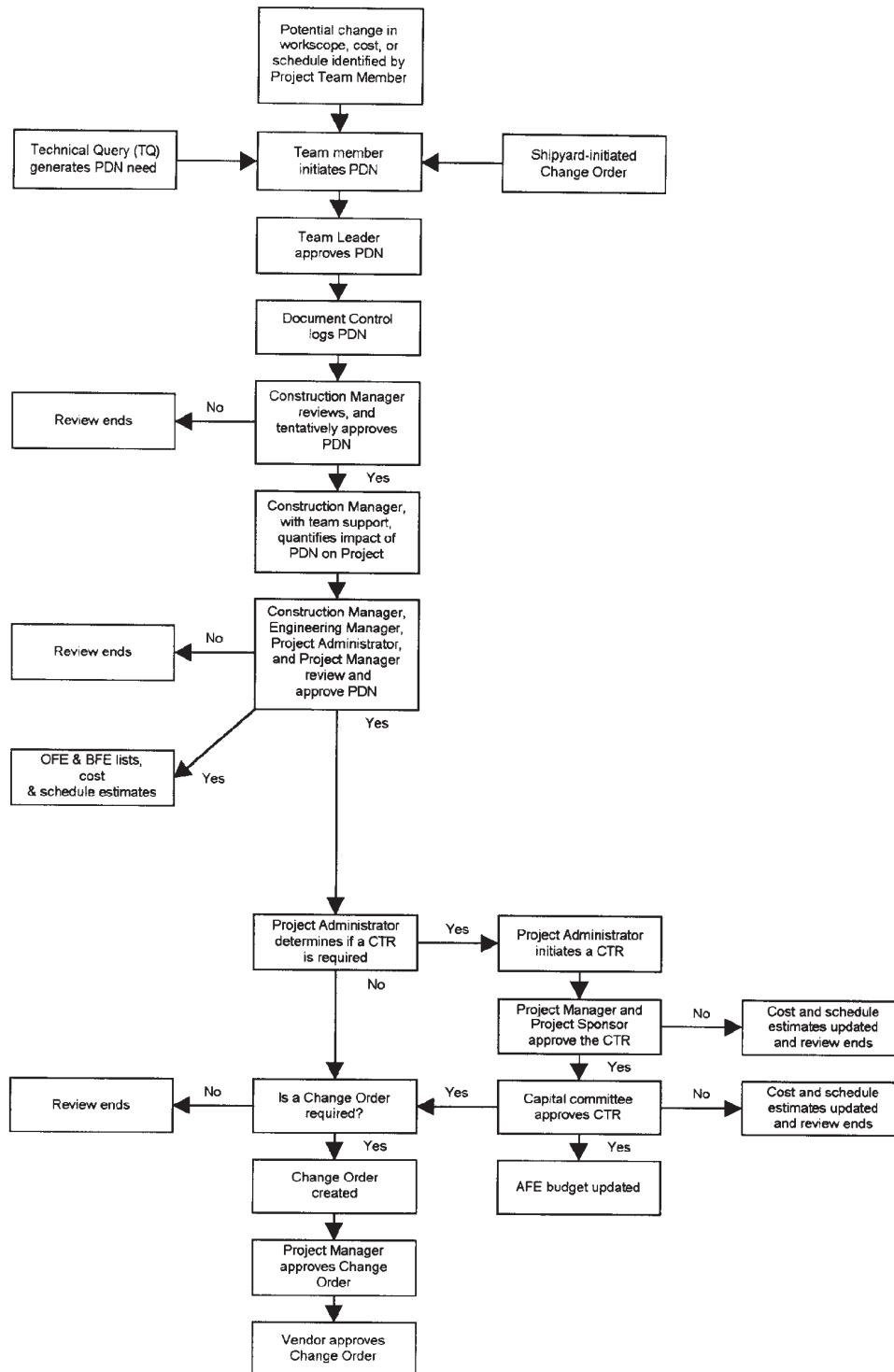
Rev D Rev



Attachment 4 Change Control Flowchart

Rev Draw

ATTACHMENT 4 RBS8D PROJECT CHANGE CONTROL FLOWCHART



Rev DSW

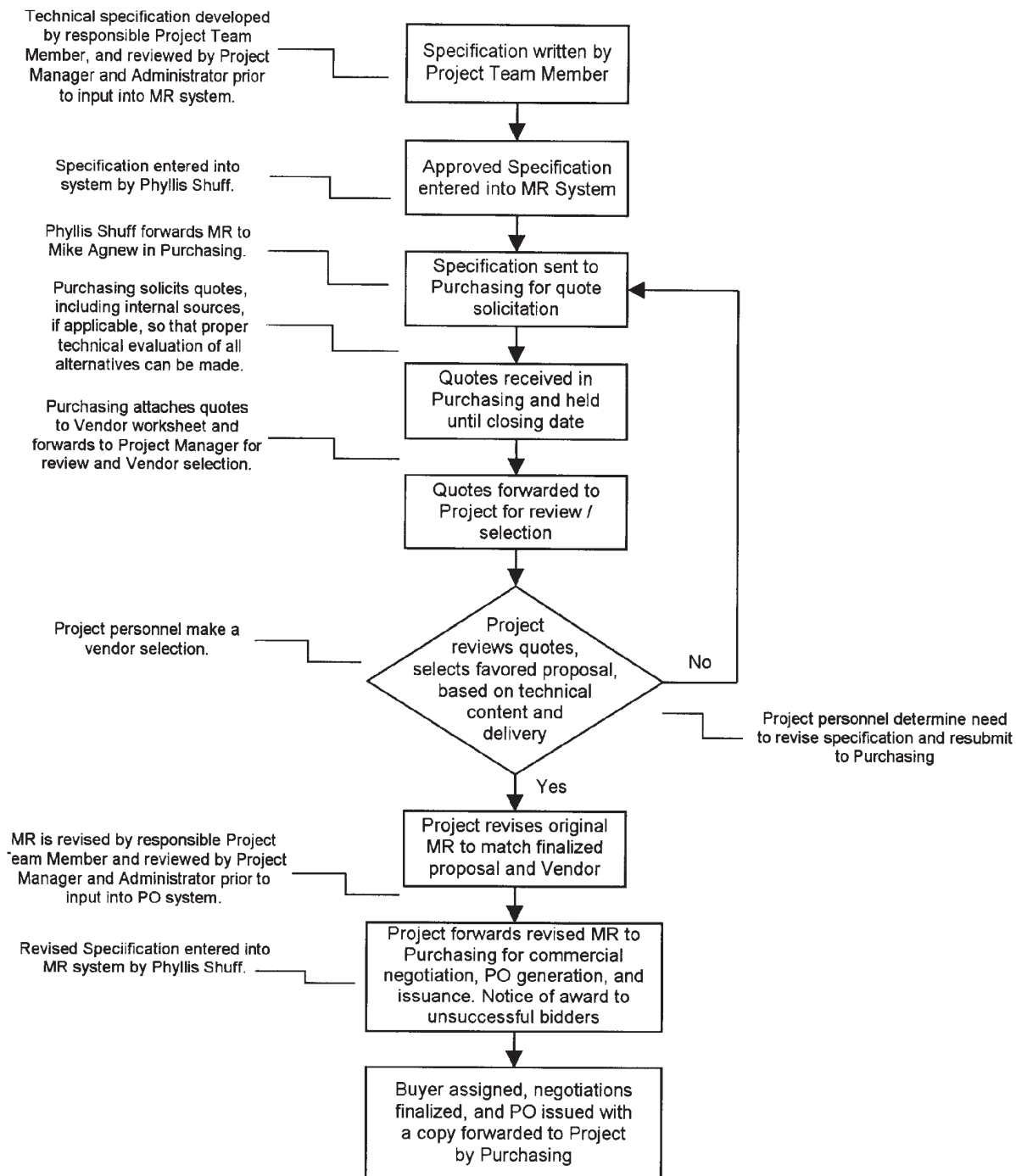


Attachment 5

MR/PO Generation & Approval Process

Rev. Jan

ATTACHMENT 5 RBS8 PROJECT MR/PO GENERATION and APPROVAL PROCESS



Rev Ddw

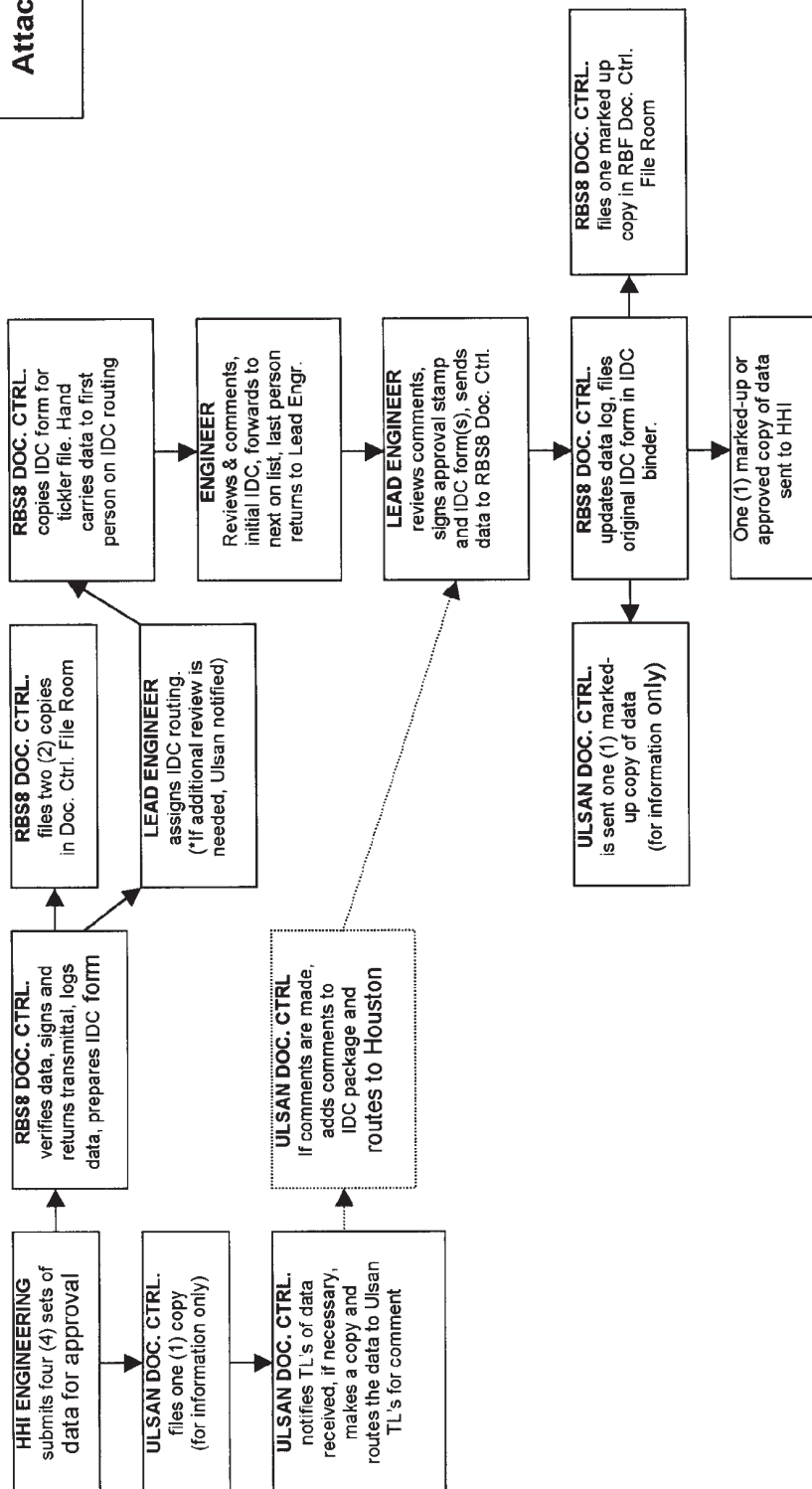


Attachment 6 Shipyard Documentation Review & Approval

Rue Daw

SHIPYARD DOCUMENTATION REVIEW AND APPROVAL

Attachment 6



Rail Daw

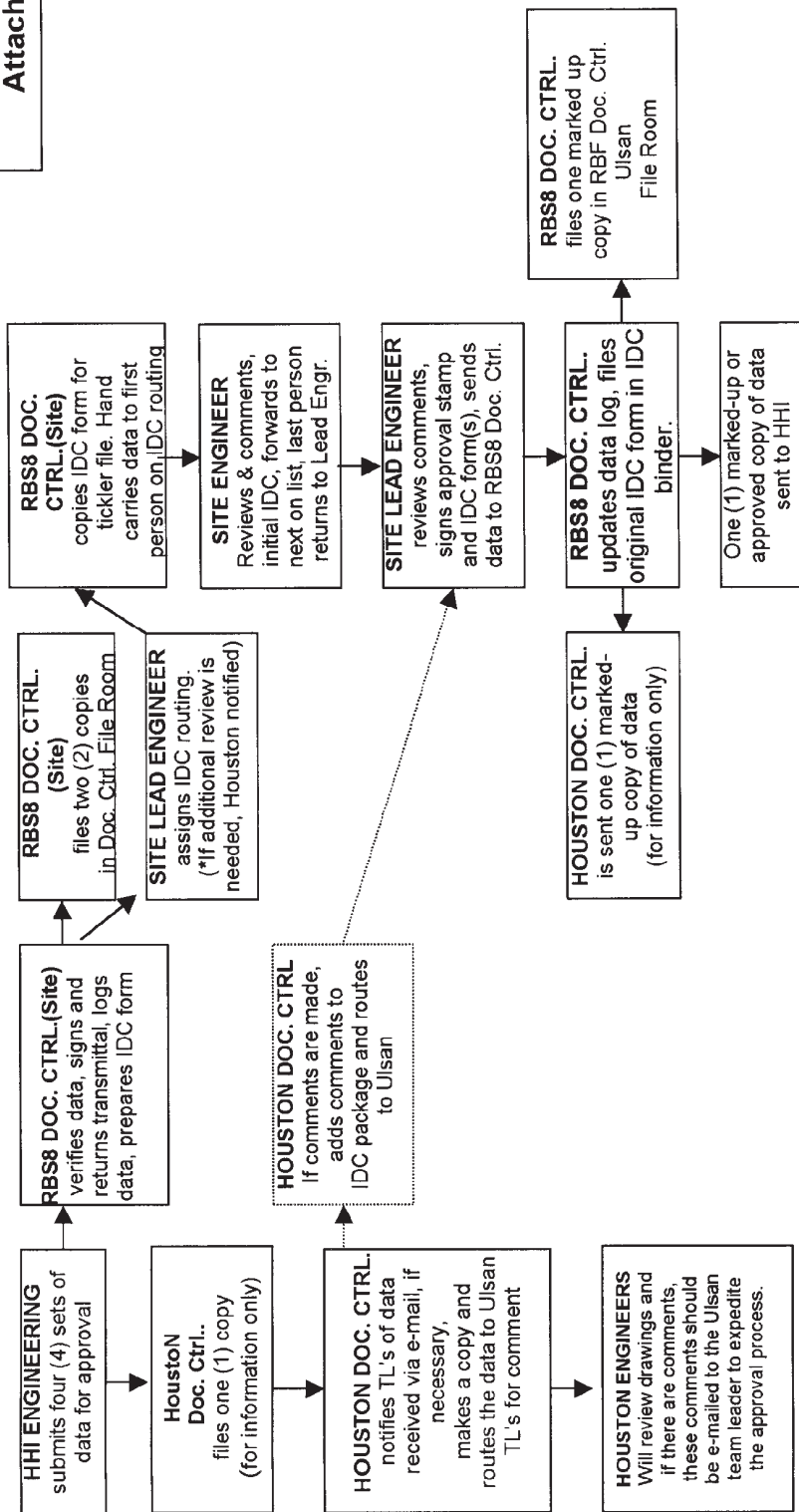


Attachment 7 Documentation Review & Approval

R&B Falcon

SHIPYARD DOCUMENTATION REVIEW AND APPROVAL - (Construction Phase)

Attachment 7



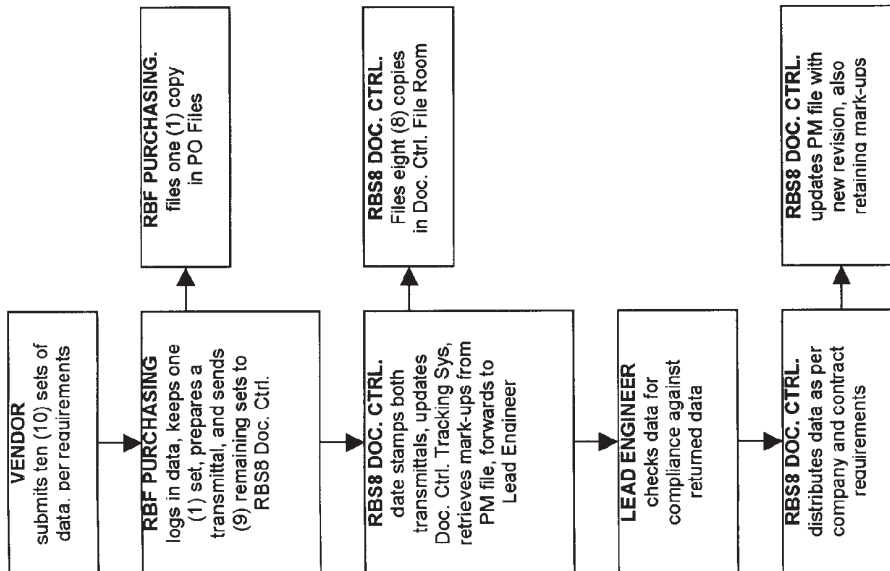
Rev DW



Attachment 8 Vendor Documentation Resubmission Process

Ran Dew

VENDOR DOCUMENTATION RESUBMISSION PROCESS



Attachment 8

File

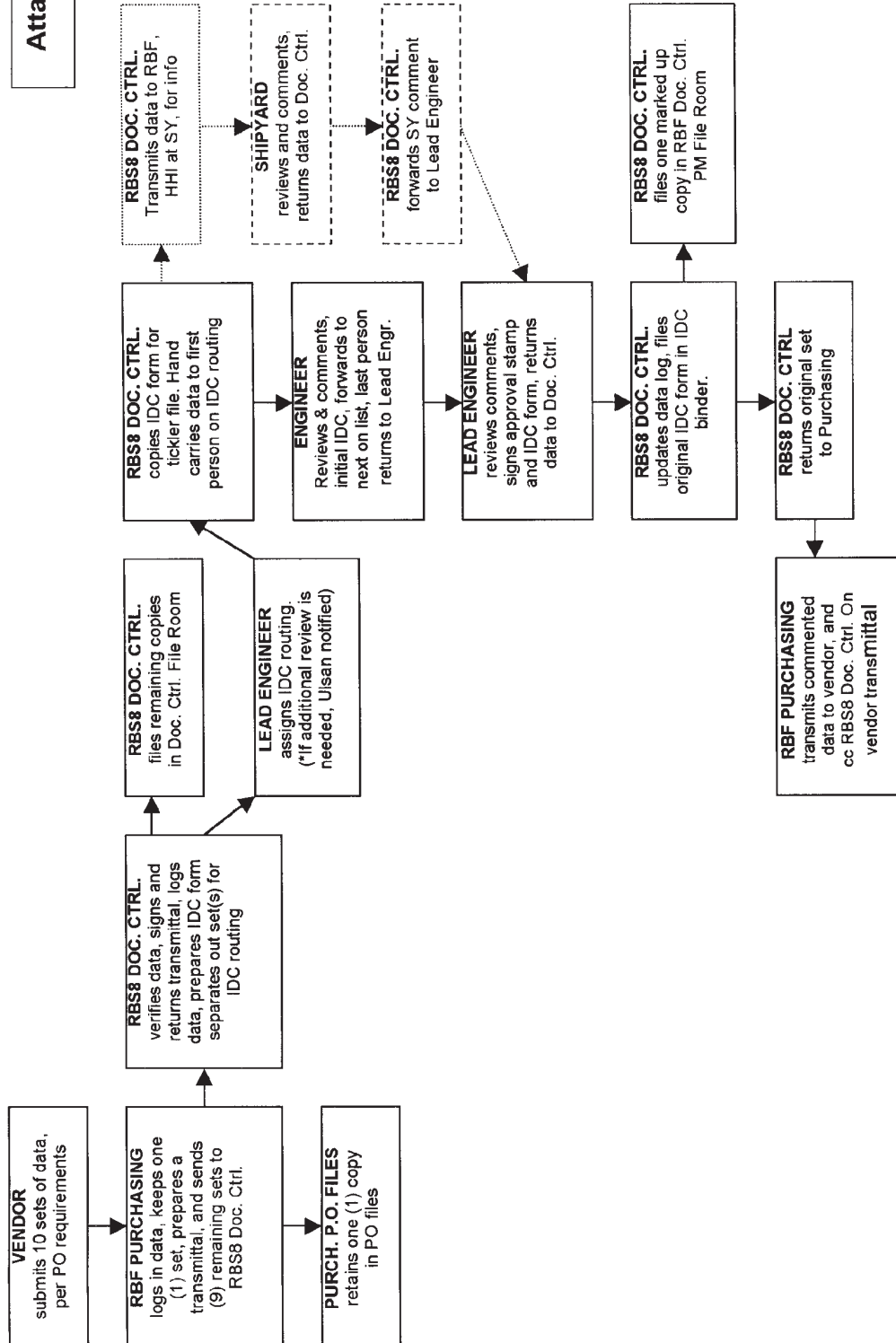


Attachment 9 Vendor Documentation Review & Approval

RUB DPW

VENDOR DOCUMENTATION REVI. AND APPROVAL

Attachment 9



Rev Daw



Attachment 10

Vastar Representatives / Subcontractors & Areas of Responsibility

R&B Draw

**VASTAR RESOURCES
KEY REPRESENTATIVES
ROLES & RESPONSIBILITIES**

PEP Attachment 10

System or Component	Responsible Individuals	
	Primary	Backup
Dynamic Positioning	Howard Shatto	Wayne Cole
Vessel Management	Howard Shatto	Wayne Cole
FMEA • Power Distribution	Howard Shatto	Wayne Cole
Power Management (Anti-Blackout) • Sea Trials • Fire / Gas	Howard Shatto	Wayne Cole
Blowout Preventers (BOP) • Wellhead Connector • ROV Interface • Emergency Disconnect • Deadman • BOP Handling	Dick Metcalf	Dan Welch
Subsea Tree Handling	Dick Metcalf	Dan Welch
MUX Control	Dick Metcalf	Dan Welch
Drilling Equipment • Drilling Fluids Systems • Bulk Materials Systems • Cementing Unit • Drilling Instrumentation • Hoisting Equipment • Derrick	Dan Welch	John Barker
Drilling System Commissioning / Acceptance	Dan Welch	John Barker
Surface Well Control	Dan Welch	Dick Metcalf
Surface BOP Handling	Dan Welch	Dick Metcalf

Rev Dan

**VASTAR RESOURCES
KEY REPRESENTATIVES
ROLES & RESPONSIBILITIES**

PEP Attachment 10

System or Component	Primary	Backup
Well Testing	Dan Welch	Dick Metcalf
Cranes	Dan Welch	John Barker
Operational Procedures	Dan Welch	John Barker
Optimization	Dan Welch	John Barker
Drill Riser <ul style="list-style-type: none"> • Hardware • Design Analysis 	Wayne Cole	John Barker
Marine Issues / Ship Systems <ul style="list-style-type: none"> • Stability • Weight Control 	Wayne Cole	John Barker
ROV Unit	Wayne Cole	John Barker
Mooring System (Future)	Wayne Cole	John Barker
Rig Design Issues	Wayne Cole	Dan Welch
Quarterly Report	Wayne Cole	Dan Welch

Rev Draw



September 5, 2000

Mr. Don Weisinger
Vastar Resources, Inc.
15375 Memorial Drive
Houston, Texas 77079

Subject: Deepwater Horizon – Shipyard Project Team Job Descriptions

Dear Don:

Enclosed for your review is the current Organization Chart for the Ulsan project site team along with job descriptions for the following personnel:

Project Manager	Lindsay Clark
Project Administrator	Jack Daigle
Power & Controls T/L	Mal Hayward
Mechanical & Piping	John Brown
Drilling & Subsea T/L	Peter Keenan
Materialsman	Louis Cordeiro
Commissioning Coordinator	Mark Tranfield
Instrumentation & Controls Spec.	Peter Nixon
Electrical Specialist	Brian Shaw
Electrical Specialist	Jeff Thomson
Electrical Specialist	Kent Stone

The following job descriptions are not included and will be forthcoming from the Ulsan project site team:

Power Systems Spec.	Kurt Jansen
Project Engineer	David Doles
Hull Structure & Coatings T/L	Norman Howard
Marine / Safety / Accommodations /	
Outfitting / Regul. T/L	Lindsay Swindells
Naval Arch. & Wt. Ctrl.	Lee Malm

Copies will provided to you upon receipt from Ulsan. Should you have any questions, please do not hesitate to let us know.

Regards,

Russell L. Krohn, P.E.

CC: Lindsay Clark – Via: Facsimile – 011/82-52-252-2247

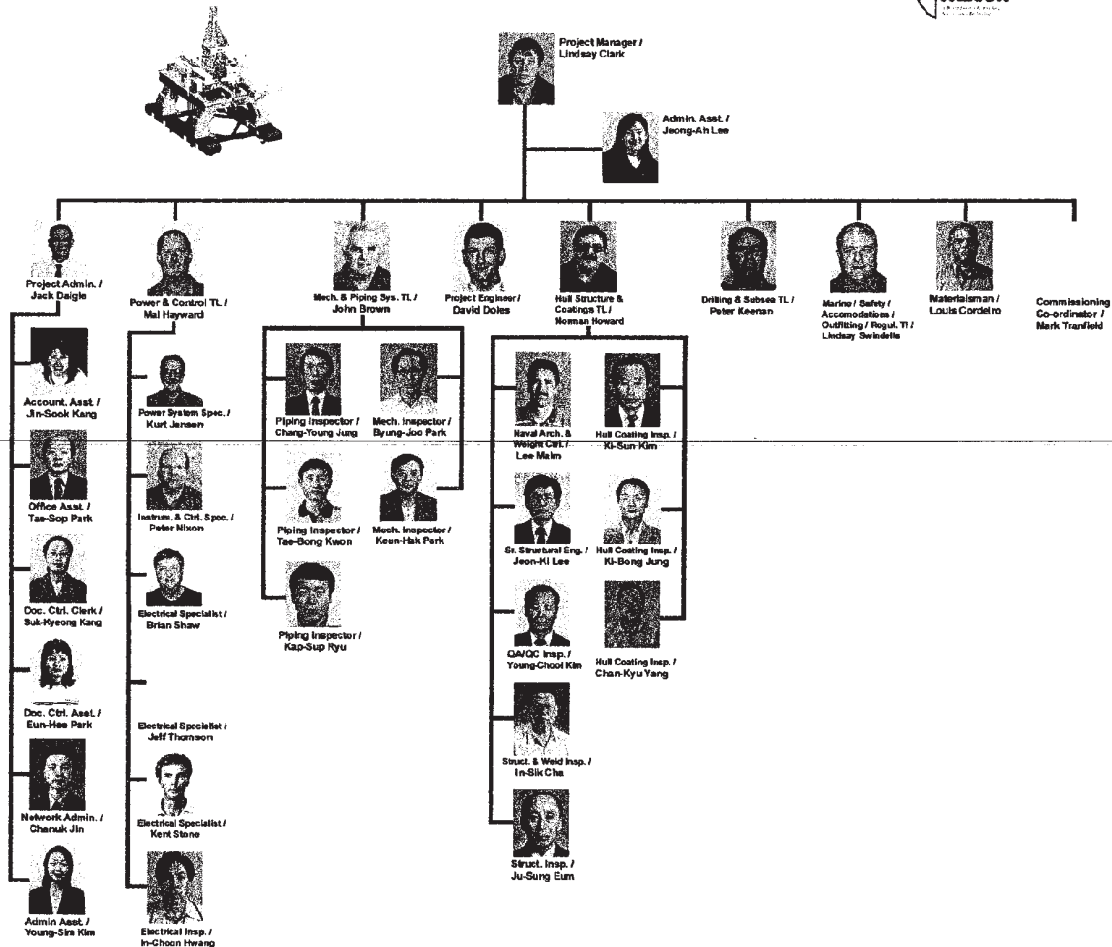
R&B Falcon Corporation

901 Threadneedle Houston, Texas 77079-2982 (281)496-5000 www.rbfalcon.com

Organization Chart

ULSAN TEAM

ORGANIZATION CHART DEEPWATER HORIZON PROJECT



**Project Manager
Lindsay Clark**

**R&B Falcon Corporation
Job Description**

Job Title:	Sr Project Manager	Grade:
Reports to:	Sr Vice President International & Deepwater	
Department:	International and Deepwater	
Location:	Ulsan Site Office, HHI Shipyard	
Date:	July/31/2000	

Basic Function:

Responsible for overall leadership and supervision of the project from engineering, procurement, expediting, construction and commissioning to final delivery of the Mobile Offshore Drilling Unit (MODU) "Deepwater Horizon".
Responsible for reporting the status of the Project to the Sr. Vice President

Responsibilities and Duties:

1. Overall responsibility for creating a positive relationship with the shipyard.
Ensures a high degree of cooperation between the site team and their shipyard counterparts to achieve the best possible project result.
 2. Takes the necessary action to insure quality, schedule and budget are maintained
 3. Responsible for the construction contract administration with the shipyard.
 4. Responsible for the site supervision team and visitor safety
 5. Monitor construction progress and keep project sponsors advised about all major activities
 6. Collects information from all site members and prepares a monthly report to project sponsors
 7. Conduct daily meetings with construction Team and Shipyard
-

Education:

College Engineering Degree in Electrical, Mechanical or Marine Engineering.

Experience:

Ten (10) years related oilfield experience with minimum of five (5) years as a Project Manager and with extensive shipyard construction experience.

Software Skills:

Proficiency at the "advanced level" in the following:
Microsoft Windows operating environment.
MS Word
MS Project 98
MS Excel

Special Requirements:

Broad disciplinary background in various areas of engineering and their application to new build Semi Submersible Drilling Rigs.

Ingenuity:

Must maintain a high degree of organization to handle a large volume and variety of ongoing shipyard projects simultaneously.
Must be self motivated and possess superior skills to identify and solve unusual problems

Decision Making:

Must be capable of decision making with minimal supervision.

**Project Administrator
Jack Daigle**

R&B Falcon Corporation
Senior Project Administrator II

Sect:
Page : 1
Date :
Rev. No : 1
Appr. By:

REPORTS TO: Project Manager

DIVISION: Deepwater Drilling

DEPARTMENT RBS8 Construction Project Office

LOCATION: Ulsan, Korea

BASIC FUNCTION:

Responsible for Administration on major Engineering/Procurement/Construction (EPC) projects. This includes accounting, budgets, contract administration, office services, personnel, project information, legal, treasury, taxes and insurance, all handled in accordance with corporate, company and project policies and procedures. Assists project management with, and possibly be directly responsible for, materials, project control and document control.

DUTIES:

AUTHORITY

- | | | |
|-----|--|--------------|
| 1. | Accounting - Responsible for financial reports, general ledger, accounts payable, accounts receivables, fixed assets, and all related financial controls and procedures. | Authority I |
| 2. | Budgeting - Responsible for operating, capital and project budgets. | Authority II |
| 3. | Contract Administration - Provide assistance in developing client agreements for major EPC projects, and administration of those agreements when finalized. Responsible for developing and administering all other project agreements including personnel services, office facilities, maintenance, etc. Coordinates contract administration activities as required with the corporate Legal department. | Authority II |
| 4. | Office Services - Responsible for office facilities, equipment, supplies, services, communications, travel, reception, etc. | Authority II |
| 5. | Personnel - Responsible for project personnel planning and staffing policies, procedures and processes including timekeeping, payroll, job descriptions, appraisal programs, organizational chart, foreign personal income taxes, safety and training, team building, etc. Coordinates personnel activities as required with the corporate Human Resources department. | Authority II |
| 6. | Project Information - Responsible for computer hardware and software, LAN, electronic mail, online documentation and forms, information sharing, etc. | Authority II |
| 7. | Legal - Acts as the liaison on all project matters of a legal nature. Responsible for project adherence to corporate Legal policies and procedures. | Authority II |
| 8. | Company taxes and registration - Coordinate with Legal and Tax to insure company taxes and registration are in order for any project office outside of Houston. | Authority II |
| 9. | Insurance - Coordinate with Legal and Risk Management to insure that project insurance matters are in order and administered in accordance with corporate Risk Management requirements and policies. | Authority II |
| 10. | Treasury - Responsible for cash forecasting, establishing, maintaining and closing of bank accounts necessary for project purposes, and liaison with Treasury on all related matters. | Authority I |
| 11. | Other responsibilities - Assume responsibility as required for project document control, materials and project control. | Authority II |

	<i>R&B Falcon Corporation</i> Senior Project Administrator II	Sect: Page : 2 Date : Rev. No : 1 Appr. By:
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QUALIFICATIONS:

DEFINITION OF AUTHORITY

Authority I To act.
Authority II To act but inform the person to whom he reports to and other interested parties.
Authority III To consult before acting.

EDUCATION:

University degree or experience in lieu of degree. CPA or other professionally recognized certification preferred.

EXPERIENCE:

Generally requires 12+ years of related experience, including 5+ years of supervisory and management experience.

SKILLS:

Broad understand of company and project discipline interrelationships and commercial issues.

	<i>R&B Falcon Corporation</i> Senior Project Administrator II	Sect: Page : 3 Date : Rev. No : 1 Appr. By:
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SPECIAL REQUIREMENTS:

Solid conceptual understanding of computer hardware and software, and how to make them an effective tool for accomplishing project requirements in all disciplines.

SUPERVISION:

May be responsible for a department or function. Hire, train, direct, appraise, discipline, coordinate and manages subordinate personnel. May be responsible for one or more disciplines, and/or one or more projects.

BUDGETS:

Budgeting - Responsible for preparing, analyzing and reporting on operating, capital and project budgets.

INGENUITY:

Acts independently or as an advisor to subordinates. Becomes actively involved as required to meet schedules and resolve problems.

DECISION MAKING:

Receives assignments in the form of objectives. With management supervision, responsible for developing scope of work to meet defined objectives in accordance with established policies and procedures. Exercises judgement using defined procedures and policies to determine appropriate action

Power & Controls T/L
Mal Hayward

POWER & CONTROLS SYSTEMS TEAM LEADER

REPORTS TO: Project Manager

DEPARTMENT: Project Site Team

GRADE:

LOCATION: Shipyard

DATE: March 26 2000

BASIC FUNCTION

Responsible for the specification, design and supervision of Power and Controls Systems for the construction of the Mobile Offshore Drilling Unit (MODU)

"Deepwater Horizon"

Responsible for reporting the status of the work to the Project Manager.

Assist with the development of the global system engineering and documentation tasks for the following:

- Power Generation and Electrical Systems
- Instrumentation and Control Systems
- Safety Management Systems
- Communication Systems

Supervise installation start-up and commissioning of all electrical, instrumentation, and communication equipment at the shipyard site.

Report the electrical equipment requirements and the status on the installation to the Project Manager.

RESPONSIBILITIES AND DUTIES

1. Supervise the development and approval of design drawings for all Power & Controls Systems
2. Supervise the installation, start-up and commissioning of all Power & Control Systems equipment.
3. Perform quality audits and inspections on material, fabrication, and installation procedures.
4. Interface with classification surveyors.
5. Report results of quality inspections, including non conformities to the Project Manager.

6. Provide input for monthly and weekly progress reports.

EDUCATION

Bachelor of Science in Electrical Engineering or equivalent work experience to include shipyard experience.

EXPERIENCE

Five years' experience working with Offshore Power and Control Systems and performing electrical engineering tasks.

SOFTWARE SKILLS:

Proficiency at the "advanced level" in the following:

- Microsoft Windows operating environment.
- MS Word
- MS Project 98
- MS Excel

SPECIAL REQUIREMENTS

Must exhibit exceptional written and oral communication skills.

SUPERVISION

Will supervise site team electrical personnel and direct third-party service personnel in installing, testing, and commissioning of the Power & Controls Systems.

INGENUITY

Must be able to develop creative solutions for the installation of new equipment on existing structures.

DECISION MAKING

Must be capable of decision making with minimal supervision.

Mechanical & Piping
John Brown

MECHANICAL AND PIPING SYSTEMS TEAM LEADER

REPORTS TO: Project Manager

DEPARTMENT: Project Site Team

GRADE:

LOCATION: Shipyard

DATE: February 20 2000

BASIC FUNCTION

Responsible for the specification, design and supervision of Mechanical & Piping Systems for the construction of the Mobile Offshore Drilling Unit (MODU) "Deepwater Horizon".

Responsible for reporting the status of the work to the Project Manager.

Assist with the development of the global system engineering and documentation tasks for the following:

Mechanical Systems
Piping Systems

Supervise installation start-up and commissioning of all Mechanical & Piping equipment and their related Systems at the shipyard site.

Report the mechanical & piping equipment requirements and the status on the installation to the Project Manager.

RESPONSIBILITIES AND DUTIES

1. Supervise the development and approval of design drawings for all Mechanical and Piping equipment and their related Systems
2. Supervise the installation, start-up and commissioning of all Mechanical & Piping equipment and their related systems.
3. Perform quality audits and inspections on material, fabrication, and installation procedures.
4. Interface with classification surveyors.
5. Report results of quality inspections, including non conformities to the Project Manager.
6. Provide input for weekly and monthly progress reports.
7. Responsible for the supervision of Piping & Mechanical Inspectors.

EDUCATION

Bachelor of Science in Mechanical Engineering or equivalent work experience to include shipyard experience.

EXPERIENCE

Five years' experience working with Offshore Mechanical and Piping Systems and performing operations and engineering tasks.

SOFTWARE SKILLS:

Proficiency at the "advanced level" in the following:

- Microsoft Windows operating environment.
- MS Word
- MS Project 98
- MS Excel

SPECIAL REQUIREMENTS

Must exhibit exceptional written and oral communication skills.

SUPERVISION

Will assist the shipyard mechanical & piping personnel and direct third-party service personnel with installing, testing, and commissioning of the Mechanical & Piping equipment and their Systems.

INGENUITY

Must be able to develop creative solutions for the installation of new equipment on existing structures.

DECISION MAKING

Must be capable of decision making with minimal supervision.

Drilling & Subsea T/L
Peter Keenan

DRILLING & SUBSEA SYSTEMS TEAM LEADER

REPORTS TO: Project Manager

DEPARTMENT: Project Site Team

GRADE:

LOCATION: Shipyard

DATE: February 20 2000

BASIC FUNCTION

Responsible for the specification, design and supervision of Drilling & Subsea Systems for the construction of the Mobile Offshore Drilling Unit (MODU) "Deepwater Horizon".

Responsible for reporting the status of the work to the Project Manager.

Assist with the development of the global system engineering and documentation tasks for the following:

- Drilling Systems
- Sub Sea Systems
- Well Control Systems
- BOP and Riser Handling Systems

Supervise installation start-up and commissioning of all Drilling and Sub Sea Equipment and their respective systems, at the shipyard site.

Report the Drilling & Sub Sea equipment requirements and the status on the installation and commissioning to the Project Manager.

RESPONSIBILITIES AND DUTIES

1. Supervise the development and approval of design drawings for all Drilling and Sub Sea Equipment and their Systems
2. Supervise the installation, start-up and commissioning of all Drilling and Sub Sea equipment and their systems.
3. Perform quality audits and inspections on material, fabrication, and installation procedures.
4. Interface with classification surveyors.
5. Report results of quality inspections, including non conformities to the Project Manager.
6. Provide input for weekly and monthly progress reports.

EDUCATION

Bachelor of Science in Mechanical Engineering or equivalent work experience to include shipyard experience.

EXPERIENCE

Five years' experience working with Offshore Drilling and Sub Sea Systems and performing Drilling and Sub Sea operations and engineering tasks.

SOFTWARE SKILLS:

Proficiency at the "advanced level" in the following:

- Microsoft Windows operating environment.
- MS Word
- MS Project 98
- MS Excel

SPECIAL REQUIREMENTS

Must exhibit exceptional written and oral communication skills.

SUPERVISION

Will assist shipyard personnel and direct third-party service personnel in installing, testing, and commissioning of the Drilling and Sub Sea Equipment and their Systems.


INGENUITY

Must be able to develop creative solutions for the installation of new equipment on existing structures.

DECISION MAKING

Must be capable of decision making with minimal supervision.

**Materialsman
Louis Corodeiro**

	R&B Falcon Corporation Area Materialsman	Sect: Page : 1/3 Date : 01-19-00 Rev. No : 1 Appr. By:
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REPORTS TO: Area Administrator

WORKS WITH:

HAS REPORTING TO:

BASIC FUNCTION:

Overall responsibility for all Purchasing and Inventory Control procedures related to operational support of one or more vessels within the area. Responsible for seeing that all Company purchasing and warehousing procedures and requirements are achieved through the solicitation of competitive bids and responsible management of the warehousing asset on board the vessel (s) under his responsibility. Responsible for seeing that all applicable codes and specifications are adhered to when soliciting bids and receipt of equipment. Responsible for ensuring that all orders are tracked and expedited to the vessel efficiently and cost effectively. Works with the Storemen on board the vessel to insure inventory levels maintained are sufficient for operational requirements. Works with and reports to the Area Administrator and supplies all of the purchasing / warehousing reporting data input required into the monthly Area General Report.

DUTIES:


AUTHORITY

Purchasing (Goods & Services):

- | | |
|---|----|
| 1. Responsible for ensuring that all Company purchasing practices and warehousing procedures are followed on each vessel under his responsibility. | I |
| 2. Review material requisitions received from the rig to insure that historical usage and maximum/minimum order numbers are in line with delivery times from point of purchase. | I |
| 3. Reviews Material Requisitions to insure that they are complete with all of the necessary information required to solicit competitive bids. | I |
| 4. Responsible for seeing quotations received are analyzed for content and comparative value and awarding of Purchase Orders to the successful bidder. | II |
| 5. Constantly review and assess economics of local purchase against foreign purchase with consideration being given to quality, certification, cost and delivery times. | II |
| 6. Seek solutions to purchasing/delivery related problems through proactive involvement with Houston Materials Department & Rig/Vessel Managers. | II |
| 7. Provide direction to Rig Manager and or Production Engineer as and when required relative to the purchase of replacement parts. | II |

Tracking & Expediting Purchase Orders:

- | | |
|---|----|
| 1. Provide feedback to Rig Managers and Storemen as to the status of routine orders for restocking of vessel warehouse. | II |
| 2. Provide feedback to Rig Managers and Storemen as to the status of "critical" spares and all AirFreight or Urgent AirFreight orders. | II |
| 3. Liaise between Houston purchasing, vendor and forwarding agents to insure that all documentation required for importation is correctly and adequately completed. | I |
| 4. Liaise between area office and local expediting office to insure that equipment imported into the | I |

	R&B Falcon Corporation Area Materialsman	Sect: Page : 2/3 Date : 01-19-00 Rev. No : 1 Appr. By:
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country is liberated cost effectively and in a timely manner.

5. Responsible for seeing that all logistics are in place for the trans-shipment of parts and equipment to the area/rig once the importation process has been completed. I
6. Generation of Company required Discrepancy/Non Conformity Reports as and when deficiencies are found to exist. I
7. Liaise between shipping & receiving personnel on the base and the client's bonded storage facility in order to assure that all equipment received transits the bonded area to the rig / vessel as quickly and cost effectively as possible. I

Warehousing & Inventory Control:

1. Assist and work with the respective Rig Manager/Production Engineer, Vessel Captain/O.I.M./Assistant Superintendent and Storemen to effectively administrate warehouse inventory control. I
2. Insures that the yearly warehousing inventory "complete physical" and "cyclic physical" counts are taken, are accurate and timely. I
3. Performs warehousing inventory control spot checks during quarterly visits to the vessel. I
4. Provides the necessary information to the Area Administrator in order that the "in transit" reports can be reconciled in a timely manner. I
5. Insures that the weekly and monthly warehousing summary reports are generated from the vessel in a timely manner and provided to the Area Administrator. I
6. Monitors the output from the "on board" weekly ordering review meetings and transmits same to the Rig Manager/Production Engineer. I
7. Assists the Rig Manager/Production Engineer with the preparation of the yearly operational budget request. I

Health Safety & Environment:

1. Be aware of new environmental trends developing within the industry as related to chemical based products supplied to the vessels and advise management accordingly. I
2. Assist and support Area Manager as defined in the Area Emergency Response Plan in the role of "Back-Up Marine Coordinator". I
3. Ensure compliance with all local requirements for disposal of refuse generated by the vessel as well as the operations base. II

Other Responsibilities:

1. Responsible for all temporary importation procedures for the vessels as well as the related spares. II
2. Overall responsibility for the filing maintenance of all purchasing, importation/exportation records for the vessels. I
3. Research all new equipment supply initiatives to improve vessel performance. I
4. Report to management on all new industry business development. I

	R&B Falcon Corporation Area Materialsman	Sect: Page : 3/3 Date : 01-19-00 Rev. No : 1 Appr. By:
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5. Actively promote the R&B Falcon profile within the area of operations. I
6. Stay abreast of all changes in local importation laws and regulations and relay of same to Area/Rig Manager/Production Superintendent in a timely manner. II

QUALIFICATIONS:

DEFINITION OF AUTHORITY

Authority I To act.
Authority II To act but inform the person to whom he reports to and other interested parties.
Authority III To consult before acting.

EDUCATION: High School Education.

EXPERIENCE: Two years as Area Materialsman with R&B Falcon or peer competitor or 3 to 5 years previous experience as a buyer for a major oilfield drilling contractor, or 3 to 5 years previous experience as an onboard Storekeeper. Exposure to and experience in some level of accounting is an asset but not a requirement. Personal computer experience. Knowledge of spreadsheets, word processing, data base and communications software needed.

SKILLS: Ability to use new generation computer and job specific associated software.

SPECIAL REQUIREMENTS: Mobile, versatile, flexible, and very high level of personal integrity. Has a sound knowledge and understanding of the R&B Falcon Drilling operations and its departmental interrelations. Good communication (written and verbal) skills. Good organizational and analytical skills. Able to plan, execute, direct, and delegate with subordinate staff. Office based work with visits to the vessel/rig as and when required.

SUPERVISION: Select, hire, train, direct, appraise, discipline, coordinate and manage.

Directly Supervised	6 to 8
Indirectly Supervised	2
Total	8 to 10

INGENUITY: Application of Purchasing, Transportation, Importation, Legal, and Custom's procedures and policies in a foreign environment. Personal adaptation to any foreign environment.

**Commissioning Coordinator
Mark Tranfield**

R&B Falcon Corporation
Job Description

Job Title: Commissioning Coordinator
Reports to: Project Manager
Department: Project Site Team
Location: Ulsan Site Office, HHI Shipyard
Date: June/14/2000

Grade:

Basic Function:

To plan and perform Commissioning in accordance with the Contract, the project procedures and design, rules and regulations, budget and plan, and in the safest and most efficient manner for the mobile offshore drilling unit (MODU) "Deepwater Horizon". Responsible for reporting the status of the work to the Project Manager

Responsibilities and Duties:

1. Coordinate the overall shipyard site team commissioning effort, procedures through execution and sign off.
2. Review all of the procedures and documentation relating to the testing and commissioning of equipment.
3. Review, expedite and report on Commissioning Schedule
4. Attend daily commissioning meeting for schedule review and application for inspection
5. Track and report "Commissioning Status" in spread sheet form
6. Track and reports results of deficiencies and NCR
7. Track and report record of Sign Off Items
8. Provides input for monthly and weekly progress reports.

Education:

Minimum, College Engineering Degree with extensive practical experience.

Experience:

~~Minimum, 10 years experience as a senior engineer with management/supervisor experience and fabrication and commissioning of Offshore Equipment including shipyard construction experience.~~

Software Skills:

Proficiency at the "advanced level" in the following:

Microsoft Windows operating environment.

MS Word

MS Project 98

MS Excel

Special Requirements:

Must exhibit exceptional written and oral communication skills.

Knowledge and experience with Drilling and Marine Systems

Knowledge of Class and regulatory bodies rules and regulations

Health, Safety and Environmental orientated

Teamwork orientated

Ingenuity:

Must be able to develop creative solutions to for installation, startup and commissioning of new equipment for a new construction vessel

Decision Making:

Must be capable of decision making with minimal supervision.

**Instrumentation & Controls Spec.
Peter Nixon**

R&B Falcon Corporation
Job Description

Job Title: Instrumentation & Controls Specialist (Drilling Systems)
Reports to: Power and Controls System Team Leader
Department: Project Site Team
Location: Shipyard
Date: March/27/2000

Grade:

Basic Function:

Responsible for the specification, design and supervision of Instrumentation and Controls related areas of the construction of the Mobile Offshore Drilling Unit "Deepwater Horizon". Responsible for reporting the status of the work to the Power and Controls System Team Leader

Responsibilities and Duties:

1. Develop and recommend all of the procedures and documentation relating to the arrangement, material selection, installation procedures and testing of the instrumentation and controls related equipment for Drilling Instrumentation.
2. Oversee the development and approval of design drawings relating to the Drilling Instrumentation and controls equipment and structure installation and commissioning.
3. Coordinates quality audits and inspections on material, fabrication, and installation.
4. Interfaces with classification surveyors.
5. Reports results of quality inspections, including non-conformities.
6. Provides input for monthly and weekly progress reports.

Education:

Bachelor of Science in Electrical Engineering, with extensive practical experience.

Experience:

Five to ten years as a Electrical Engineer, with shipyard construction experience.

Software Skills:

Proficiency at the "advanced level" in the following:

Microsoft Windows operating environment.

MS Word

MS Project 98

MS Excel

Special Requirements:

Must exhibit exceptional written and oral communication skills.

Ingenuity:

Must be able to develop creative solutions, for the installation of new equipment on existing structures.

Decision Making:

Must be capable of decision making with minimal supervision.

R&B Falcon Corporation
Job Description

Job Title: Instrumentation & Controls Specialist (Marine, Safety & Communications Systems) **Grade:**
Reports to: Power and Controls System Team Leader
Department: Project Site Team
Location: Shipyard
Date: March/27/2000

Basic Function:

Responsible for the specification, design and supervision of Instrumentation and Controls related areas of the construction of the Mobile Offshore Drilling Unit "Deepwater Horizon". Responsible for reporting the status of the work to the Power and Controls System Team Leader

Responsibilities and Duties:

1. Develop and recommend all of the procedures and documentation relating to the arrangement, material selection, installation procedures and testing of the instrumentation and controls related equipment for Marine, Safety & Communications Systems.
 2. Oversee the development and approval of design drawings relating to the instrumentation and controls equipment and structure installation and commissioning.
 3. Coordinates quality audits and inspections on material, fabrication, and installation.
 4. Interfaces with classification surveyors.
 5. Reports results of quality inspections, including non-conformities.
 6. Provides input for monthly and weekly progress reports.
-

Education:

Bachelor of Science in Electrical Engineering, with extensive practical experience.

Experience:

Five to ten years as a Electrical Engineer, with shipyard construction experience.

Software Skills:

Proficiency at the "advanced level" in the following:
Microsoft Windows operating environment.
MS Word
MS Project 98
MS Excel

Special Requirements:

Must exhibit exceptional written and oral communication skills.

Ingenuity:

Must be able to develop creative solutions, for the installation of new equipment on existing structures.

Decision Making:

Must be capable of decision making with minimal supervision.

Electrical Specialists
Brian Shaw
Jeff Thomson
Kent Stone

R&B Falcon Drilling Co

Job Description

Job Title: Electrical Specialist

Reports to: Power and Controls System Team Leader

Department: Project Site Team

Objective

"Deepwater Horizon" will be delivered by HHI, February/01/2001.
To accomplish this goal, 80% of the cables must be pulled and terminated before Superlift, which is currently scheduled for July/15/00. To help achieve this milestone, you will work closely with HHI Project Management Team (PMT) Mr. D. H. Kim and Production Team headed by Mr. I. S. Jung.

Responsibilities and Duties

1. Cable Installation

- Review and monitor the cable installation schedule.
- Ensure cable trays, flat bar strapping etc are installed correctly and all welded areas are painted prior to cable installation
- Ensure Shipyard adheres to the schedule.
- Assist the shipyard to identify potential problem areas and have them rectified before it's too late.
- Ensure shipyard follows cable routing drawings to the letter. Cable segregation and separation for DP-3 class is critical.
- Ensure the shipyard follows the "Standard of Cable Installation" document.

2. Cable Terminations

- Review and monitor the cable termination schedule.
- **Monitor the following items:**
 - Gland Installation
 - Pin and Lug installation
 - Earthing
 - Cable tag numbering
 - Cable core numbering
 - Spare Cores -terminations

3. Line Testing

- Insulation testing
- Hi-Pot testing
- Continuity / Loop testing
- Color Coding of Phases

4. Cable Strapping

- Monitor all cable strapping
 - Monitor all MCT Packing
-



September 14, 2000

Mr. Don Weisinger
Vastar Resources, Inc.
15375 Memorial Drive
Houston, Texas 77079

Subject: Deepwater Horizon – Shipyard Project Team Job Descriptions

Dear Don:

To date we have forwarded the following job descriptions for your information and files:

Project Manager	Lindsay Clark
Project Administrator	Jack Daigle
Power & Controls T/L	Mal Hayward
Mechanical & Piping	John Brown
Drilling & Subsea T/L	Peter Keenan
Materialsman	Louis Cordeiro
Commissioning Coordinator	Mark Tranfield
Instrumentation & Controls Spec.	Peter Nixon
Electrical Specialist	Brian Shaw
Electrical Specialist	Jeff Thomson
Electrical Specialist	Kent Stone
Marine, Safety & Accommodations T/L	Lindsay Swindells
Naval Architect & Weight Control	Lee Malm
Hull Structure & Coatings T/L	Norman Howard
Project Engineer	David Doles

Enclosed please find an updated Organization Chart for the Deepwater Horizon project team in Ulsan. Also enclosed, to be included with the above job descriptions, is the following:

Electrical Specialist	Kurt Jansen
-----------------------	-------------

Mr. Don Weisinger
September 14, 2000
Page Two

The revised Organization Chart and job description should clear the issue of project-site job descriptions.

Should you have any questions, please do not hesitate to let us know.

Regards,

A handwritten signature in black ink, appearing to read 'Russell L. Krohn', with a long horizontal stroke extending to the right.

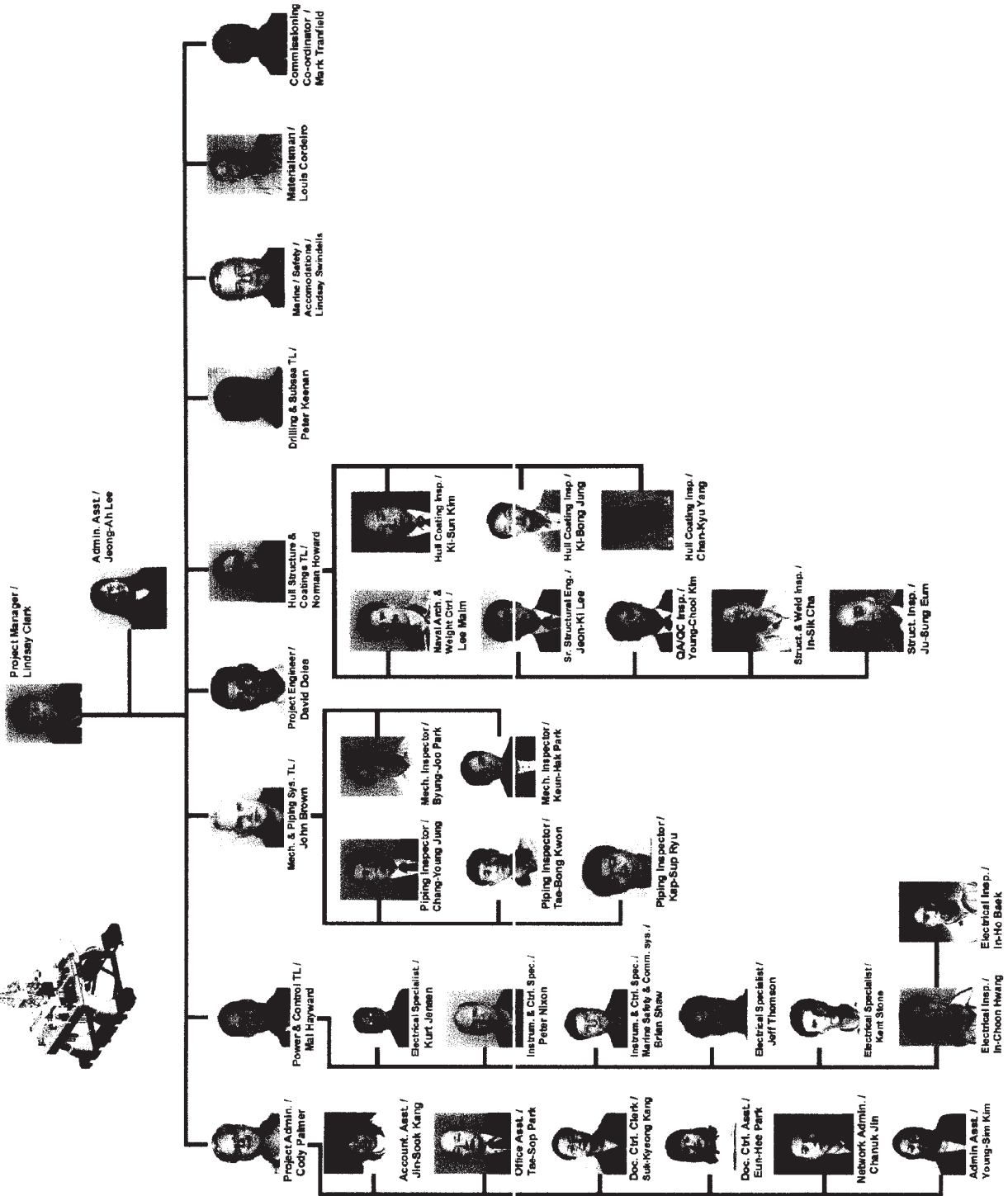
Russell L. Krohn, P.E.

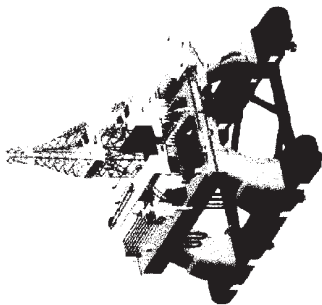
CC: Lindsay Clark – via: Facsimile – 011/82-52-252-2247



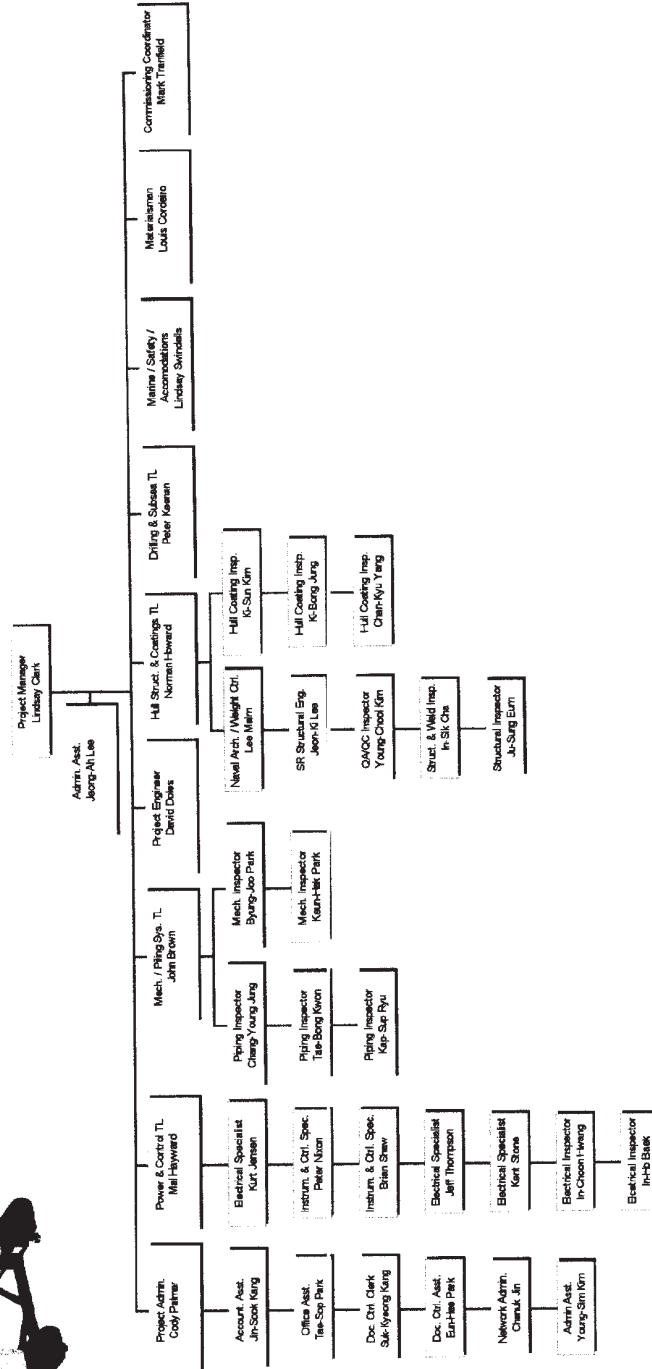
Organization Chart

ORGANIZATION CHART DEEPWATER HORIZON PROJECT





ORGANIZATION CHART DEEPWATER HORIZON PROJECT



**Electrical Specialist
Kurt Jansen**

**R&B Falcon Corporation
Job Description**

Job Title: Electrical Specialist
Reports to: Power and Controls System Team Leader
Department: Project Site Team
Location: Shipyard
Date: Sept/11/2000

Grade: 5

Basic Function:

Responsible for the supervision of Electrical and HVAC related equipment in the construction of the mobile offshore drilling unit (MODU) "Deepwater Horizon". Responsible for reporting the status of the work to the Power and Controls System Team Leader

Responsibilities and Duties:

- 1 Develop all procedures and documentation relating to the arrangement, material selection, installation, and testing and commissioning of all general electrical and HVAC equipment.
- 2 Oversee the development and approval of design drawings relating to all electrical and HVAC equipment to be installed on the vessel.
- 3 Liaise with equipment vendors as required to resolve issues when they occur.
- 4 Perform inspections on materials and equipment prior to and after installation. Generate Non Conformance Reports where necessary.
- 5 Interface with classification surveyors.
- 6 Provide input for weekly and monthly progress reports.

Education:

Bachelor of Science in Electrical Engineering, with extensive practical experience.

Experience:

Five to ten years as a Electrical Engineer, with shipyard construction experience.

Software Skills:

Proficiency at the "advanced level" in the following:

Microsoft Windows operating environment.

MS Word

MS Project 98

MS Excel

Special Requirements:

Must exhibit exceptional written and oral communication skills.

Ingenuity:

Must be able to develop creative solutions, for the refurbishment of an existing structure.

Decision Making:

Must be capable of decision making with minimal supervision.

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EXHIBIT A

DAYRATES

RATES PER 24 HOUR DAY

	<u>Three (3) Year Option</u>	<u>Five (5) Year Option</u>
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

[Handwritten signature]
d-L. Daw

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R & B FALCON DRILLING 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.

VASTAR RESOURCES INC
Deepwater Horizon Contract Amendment - Additional Personnel
TSF File #01-063

Page 2
June 26, 2001

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.

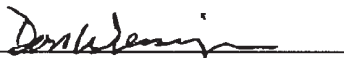


Mike Roth

AGREED AND ACCEPTED
THIS 26 DAY OF July, 2001

VASTAR RESOURCES INC.

SIGNED



PRINTED

DON WEISINGER

TITLE

DRILLING TEAM LEADER

Due to the sensitivity of the data contained in this Document, access and use is restricted to BP authorized personnel only. All data shall be treated as **Confidential**. Any unauthorized access or use of the data extracted from the system may result in Company disciplinary action or legal proceeding.



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

November 5, 2001

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

Subject: Late Delivery Charge and Change Order Summary

Dear Mr. Weisinger,

Reference is made to that certain **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 ("Contract"). Further reference is made to Article 1.2 – Commencement Date, Article 5 – Drilling Unit Modifications and Exhibit H – Project Execution Plan ("Execution Plan").

In accordance to Article 1.2 – Commencement Date states that R&B will be charged \$5,000 for each day the **Deepwater Horizon** was late arriving in the Gulf of Mexico after thirty (30) months from the Effective Date ("Late Delivery Charge"). We have calculated the number of days that the Drilling Unit was late at eighty-nine (89) days based on the Effective Date of December 9, 1998 and the August 7, 2001 arrival of the Drilling Unit in the Gulf of Mexico (reference in the attached e-mail dated August 7, 2001 from Lindsay Clark, Project Manager of the **Deepwater Horizon**). It is understood and agreed that R&B will be charged the 89 days at \$5,000 to a total of four hundred forty five thousand dollars (\$445,000) for the Late Delivery Charge.

Attached to this letter is a copy of the BP approved spreadsheet titled **Deepwater Horizon Contract Change Summary** ("Contract Change Summary"), which includes thirty-seven (37) Change Orders of which three (3) (Nos. 4, 5 and 31) were deleted. Notwithstanding that Change Order numbers 001 – 037 reflect an aggregate of actual costs totaling \$2,662,264, the parties agree that only the actual costs of the Change Orders as detailed below (the "BP Change Orders") shall be borne by BP, and further agree that BP shall have no liability or responsibility whatsoever for any of the costs attendant to the remainder of the Change Orders set forth on the Contract Change Summary. It is understood and agreed that the cost of the BP Change Orders total one million four hundred seventy one thousand three hundred forty one dollars (\$1,471,341) and that such costs shall be reimbursed to R&B by BP via the dayrate increase mechanism referred in Section 5.6.3.2.2 (Approval of Operator Changes) of the Execution Plan. A summary of the agreed to BP Change Orders is as follows:

CONTRACT CHANGE SUMMARY		
Change Order No.	Description	Cost
1	Initial Contract Equipment Trade Out on 12/04/98	\$ 272,188
2	Added High Rate Mixer (OPE)	3,250
14	Added High Rate Mixer	62,485
18	Second Level Indicating System for Mud Pits (10 each)	24,233
20	Additional Redundancy for the DP References Sources	66,061
21	Insert Vibration Pad under Cement Unit Skid	10,867
24	DGPS System Upgrade (Hardware Cost OFE)	92,686
25	Modifications made to Drilling Instrumentation System	101,337
27	Cameron Well Head Connector	645,148
28	Structural Modifications required to accommodate test stump & WH Connector	38,910
32	ROV Mounting Pad Rearrangement	9,657

PHONE: 281-647-8518

FAX: 281-647-8754

EMAIL: mroth@deepwater.com

CONTRACT CHANGE SUMMARY		
Change Order No.	Description	Cost
33	ROV Mounting Pad Rearrangement	10,270
34	Rearrangement of Well Logging Unit and	102,529
35	Added CCTV Monitor & Keyboard on Cement Unit	19,720
37	DMI - Custom Thruster DP Analysis	12,000
TOTAL:		\$ 1,471,341
Day Rate Change Based on \$850 per \$1,000,000 of Authorized Cost:		\$ 1,251
(As per Section 5.6.3.2.2 of the Execution Plan)		

Accordingly, effective upon the Contract Commencement Date the Dayrate will increase by the above one thousand two hundred fifty one dollars (\$1,251) per day for the Change Orders. Effective on the next invoice billing cycle for the month ending JUNE, BP will receive a separate credit note for the Late Delivery Charge of \$445,000.

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

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 R&B's Park Ten Office 281-647-8500.

Sincerely,

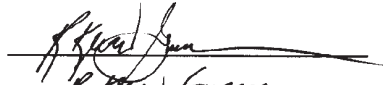


Mike Roth
On Behalf of R & B Falcon Drilling Co.

AGREED AND ACCEPTED
THIS 10th DAY OF JUNE, 2002

BP AMERICA PRODUCTION COMPANY

SIGNED



PRINTED

R. Kevin Guene

TITLE

TL-SCM

Phone Number: 281-647-8518

PHONE: 281-647-8518

FAX: 281-647-8723

EMAIL: mroth@deepwater.com



Due to the sensitivity of the data contained in this Document, access and use is restricted to BP authorized personnel only. All data shall be treated as **Confidential**. Any unauthorized access or use of the data extracted from the system may result in Company disciplinary action or legal proceeding.



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

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	<u>(861)</u>
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.

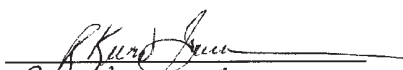
Sincerely,



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 
PRINTED R. KEVIN GUERRE
TITLE TL- SCM

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PHONE: 281-675-8848

FAX: 281-647-8754

EMAIL: tbonno@deepwater.com

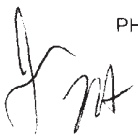


EXHIBIT F-1a

CREW COMPLEMENT

<u>Drill Crew</u>	<u>Total</u>	<u>On Board</u>	
Drilling Rig Supt/OIM	2	1	
Toolpusher	4	2	
Driller	4	2	
Asst. Driller	8	4	
Pumphand	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	
Materialman Materials Coordinator	4	2	
Captain Master/OW	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	
2 nd Asst. Engineer	4	2	
Motorhand	4	2	
Boatwain Bosun	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.

BASIS FOR COST ESCALATIONS

DEEPWATER HORIZON

As of September 1, 2001

	Per Baseline Costs Plus		2001
	July 24, 2001 Letter	Sept. 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

DEEPWATER HORIZON
Adjusted Base Labor as of September 1, 2001

Gulf of Mexico Crew Complement				A	B	C	D
JOB CODE	No. of Personnel		JOB CLASSIFICATION	GOM Base Labor w/Burden		GOM Overtime Rates	
	On Board	Assigned To Rig		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	930.33	855.23	Salaried	
1276	2	4	Toolpusher	761.90	1,373.80	Salaried	
1295	2	4	Driller	650.37	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	408.32	867.65	362.40	30.20
1296	10	20	Floorhand	395.57	3,205.71	348.65	28.89
1297	10	20	Roustabout	353.37	2,789.67	297.20	24.77
799	1	2	Welder	475.32	400.62	441.80	36.82
1289	2	4	Crane Operator	493.35	836.70	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	596.57	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	1	2	Deck Pusher	511.80	437.80	486.00	40.50
1298	1	2	Bosun	457.95	382.95	420.79	35.07
1300	3	6	Able Bodied Seaman	411.70	1,016.11	368.20	30.68
1608	1	2	Rig & Safety Training Technician*	461.78	391.78	431.29	35.94
1677	1	2	Rig Medic/Clerk	341.23	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.

Bureau of Labor Statistics Data

Bureau of Labor Statistics
U.S. Department of Labor



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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)								

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

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Washington, DC 20212-0001

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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
From: James Mitchell, Director of Risk Management
Subject: Estimated Annual Premium – Deepwater Horizon

Date: December 6, 2001

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)	\$656,439
-------------------------------------	-----------

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	9/1/01				
	Baselines	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	
	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 thereafter.

Due to the sensitivity of the data contained in this Document, access and use is restricted to BP authorized personnel only. All data shall be treated as **Confidential**. Any unauthorized access or use of the data extracted from the system may result in Company disciplinary action or legal proceeding.



TERRY BONNO
SR. MARKETING REPRESENTATIVE

R & B FALCON DRILLING CO.

311 BROADFIELD BLVD., SUITE 400

HOUSTON, TEXAS 77084

January 16, 2002

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

Attn: Mr. Don Weisinger

**Reference: Deepwater Horizon Contract – Riser Removal, Transportation, & Storage
TSF-5121-2002-001**

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")**, predecessor in interest to BP America Production Company ("BP"), as amended.

The following is to document the agreement for the drilling riser removal, transportation, storage and associated costs involved with the operation.

The terms and conditions of this include:

1. Riser in excess of 4,000' (footage required onboard the drilling unit for the next two operations) shall be offloaded from the Deepwater Horizon to BP provided supply vessel;
2. BP shall be responsible and remain liable for the riser while in BP's care, custody, and control during transportation from the Deepwater Horizon to the Amelia, Louisiana shore base and during the return trip from Amelia, Louisiana shore base to the Deepwater Horizon;
3. R&B will arrange for the riser to be offloaded onto a smaller supply vessel, approved in advance by BP, that will transport the riser to a storage facility in Amelia, Louisiana. BP will be invoiced for all costs of handling and transportation from Fourchon to Amelia;
4. BP will be responsible for the rental cost of the storage facility in Amelia, Louisiana;
5. R&B will be responsible for all maintenance and repair, after the riser has arrived at the storage facility and shall be responsible and remain liable for the riser while at the storage facility;
6. If space becomes available at the R&B yard, during the duration of the storage of the riser, R&B agrees to move the riser to the R&B yard at R&B's expense and risk of loss, and BP will be released from further financial obligations for rental of storage.
7. BP shall be responsible for returning the riser to the Deepwater Horizon including all handling and transportation charges associated with the movement of the riser at such time that it is returned to the drilling unit.

PHONE: 832-587-8848

FAX: 832-587-8754

EMAIL: tbonno@houston.deepwater.com

Except as specifically provided herein, all other 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.

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.

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

Sincerely,

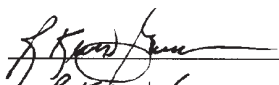


Terry Bonno
R & B Falcon Drilling Co.

/ks

AGREED AND ACCEPTED
THIS 10th DAY OF June, 2002

BP AMERICA PRODUCTION COMPANY

SIGNED 
PRINTED Kevin Guerra
TITLE TL-Scm



Hou-01-Amended-For-Removal-FA*

PHONE: 832-587-8848

FAX: 832-587-8754

EMAIL: tbonno@houston.deepwater.com

Due to the sensitivity of the data contained in this Document, access and use is restricted to BP authorized personnel only. All data shall be treated as **Confidential**. Any unauthorized access or use of the data extracted from the system may result in Company disciplinary action or legal proceeding.



JOHN KEETON
RIG MANAGER

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

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.

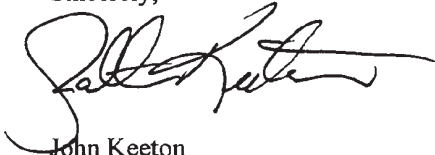
PHONE: 832-587-8533

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,

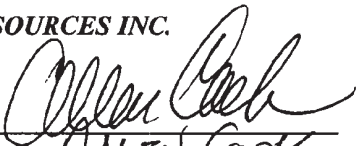


John Keeton
R & B Falcon Drilling Co.

/ks

AGREED AND ACCEPTED THIS 24 DAY OF April, 2002

VASTAR RESOURCES INC.

SIGNED 
PRINTED Allen Cook
TITLE MD War Deling TL

Due to the sensitivity of the data contained in this Document, access and use is restricted to BP authorized personnel only. All data shall be treated as **Confidential**. Any unauthorized access or use of the data extracted from the system may result in Company disciplinary action or legal proceeding.



R & B FALCON DRILLING 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

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,



Terry Bonno
R & B Falcon Drilling Co.

/ks

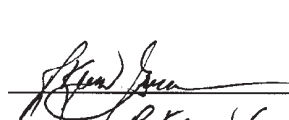
AGREED AND ACCEPTED THIS 10th DAY OF June, 2002

BP AMERICA PRODUCTION COMPANY

SIGNED

PRINTED

TITLE


KEVIN C. MOORE
TL-SEM

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R & B FALCON DRILLING CO.
1311 BROADFIELD BLVD., SUITE 400
HOUSTON, TEXAS 77064

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,	2
API 16A, ABS and DNV Certification	
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

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,




Terry Bonno
R & B Falcon Drilling Co.

/ks

AGREED AND ACCEPTED THIS 20th DAY OF JUNE, 2002

BP AMERICA PRODUCTION COMPANY


SIGNED _____
PRINTED JERRY R. RHOADS
TITLE CONTRACTS ANALYST

Due to the sensitivity of the data contained in this Document, access and use is restricted to BP authorized personnel only. All data shall be treated as **Confidential**. Any unauthorized access or use of the data extracted from the system may result in Company disciplinary action or legal proceeding.



R & B FALCON DRILLING 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 6074344 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,

Christopher S. Young
R & B Falcon Drilling Co.

PHONE: 832-587-8506

FAX: 832-587-8754

EMAIL: cyoung@houston.deepwater.com

/ks

AGREED AND ACCEPTED THIS 16th DAY OF September, 2002

BP AMERICA PRODUCTION COMPANY

SIGNED 

PRINTED JERRY R RHODS

TITLE CONTRACTS SPECIALIST

Due to the sensitivity of the data contained in this Document, access and use is restricted to BP authorized personnel only. All data shall be treated as **Confidential**. Any unauthorized access or use of the data extracted from the system may result in Company disciplinary action or legal proceeding.



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

CHRISTOPHER S. YOUNG
SR. MARKETING REPRESENTATIVE

October 14, 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 and Vastar Resources, Inc. predecessor in interest to BP America Production Company, as amended for RBS-8D (now known as the Deepwater Horizon)

Dear Randy:

This letter provides notice to BP America Production Company as successor-in-interest to Vastar Resources, Inc. that R&B Falcon Drilling Co. will be assigning the above-mentioned contract to its affiliate Transocean Holdings Inc. at the stroke of midnight on October 31, 2002.

Sincerely,

A handwritten signature in black ink, appearing to be 'C. Young', with a long horizontal flourish extending to the right.

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

Due to the sensitivity of the data contained in this Document, access and use is restricted to BP authorized personnel only. All data shall be treated as **Confidential**. Any unauthorized access or use of the data extracted from the system may result in Company disciplinary action or legal proceeding.



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:

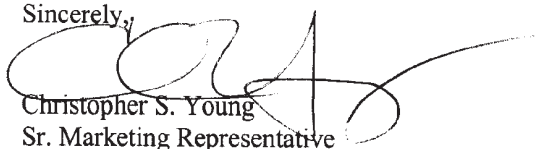
This letter will confirm our agreement to add additional Transocean personnel to the crew complement of the **Deepwater Horizon**. Upon execution of this Letter Agreement by Company, Contractor agrees to provide two (2) Offshore Safety Advisors (OSA) on the **Deepwater Horizon** in addition to those specified to be 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,


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

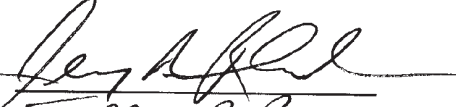
AGREED AND ACCEPTED THIS 27th DAY OF JANUARY, 2003

BP AMERICA PRODUCTION COMPANY

SIGNED

PRINTED

TITLE



TERRY R RHOADS

CONTRACTS SPECIALIST



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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**)

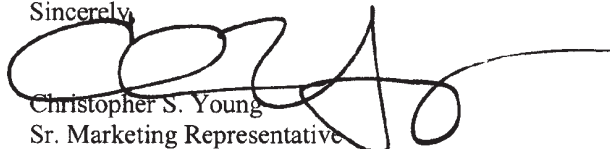
**Subject: Letter of Agreement for Recycling program – Deepwater Horizon
CONTRACTOR-5121-2002-011**

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.

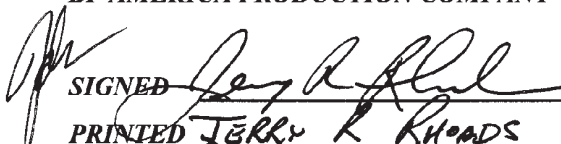
Sincerely,



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 Jerry R. Rhoads
PRINTED JERRY R. RHOADS
TITLE CONTRACTS SPECIALIST

PHONE: (832) 587-8506

FAX: (832) 587-8754

EMAIL: cyoung@houston.deepwater.com

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

RecycleAgreement_Amended.IRR1

PHONE: (832) 587-8506

FAX: (832) 587-8754

EMAIL: cyoung@houston.deepwater.com

Model 4000 Trash Compactor Bags	\$ 10.20/each
Processing Fee (per bag of recycled material)	\$ 1.85/bag

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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

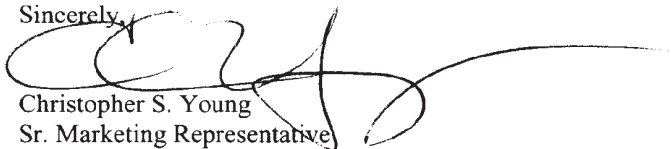
EMAIL: cyoung@houston.deepwater.com

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,


Christopher S. Young
Sr. Marketing Representative

AGREED AND ACCEPTED THIS 3RD DAY OF FEBRUARY, 2005
BP AMERICA PRODUCTION COMPANY

SIGNED 

PRINTED TERRY R. RHOADS

TITLE CONTRACTS SPECIALIST


Houston Deepwater Rental Receivables

PHONE: (832) 587-8506

FAX: (832) 587-8754

EMAIL: cyoung@houston.deepwater.com

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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,



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 J. W. Farnsworth
PRINTED J. W. Farnsworth
TITLE VP Exploration

AK

**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				0.36% *		
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 Addl. 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		JOB CLASSIFICATION	GOM Base Labor		GOM Overtime Rates	
On Board	Assigned To Rig		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	1,669.57	441.18	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	487.87	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	-	-	-	-	-
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 excluding Training, Transportation and Catering costs.

The figures in column "C" are the daily cost of overtime excluding Training, Transportation and Catering costs (assuming a daily schedule of 12 hours)

The figures in column "D" are the hourly cost of overtime excluding Training, Transportation and Catering costs.



U.S. Department of Labor

Bureau of Labor Statistics

Bureau of Labor Statistics Data

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Options:

From: 1992 To: 2002 [GO](#)

☐ include graphs **NEW!**

[More Formatting Options](#) ➔

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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SCHEDULE C**CATERING SERVICE FOR THE DEEPWATER HORIZON**

The catering service manday rates for this Drilling Unit shall be based on the following information:

Average Total POB = 120

Average Casual Meals Per Day = 2

Catering Crew Complement = 14

By Position:

		Population Range(Avg)	Total Manday Charge
Executive Steward	<u>1</u>	100 - 114	<u>\$34.69</u>
Day Cook	<u>1</u>	115 - 129	<u>\$31.95</u>
Night Cook	<u>1</u>	130 +	<u>\$30.75</u>
Baker	<u>1</u>		
Prep. Cook	<u>1</u>		
Senior Orderly	<u>2</u>		
Galley/Utility Hand	<u>7</u>		

Please provide a \$/per man per day quote on providing the above the enhanced catering menu described in Exhibit E that would be additive to the above pricing. The enhanced menus items would be in addition to the prescribed catering services and meal requirements in Schedule A-1 and A-2.

\$ +10% Per Man Per Day - Enhanced Catering Menu



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

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CHRISTOPHER S. YOUNG
SR. MARKETING REPRESENTATIVE

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

Ann Hu
4/24
#15

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,

Christopher S. Young
Sr. Marketing Representative

AGREED AND ACCEPTED THIS 4th **DAY OF** April, 2003
BP AMERICA PRODUCTION COMPANY

SIGNED

PRINTED

TITLE

PHONE: (832) 587-8506

FAX: (832) 587-8754

EMAIL: cyoung@houston.deepwater.com

John R. Rhoads
Contractor Specialist

J. C. Young

Due to the sensitivity of the data contained in this Document, access and use is restricted to BP authorized personnel only. All data shall be treated as **Confidential**. Any unauthorized access or use of the data extracted from the system may result in Company disciplinary action or legal proceeding.



CHRISTOPHER S. YOUNG
SR. MARKETING REPRESENTATIVE

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

ANN HILL
4/21
#16

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,

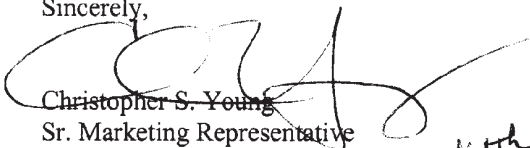
This letter is to document the actual cost and daily rental rate for the 6 5/8" drill pipe referenced in our November 1, 2002 letter agreement.

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,



Christopher S. Young
Sr. Marketing Representative

AGREED AND ACCEPTED THIS 14th DAY OF APRIL, 2003
BP AMERICA PRODUCTION COMPANY

SIGNED

PRINTED JERRY A. RHODS

TITLE Contract Specialist

PHONE: (832) 587-8506

FAX: (832) 587-8754

EMAIL: cyoung@houston.deepwater.com

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RTRANSOCEAN HOLDINGS INC.
1311 BROADFIELD, SUITE 400
HOUSTON, TX 77084

#17

CHRISTOPHER S. YOUNG
SR. MARKETING REPRESENTATIVE

January 9, 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: Cost Adjustments – Follow up

Dear Mr. Rhoads,

Further to our discussions regarding the Cost Escalation for the **Deepwater Horizon** and our agreement to delay the agreement for the cost escalation until January 2003. While the cost of insurance increased effective December 31, 2002, our Risk Department is currently finalizing details with the insurers and they have not yet released the details to us. We are expecting to receive this information by the end of January and will provide you an agreement letter shortly thereafter with all the relevant cost increases that will be effective December 31, 2002.

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,

A handwritten signature in black ink, appearing to be 'CSY', with a long horizontal line extending to the right.

Christopher S. Young
Sr. Marketing Representative
On Behalf of Transocean Holdings Inc.

/ks

PHONE: (832) 587-8506

FAX: (832) 587-8754

EMAIL: cyoung@houston.deepwater.com

Due to the sensitivity of the data contained in this Document, access and use is restricted to BP authorized personnel only. All data shall be treated as **Confidential**. Any unauthorized access or use of the data extracted from the system may result in Company disciplinary action or legal proceeding.



Letter Agreement #18

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 2004
Transocean Ref: 5121-2001063-020

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

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.

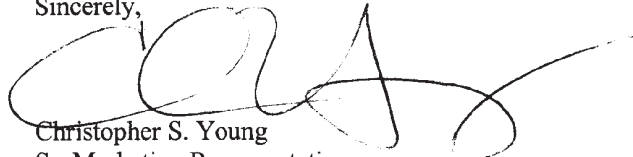
In summary, the following adjustments will be made:

Paragraph 2.3.2b	(130)
Paragraph 2.3.2c	<u>738</u>
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,



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

AGREED AND ACCEPTED THIS 31ST DAY OF MARCH, 2004

BP AMERICA PRODUCTION COMPANY

SIGNED Scott Sigurdson
PRINTED SCOTT SIGURDSON
TITLE WELLS MANAGER, DWD

JS

01-063NAR - Horizon Escalation 2004.doc

PHONE: (832) 587-8506

FAX: (832) 587-8754

EMAIL: cyoung@houston.deepwater.com

**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 Cost	\$2,780	\$2,650	-\$130	\$2,650
Percentage Increase			-6.3%	
2.3.2c) Base Maintenance Element:				
Percentage Increase	\$13,851	\$14,589	\$738	\$14,589
			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

			A	B	C	D
			GOM Base Labor		GOM Overtime Rates	
No. of Personnel		JOB CLASSIFICATION	Daily Rate per person (inc. TT&C)	Total Daily on Board Cost	Daily Overtime Rates	Hourly Overtime Rates
On Board	Assigned To Rig					
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	398.28	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	-	-	-	-	-
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 excluding Training, Transportation and Catering costs.

The figures in column "C" are the daily cost of overtime excluding Training, Transportation and Catering costs (assuming a daily schedule of 12 hours)

The figures in column "D" are the hourly cost of overtime excluding Training, Transportation and Catering costs.



U.S. Department of Labor

Bureau of Labor Statistics
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Data extracted on: February 6, 2004 (4:38:01 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
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	146.7	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	152.5 (P)	153.2 (P)	153.2 (P)	153.8 (P)	152.0 (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@bls.gov

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TRANSOCEAN HOLDINGS, INC.
1311 BROADFIELD, SUITE 400
HOUSTON, TX 77064

CHRISTOPHER S. YOUNG
SR. MARKETING REPRESENTATIVE

Ltr. Agreement # 19

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

J

VG

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 hereto 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.

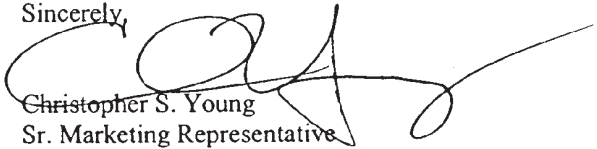
d) Drilling Riser

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 Contract, 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,


Christopher S. Young
Sr. Marketing Representative
On Behalf of Transocean Holdings, Inc.

ACCEPTED AND AGREED TO:

By: 
On Behalf of BP America Production Company

Date: 

EXHIBIT 1
PERSONNEL COMPLEMENT
DEEPWATER HORIZON

			A	B	C	D
			GOM Base Labor		GOM Overtime Rates	
No. of Personnel		JOB CLASSIFICATION	Daily Rate per person (inc. TT&C)	Total Daily on Board Cost	Daily Overtime Rates	Hourly Overtime Rates
On Board	Assigned To Rig					
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 excluding Training, Transportation and Catering costs.

The figures in column "C" are the daily cost of overtime excluding Training, Transportation and Catering costs (assuming a daily schedule of 12 hours)

The figures in column "D" are the hourly cost of overtime excluding 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:	
Percentage Increase	\$14,589
 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

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CHRISTOPHER S. YOUNG
SR. MARKETING REPRESENTATIVE

TRANSOCEAN HOLDINGS INC.
1311 BROADFIELD, SUITE 400
HOUSTON, TX 77084

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

Sincerely,

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

mr
SIGNED 

PRINTED JERRY R RHODS

TITLE CONTRACTS SPECIALIST

Due to the sensitivity of the data contained in this Document, access and use is restricted to BP authorized personnel only. All data shall be treated as **Confidential**. Any unauthorized access or use of the data extracted from the system may result in Company disciplinary action or legal proceeding.



TRANSOCEAN OFFSHORE DEEPWATER DRILLING INC.

1311 BROADFIELD, SUITE 400

HOUSTON, TX 77064

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**

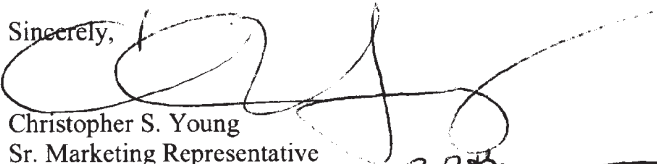
Dear Randy,

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,


Christopher S. Young
Sr. Marketing Representative

AGREED AND ACCEPTED THIS 28th DAY OF JUNE, 2004
BP AMERICA PRODUCTION COMPANY


SIGNED

PRINTED JERRY R. RHOADS

TITLE CONTRACTS SPECIALIST

PHONE: (832) 587-8506

FAX: (832) 587-8754

EMAIL: cyoung@houston.deepwater.com



4400 S. Sam Houston Parkway East
Houston, Texas 77048
832-668-2370
FAX 832-668-2388

Quotation

Customer: Transocean		Quotation #: 3630-10100	
Attn: Niel Svendsen/John Keeton		Date: 6/2/04	
Address: 1311 Broadfield Blvd. suite 200		Acct. Mgr. S. Newstead	
City, State, Zip: Houston, TX 77084		Ref: HORIZON - VSAT	
Phone/Fax: 832-587-8759		Revision: b3	
<u>Item</u>	<u>Qty.</u>	<u>Description</u>	<u>each</u> <u>ext</u> <u>single ant.</u>
<u>HARDWARE</u>			
1.0		Single stabilized antenna system (dual band) Seate! 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 Seate! 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 F100). 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		<u>Delivery</u> 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,	

(P-HS)NAR - Horizon Communication Modules

PHONE: (832) 587-8506

FAX: (832) 587-8754

EMAIL: cyoung@houston.deepwater.com

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TRANSOCEAN HOLDINGS, INC.
1311 BROADFIELD, SUITE 400
HOUSTON, TX 77024

Letter Agreement 22

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 Conversion 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

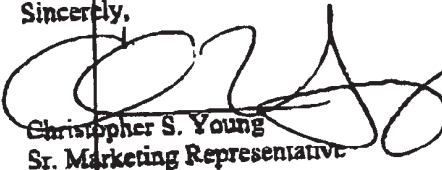
FAX: (832) 587-8754

EMAIL: cyoung@houston.deepwater.com

BP America Production Company
Letter Agreement for Conversion of VBR to a Test Ram
October 11, 2004
Page 2 of 2

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 Kector at (832) 587-8533 or me at (832) 587-8506. Thank you for the opportunity to be of service.

Sincerely,


Christopher S. Young
Sr. Marketing Representative
Transocean Holdings, Inc.

AGREED AND ACCEPTED:
THIS 19th DAY OF October, 2004
BP AMERICA PRODUCTION COMPANY

SIGNED 
PRINTED JEFF STURSETH
TITLE Contract Specialist

OMS
10/19/04

Form for Test Ram (Rev. 9-28-04).doc

PHONE: (832) 587-8506

FAX: (832) 587-8754

EMAIL: cyoung@houston.deepwater.com

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TRANSOCEAN HOLDINGS, INC.
1311 BROADFIELD, SUITE 400
HOUSTON, TX 77084

CHRISTOPHER S. YOUNG
SR. MARKETING REPRESENTATIVE

January 7, 2005

Ltr agrmt 13

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: Additional Personnel
CONTRACTOR-5121-2002-011

Dear Randy,

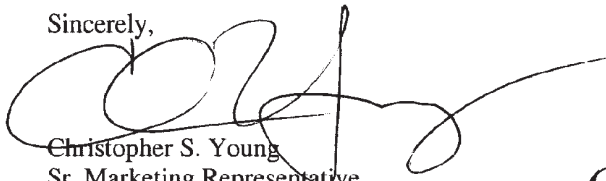
Company has requested and Company and Contractor agree that CONTRACTOR will provide one (1) Performance Engagement Coordinator (PEC) to work on the Deepwater Horizon. The PEC will be rig based and will work on an even rotating schedule. Work will commence on or about January 10, 2005.

CONTRACTOR shall invoice COMPANY at the rate of US\$500 (Five Hundred) per day worked with CONTRACTOR being responsible for all costs for lodging, food, transportation and CONTRACTOR required training. It is anticipated that the PEC will work a Monday through Friday schedule. CONTRACTOR will supply supporting documentation with each monthly invoice as evidence of days worked.

COMPANY reserves the right to release the services of the PEC at any time 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.

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 Keeton at (832) 587-8533 or me at (832) 587-8506. Thank you for the opportunity to be of service.

Sincerely,


Christopher S. Young
Sr. Marketing Representative
Transocean Holdings, Inc.

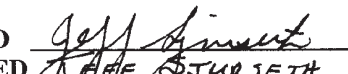
AGREED AND ACCEPTED:

THIS 19th DAY OF January, 2005
BP AMERICA PRODUCTION COMPANY

SIGNED

GC PRINTED

TITLE


JEFF STURSETH
Contract Specialist

PHONE: (832) 587-8506

FAX: (832) 587-8754

EMAIL: cyoung@houston.deepwater.com

Performance Champion

DUTIES:

Authority

- | | |
|---|-----|
| 1. Prepare documentation for Transocean and BP | I |
| 2. Survey other Rigs for time saving ideas | III |
| 3. Ensure GRS Quality | II |
| 4. Prepare Summary of Key Step Measures | I |
| 5. Obtain a 5 day Plan and Prepare operations | III |
| 6. Observe Key Step Operations and report on good/bad aspects | I |
| 7. Develop contingencies for non-productive time | III |
| 8. Know the MOC and ensure procedures are revised | II |
| 9. Research new technology, new equipment and methods for improving efficiency. | I |
| 10. Identify individuals/teams that contribute the most for the past week | I |

QUALIFICATIONS:

Definition of Authority

- | | |
|---------------|--|
| Authority I | To act. |
| Authority II | To act but inform the person to whom he reports to and other interested parties. |
| Authority III | To consult before acting. |

Education:

High school diploma or equivalent.

Experience:

A minimum of 5 years of offshore drilling rig experience. Ability to work with senior-level offshore management.

Skills:

Computer literate with word processing skills and a knowledge of spreadsheets.

Special Requirement:

Solid understating of rig operations. Possesses interpersonal skills to interact effectively with personnel at all levels. Extremely well organized with a high level of accuracy and attention to detail.

Ingenuity:

Demonstrates an ability to work unsupervised. Strong in identifying and setting priorities. Ability to learn new information quickly.

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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:

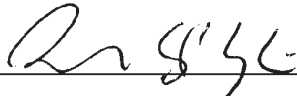
1.42 CONTRACTOR shall provide up to an additional 2,000' of Vetco type "F" or "H" riser for the DEEPWATER HORIZON upon at least six month's written notice from COMPANY. The additional riser must be available by a mutually agreed date, provided such date shall not be later than September 17, 2007. CONTRACTOR 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

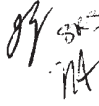
By:



David G. Eyton


Title:

Vice President



Transocean Holdings, Inc.
CONTRACTOR

By:


CHRISTOPHER S. YOUNG
Printed Name

Title:

Sr. Mktg. Rep.

Due to the sensitivity of the data contained in this Document, access and use is restricted to BP authorized personnel only. All data shall be treated as **Confidential**. Any unauthorized access or use of the data extracted from the system may result in Company disciplinary action or legal proceeding.



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,



Christopher S. Young
Sr. Marketing Representative

PHONE: (832) 587-8506

FAX: (832) 587-8754

EMAIL: cyoung@houston.deepwater.com

AGREED AND ACCEPTED THIS 4th **DAY OF** March, 2005

BP AMERICA PRODUCTION COMPANY

SIGNED Jeff Sturath GC
PRINTED JEFF STURATH
TITLE Contract Specialist

Due to the sensitivity of the data contained in this Document, access and use is restricted to BP authorized personnel only. All data shall be treated as **Confidential**. Any unauthorized access or use of the data extracted from the system may result in Company disciplinary action or legal proceeding.



TRANSOCEAN HOLDINGS INC.
4 GREENWAY PLAZA
HOUSTON, TX 77046

CHRISTOPHER S. YOUNG
SR. MARKETING REPRESENTATIVE

AMENDMENT # 25

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

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.

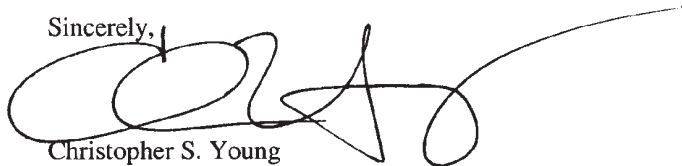
In summary, all of the dayrates will increase by \$1,999 per day effective January 1, 2005

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,



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 [Signature]
PRINTED Jeff Swarth
TITLE Contract Specialist

01-063NAR - Horizon Escalation Jan 2005-c

PHONE: (832) 587-8506

FAX: (832) 587-8754

EMAIL: cyoung@houston.deepwater.com

Due to the sensitivity of the data contained in this Document, access and use is restricted to BP authorized personnel only. All data shall be treated as **Confidential**. Any unauthorized access or use of the data extracted from the system may result in Company disciplinary action or legal proceeding.

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

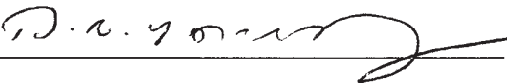
The following documentation which supports all of the increases reflected above is attached hereto and made a part of this Amendment No. 26:

- 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: 

David R. Mottashed
Printed Name

Title: _____ PSCM Manager – Offshore GoM

Transocean Holdings, Inc.
CONTRACTOR

By: 

Anton Dibowitz
Printed Name

Title: _____ Sr. Marketing Representative

5/15/06

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**BASIS FOR COST ESCALATIONS
DEEPWATER HORIZON
September 18, 2005
\$ Per Day**

Clause No.:	March 1, 2005 Baseline Costs	September 18, 2005 Baseline Costs	Variance	Adjusted Sept. 2005 Baseline Costs
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:				
Total Base Maintenance Costs	\$16,030	\$16,495	\$465	\$16,030
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

980249- Amend 26-rate

DEEPWATER HORIZON **Adjusted Labor as of** **September 18, 2005**

No. of Personnel			JOB CLASSIFICATION	GOM Base Labor		GOM Overtime Rates	
On Board	Assigned To Rig			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 excluding Training, Transportation and Catering costs.

The figures in column "C" are the daily cost of overtime excluding Training, Transportation and Catering costs (assuming a daily schedule of 12 hours)

The figures in column "D" are the hourly cost of overtime excluding Training, Transportation and Catering costs.

Bureau of Labor Statistics Data

Page 1 of 1



**U.S. Department of
Labor**
Bureau of Labor Statistics
Bureau of Labor Statistics Data



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Change Output
Options:

From: 1995

To: 2005



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Data extracted on: December 8, 2005 (11:24:10 AM)

Producer Price Index-Commodities

Series Id: WFU119102 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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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

[http://data.bls.gov/PDQ/servlet/SurveyOutputServlet;jsessionid=f030b5b34d1253Fxs3F\\$](http://data.bls.gov/PDQ/servlet/SurveyOutputServlet;jsessionid=f030b5b34d1253Fxs3F$)

12/8/2005

01-063NAR - Horizon Escalation Mar-Sept 2005.doc

PHONE: (832) 587-8584

FAX: (832) 587-8754

EMAIL: adibowitz@houston.deepwater.com



BETSY KELLY
MANAGER-INSURANCE

TRANSOCEAN OFFSHORE DEEPWATER DRILLING INC.

4 GREENWAY PLAZA

HOUSTON, TX 77046

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

Due to the sensitivity of the data contained in this Document, access and use is restricted to BP authorized personnel only. All data shall be treated as **Confidential**. Any unauthorized access or use of the data extracted from the system may result in Company disciplinary action or legal proceeding.

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-1: 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:  1/16/08

WILBERT LONG JR.
Printed Name

 Title: HEAD OF PSCM (GOM)

TRANSOCEAN HOLDINGS INC.
CONTRACTOR

By: 

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:				
Labor & Burden (per schedule)	\$33,168	\$35,110	\$1,942	\$35,110
Training Costs	\$828	\$1,715	\$887	\$1,715
Transportation Costs	\$1,499	\$2,125	\$626	\$2,125
Total Base Labor Cost	\$35,495	\$38,950	\$3,455	\$38,950
Percentage Increase			10%	
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 Maintenance 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**

			A	B	C	D
			GOM Base Labor		GOM Overtime Rates	
No. of Personnel			Daily Rate per person (inc. TT&C & P&I)	Total Daily on Board Cost	Daily Overtime Rates	Hourly Overtime Rates
On Board	Assigned To Rig	JOB CLASSIFICATION				
1	2	OIM	1,107.22	978.51	928.20	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	Pumpjack	510.98	827.13	443.81	36.98
8	16	Floorhand	481.79	3,075.16	409.01	34.08
1	2	Maintenance Supervisor	931.47	800.75	750.45	62.54
1	2	Mechanical Supervisor	808.69	677.98	627.67	52.31
2	4	Chief Mechanic	736.54	1,211.68	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

			A	B	C	D
			GOM Base Labor		GOM Overtime Rates	
No. of Personnel		JOB CLASSIFICATION	Daily Rate per person (Inc. TT&C & P&I)	Total Daily on Board Cost	Daily Overtime Rates	Hourly Overtime Rates
On Board	Assigned To Rig					
1	2		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

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Data extracted on: October 24, 2006 (11:24:35 AM)

Producer Price Index-Commodities

Series Id: WPUI19102													
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.

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Postal Square Building
2 Massachusetts Ave., NE
Washington, DC 20212-0001Phone: (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[http://data.bls.gov/PDQ/servlet/SurveyOutputServlet;jsessionid=f03080c7caaf\\$3F\\$3F\\$3](http://data.bls.gov/PDQ/servlet/SurveyOutputServlet;jsessionid=f03080c7caaf$3F$3F$3)

10/24/2006



TRANSOCEAN OFFSHORE DEEPWATER DRILLING INC.
4 GREENWAY PLAZA
HOUSTON, TX 77046

Kim Schults
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

Coverage:	Excess Liability
Carriers:	various Underwriters @ Lloyds, led by Limit and Wellington Syndicates
Limits:	\$930,000,000
NET ANNUAL PREMIUM:	\$ 376,623

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 77064

TIM JURAN
DIVISION MANAGER, NORTH AMERICA

April 20, 2006 *KS*

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-1 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-1 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,

Tim Juran
Division Manager, North America

/ks

AGREED AND ACCEPTED THIS 26 DAY OF April, 2006

DELTA CATERING MANAGEMENT, LLC

SIGNED Marcia Marney

TITLE President & General Manager

DATED April 26, 2006

PHONE: (832) 587-8586

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							
Catering Position	On Board	Costs for Incremental Personnel			Total Daily On Board Costs	Hourly Overtime Rate	Cost/Hour Standby Rate
		Range	Max. Employee Hourly Wage	Daily Cost (incl. burden)			
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

PHONE: (832) 587-8596

FAX: (832) 587-8754

E-MAIL: tjuran@houston.deepwater.com

Due to the sensitivity of the data contained in this Document, access and use is restricted to BP authorized personnel only. All data shall be treated as **Confidential**. Any unauthorized access or use of the data extracted from the system may result in Company disciplinary action or legal proceeding.

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

By: Ben Steven Smith
Ben Steven Smith
Printed Name

Title: Sr. RSCM Specialist

Transocean Holdings, Inc.

CONTRACTOR

By: Andrew Tietz
ANDREW TIETZ
Printed Name

Title: MARKETING MANAGER

Due to the sensitivity of the data contained in this Document, access and use is restricted to BP authorized personnel only. All data shall be treated as **Confidential**. Any unauthorized access or use of the data extracted from the system may result in Company disciplinary action or legal proceeding.

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

By: Ben Steven Smith 06/04/08
Ben Steven Smith
Printed Name

Transocean Holdings LLC (formerly known as
Transocean Holdings Inc.)

CONTRACTOR

By: [Signature]
MICHAEL D. HUFF
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

Due to the sensitivity of the data contained in this Document, access and use is restricted to BP authorized personnel only. All data shall be treated as **Confidential**. Any unauthorized access or use of the data extracted from the system may result in Company disciplinary action or legal proceeding.

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-1 supersedes Exhibit F-1 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 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 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 than 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 than 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.

* 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.

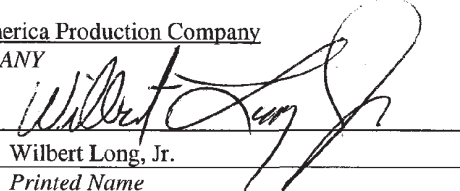
Upon reasonable notification, any given Market Rate calculation shall be subject to audit by third party auditors contracted by COMPANY. Errors in any given Market Rate calculation inconsistent with the above shall be adjusted promptly following the issuance of the relevant audit report.

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
COMPANY

By:



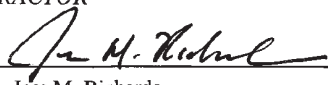
Wilbert Long, Jr.
Printed Name

Title: Head of GoM PSCM

Date: 8/10/09

Transocean Holdings Inc
CONTRACTOR

By:



Jess M. Richards
Printed Name

Title: Marketing Manager – North America

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-1: Personnel to be Provided
Deepwater Horizon
Adjusted Labor as of
December 18, 2007**

			A	B	C	D
			GOM Base Labor		GOM Overtime Rates	
No. of Personnel		JOB CLASSIFICATION	Daily Rate per person (inc. TT&C & P&I)	Total Daily on Board Cost	Daily Overtime Rates	Hourly Overtime Rates
On	Assigned					
Board	To Rig					
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	865.44	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 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.

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
COMPANY

By:




Wilbert Long, Jr.
Printed Name

Title: Head of GoM PSCM

Transocean Holdings LLC
CONTRACTOR

By:



Jess M. Richards
Printed Name

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

Due to the sensitivity of the data contained in this Document, access and use is restricted to BP authorized personnel only. All data shall be treated as **Confidential**. Any unauthorized access or use of the data extracted from the system may result in Company disciplinary action or legal proceeding.

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:

<i>Operating Rate</i>	<i>US\$497,000.00/day</i>
<i>Moving Rate</i>	<i>US\$497,000.00/day</i>
<i>Standby Rate With Crews</i>	<i>US\$497,000.00/day</i>
<i>Standby Rate Without Crews</i>	<i>US\$497,000.00/day less documented cost savings</i>
<i>Stack Rate With Crews</i>	<i>US\$497,000.00/day less documented cost savings</i>
<i>Stack Rate Without Crews</i>	<i>US\$497,000.00/day less documented cost savings</i>
<i>Equipment Repair Rate</i>	<i>US\$497,000.00/day subject to Article 2.2.5(A)</i>
<i>Hurricane Evacuation Rate</i>	<i>Standby Rate Without Crews plus documented expenses of evacuation</i>

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

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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 B1 – 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:

$[(DR\% \times \text{Replacement Cost}) \times (100\% - \text{Depreciation Allowance})] + \text{shipping \& handling}$

Where:

	DRILL PIPE (DP)		OTHER IN-HOLE	SUB-SEA EQUIPMENT
Inspection Criteria	DS1-Cat5	Other than DS1-CAT5	DS1-Cat5/ Other than DS1-CAT5	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

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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: (i) 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 AFFILIATES 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 4 1/2" 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.

Handwritten signatures, likely of the representatives of the parties, located in the bottom right corner of the page.

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: _____

Willbert Long Jr.
Willbert Long Jr.
Printed Name

JFM

Title: _____

CPO GOM

TRANSOCEAN HOLDINGS LLC
CONTRACTOR

By: _____

Keenan Adams
KEEAN ADAMS
Printed Name

EA

Title: _____

MANAGERIAL 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:

A handwritten signature in black ink, appearing to be "J. J. J.", located in the bottom right corner of the page.

Our commitment
to integrity



<http://www.bp.com/sectiongenericarticle.do?categoryId=9003494&contentId=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

A handwritten signature or set of initials in the bottom right corner of the page, consisting of stylized, cursive letters.

EXHIBIT "D"

HSSE REQUIREMENTS

[ATTACHED]

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Amc

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

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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

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- 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.

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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:

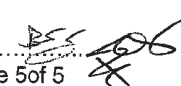
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|---------------|---|
| Attachment 1. | Scope Specific HSE Requirements |
| Attachment 2. | CONTRACT AREA Specific HSE Requirements |
| | • GoM Specific Health, Safety, Security, and Environmental Requirements |
| | • Substance Abuse Policy |

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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.

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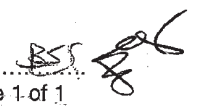
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ATTACHMENT 1 Scope Specific HSSE Requirements

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

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SECTION 8
HSE MANAGEMENT
HSSE Standard 1

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

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HSSE Standard 1

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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**SECTION 8
HSE MANAGEMENT
HSSE STANDARD 02 NOISE**

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

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HSSE STANDARD 02 NOISE

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.

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SECTION 8
HSE MANAGEMENT
HSSE STANDARD 03 – AUTOMATION/MECHANISATION

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 in 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.

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**SECTION 8
HSE MANAGEMENT**

HSSE STANDARD 03 – AUTOMATION/MECHANISATION

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.

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HSE MANAGEMENT
HSSE STANDARD 04 – MAN RIDING

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 OIM/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.

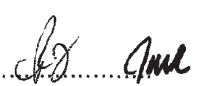
Specific working instructions must be available, understood and followed by all those involved in the operation.

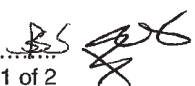
A min of three people shall be used at all times and clear lines of communication established. Consideration should be given in the use of the hands free radio. Hand signals are to be agreed by all parties prior to commencement of the man-riding operation.

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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SECTION 8
HSE MANAGEMENT
HSSE STANDARD 04 – MAN RIDING

- 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 air-hoist 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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HSE MANAGEMENT
HSSE Standard 05- LIFTING OPERATIONS

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.

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HSSE Standard 05- LIFTING OPERATIONS

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 Drilling 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.

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HSE MANAGEMENT
HSSE STANDARD 06 – WASTE MANAGEMENT

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 fluorocarbons (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.

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HSE MANAGEMENT
HSSE STANDARD 07 – MAINTENANCE

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.

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SECTION 8
HSE MANAGEMENT
HSSE STANDARD 08 – DROPPED OBJECTS

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.

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SECTION 8
HSE MANAGEMENT
HSSE STANDARD 09 – RISK MANAGEMENT

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

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SECTION 8
HSE MANAGEMENT
HSSE STANDARD 09 – RISK MANAGEMENT

- **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**)

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SECTION 8
HSE MANAGEMENT
HSSE STANDARD 10 – VENTILATION

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.

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**SECTION 8
HSE MANAGEMENT
HSSE STANDARD 11 – LIGHTING**

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.

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SECTION 8
HSE MANAGEMENT
HSSE STANDARD 12 – WORK TIME

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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SECTION 8
HSE MANAGEMENT
HSSE STANDARD 13 – HAZARDOUS MATERIAL

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.

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HSE MANAGEMENT
HSSE STANDARD 13 – HAZARDOUS MATERIAL

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

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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

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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 CONTRACTOR 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

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Company Specific HSSE Requirements Specifically Selected for Certain Contractors (Company and Contractor will initial all those that apply). See web site for details: <http://nasupplierhsse.bpglobal.com>.

Initialed by: (if applicable)

Contractor Company

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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

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2. COMPANY requires CONTRACTOR to have an acceptable CONTRACTOR'S Environmental Management System (C-EMS).

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3. Contractors will meet or exceed BP's Driving Standard.

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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.

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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.

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6. CONTRACTOR must have a working knowledge of the Drilling and Well Operations Policy.

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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.

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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:

<u>Drug</u>	<u>EMIT Screen</u>	<u>GC/MS Confirmation Levels</u>
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

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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

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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.

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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 GROUP 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..... *mm*
Amendment 1 to CON-ANG-31-5367

COMPANY's Initial..... *BSS*
Page 5 of 6 *8*

Provision and Operation of an Offshore Mobile Drilling Unit
SECTION 8 HSE Management
ATTACHMENT 2 CONTRACT AREA SPECIFIC HSE REQUIREMENTS



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.....
Amendment 1 to CON-ANG-31-5367

COMPANY's Initial.....
Page 6 of 6

**Exhibit F-1
Personnel to be Provided
Deepwater Horizon**

No. of Personnel		JOB CLASSIFICATION	Daily Rate per person	Daily Overtime Rates	Hourly Overtime Rates
On Board Rig	Assigned To Rig				
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.


Exhibit F-1



Amendment No. ____ to Contract No. 980249

EXHIBIT B-2
MATERIAL EQUIPMENT LIST SEPTEMBER 28, 2009

A. Unit Specifications

General

Unit Name	: <i>Deepwater Horizon (RBS8D)</i>
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%)

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Sack Storage	No. or ft2: 10,000 sacks
Pipe Rack Area	ft2: 9,367
Load Bearing Capacity	lb/ft2: 500
Riser Sack Area	ft: 10,000
Load Bearing Capacity	lb/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

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: 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)

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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

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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

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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

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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, 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

Whip Line

Radius Meters	Metric Tons
51	15
Platform Lift 51	10
Seastate Lift	No Load

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Hook Load Indicator Automatically Corrected
for Boom Angle
Alarm (audible, visual, both)
Automatic Brake
Safety Latch on Hooks
Crown Saver (limit switch)
Boom Illumination
Baskets for Personnel Transfer

yes/no: Yes
: Both

yes/no: Yes
yes/no: Yes
yes/no: Yes
yes/no: Yes
no.: 2

A.9.2 Cranes, Revolving, Secondary

Quantity
Specification (API, etc.)
Make
Type
Location (stbd., port, aft, fwd.)
Maximum Rated Capacity (main hook)
Maximum Rated Capacity (main hook)
Boom Length
Line Length (nominal)

no.: 1
: API
: Outreach
: Knuckle boom
: Forward
lt.: SWL 4000 KG/ 8800 lbs 14.6 meters / 47.9 ft
lt.: SWL 3000 KG/ 6600 lbs 21meters / 68 ft
ft.: 68
ft.: N/A

A.9.3 Forklifts

Quantity
Make/Type
Rated Capacity
Location

no.: 1
: Stewart & Stevenson
lbs.: 5000
: Sack Room

A.9.4 Monorail Overhead Cranes

Quantity
Make
Type
Rated Capacity
Location

no.: 1
: Hydralift
: Gantry Type
mt: 37 (18.5x2)
: Aft Riser Deck

A.9.5 BOP Handling System

Make/Type
Rated Capacity

: Hydralift Bridge Crane
mt: 310

BOP Carrier

Make/Type
Rated Capacity

:
Hydralift "C" Cart complete w/false rotary deck
mt: 310

A.9.6 Air Hoists/Derrick Winches

A.9.6.1 Rig Floor Winches (Non Man-Riding)

Quantity
Make

no.: 4
: 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 lt.: 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

gdx
Amc

Fuel Storage Capacity
Jettisonable
Fuel Transport Containers
Volume (ea)
Covered by Foam Fire System (See L.3.5)

US Gal.: 2,250 (750x3)
yes/no: No
Qty.: 3
: 750
yes/no:
Yes

A.11 Auxiliary Equipment

A.11.1 Water Distillation

Quantity
Make/Type
Capacity (each/total)

no.: 6
: Alfa-Laval
cu.ft./day: 20 Metric Tons Ea. (Depending on Engine Utilization)

A.11.2 Broilers

: N/A

A.11.3 Air Conditioning

Quantity
Make/Type
Capacity (Total System)

no.: 4 Air Handlers, 6 Compressor/Condensers
: Carrier
tons: 200

A.11.4 Electric Welding Sets

Quantity
Current Capacity
Make / Type

no.: 3
amp: 400
: Lincoln S-7046 SAE 400

A.11.5 High Pressure Cleaner

Quantity
Make/Type
Electric/Pneumatic
Max Delivered Pressure
Ring Main
Outlets

no.: 2
: Unitor
: Electric
PSI: 1600
yes/no: Yes
Number: 6

B. General Rig Description

B.1 Derrick & Substructure

B.1.1 Derrick / Mast

Make/Type
Rated for Wind Speed
-With Full Set Back
-With No Set Back
Height
Dimensions of Base
Dimensions of Crown
Gross Nominal Capacity
Maximum Number of Lines
Ladders w/Safety Cages & Rests
Platform for Crown Sheave Access

: Dreco
Knots: 60/71 (GOMEX/WOS)
Knots: 103/99 (GOMEX/WOS)
ft.: 242 (drill floor to top of gin pole)
ft.xft.: 48x48
ft.xft.: 18x18
st.: 1000
no.: 14, 1 Spare Sheave Fitted in cluster
yes/no: Yes
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
Clear Height Below Rotary Table
Beams(from 3rd deck)

st.: 1,750
ft.: 29.5

B.1.6 Weather Proofing

Rig Floor Windbreaks Height
Derrickman Windbreaks Height

ft.: 11.5
ft.: none

B.1.7 Derrick TV Camera System

Camera Located at
Make/Type
Zoom/Pan/Tilt-Function
Monitor Located at

: Monkey Board/Crown
: Color
yes/no: Yes
: Driller's House

B.2 Drawworks & Associated Equipment

B.2.1 Drawworks

Make/Type
Drum Type
Spinning Cathead Type
Breakout Cathead Type
Crown Block Safety Device
Make
Model
Rated Input Power Continuous
Rated Input Power Maximum
Drum Diameter
Maximum Line Pull 14 Lines
Maximum Line Pull 12 Lines
Maximum Line Pull 10 Lines
Maximum Line Pull 8 Lines
Independent Freshwater Cooling System for Drawworks

: Hitec/AHD 1000
: Lebus Grooving 2" Drill Line
: N/A
: N/A
: Yes
: Hitec/SDI
: Hitec/SDI
hp: 6900
hp: 8400
inches: 73.5
st: 1,000 (intermittent)
st: 880
st: 750
st: 600
yes/no: Yes

B.2.2 Drawworks Power

Number of Electric Motors
Make
Model
Output Power Continuous
Output Power Intermittent (max.)

no.: 6
: General Electric
: GEB22A1
hp: 1150
hp: 1400

B.2.3 Auxiliary Brake

Make
Model

: Hitec
:
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.
: Failsafe Disc Brakes

Independent Back-up System Type

286
QML

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 yes/no: Yes. Active Counter Balance w/Stand, Jump &
Locking Device 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 >= yes/no: N/A
76mm inches: N/A
Left-hand Pin Connection Size yes/no: N/A
Access Fitting for Wireline Entry on Top of
Gooseneck

206
Amc

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

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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)

306
8
Amc

Tripping:
Top Hole Drilling:

bbl/day: 270 (Est. only, will vary depending on operations)
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/480 V, Delta-Wye
Frequency Hz: 60

C.1.6 Emergency Shutdown

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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

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Make : Kimray -4 each reducing wave/back pressure v
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, : Automatic Electric / Hydraulic
Air/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

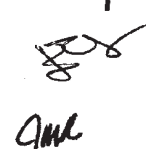
C.3.2 Thruster Motors

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

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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

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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:

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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: 8-1/4"
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.

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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		PSI: 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

QMA
SPB

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

QMA *808*

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

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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.

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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

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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	: 4-1/2 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

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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

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-Pick Up Attachment

- Transport Base

Size (bore)

Working Pressure

H2S Service

yes/no: Yes

yes/no: Yes

inch: 18.75

PSI: 15000

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

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Chave

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)
US Gal.: 0

Useful Capacity per Accumulator (w/o Pre-Charge)

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)

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Size	inch: 18-3/4
Quantity	no.: 2
Working Pressure	PSI: 10000
Make/Type (2*70.5=141" Total Height)	: 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 (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.
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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

Make/Mode	: Designed for 10,000 Ft. Water Depth
OD	: Vetco / HMF-Class H
ID	inch: 21.25, 21.5
Wall Thickness	inch: 19.5
Average Length of Each Joint	inch: .875 & 1.00
Weight of One Complete Joint (In Air)	ft.: 90
	39,920 lbs.
11 ea. x 1" 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	54,595 lbs., 2,000' rated buoyancy, 52" OD
11 ea. x 0.875" wall buoyed	47,356 lbs., 1,000' rated buoyancy, 42" OD

9 ea. x 1.000" wall buoyed

Quantity
Pipe Material
Minimum Yield Strength
Type Riser Connectors
Dogs

no.: 90 ea. 90' jts.
grade: API 5L Grade X80 Mod.
PSI: 80 KSI
: HMF-Class H
no.: N/A

Pup Joints

Quantity
Length
Quantity
Length
Quantity
Length
Quantity
Length
Quantity
Length

no.: 1
ft.: 45.0
no.: 1
ft.: 37.5 XO
no.: 1
ft.: 30.0
no.: 1
ft.: 22.5
no.: 1
ft.: 15

E.6.2 Telescopic Joint

Make/Type
Size (ID)
Stroke
Double Seals
Working Pressure
Spare Telescoping Joint
Location
Rotating Support Ring for Riser Tensioners

: Vetco
inch: 19.75
ft: 65
yes/no: Yes
PSI: 500
yes/no: Yes
: Shore or Rig
type: Vetco SDC

Connection Points

no.: 6

E.6.3 Kill/Choke Lines

Quantity
Outside Diameter
Inside Diameter
Working Pressure
LMRP Isolation Valves

no.: 2
inch: 6.625
inch: 4.5
PSI: 15000
yes/no: Yes. Fail Open

E.6.4 Booster Lines

Quantity
Outside Diameter
Inside Diameter
Working Pressure
LMRP Isolation Valve (Mud Boost Valve)

no.: 1
inch: 4.5
inch: 3.83
PSI: 6000
yes/no: Yes, Failsafe Close

E.6.5 Hydraulic Supply Lines

Quantity
Outside Diameter
Inside Diameter
Working Pressure

no.: 1
inch: 3.5
inch: 2.62
PSI: 5000

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JMR

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

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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
Rated 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

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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

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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)

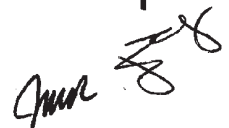
Quantity no.: 2
Make/Type : Coflexip
ID inch: 3"
Working Pressure / Test Pressure PSI/PSI: 15,000/22,500
Quantity no.: N/A
Make/Type : N/A
ID inch: N/A
Working Pressure / Test Pressure PSI/PSI: N/A

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	yes/no: Yes
System		
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 or 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: 90 SPM @ 90%
SPM	
Maximum SPM	SPM: 100 SPM @ 100%

F.1.2 Transfer 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

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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

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56

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

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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.: 644
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

Capacity	: Separate Mixing Tank Above for Mixing
Chemical Mixer Type	Caustic
	Gal.: 100 Model DA-13
	: Portable Rotor/Stator - Dual Impeller Mixing
	Assembly, 1/3 hp air motor

F.2.7 Shale Shakers

Primary:

Quantity
Make/Model
Type
Driven by No. of Electric Motor
Design Flowrate

no.: 7
: Brandt/LCM-2D CS
: Linear Motion/Cascading
no.: 3
bbl/min: Depending on Mud Characteristics

Cascading:

Quantity
Make/Model
Type
Driven by No. of Electric Motor
Design Flowrate

no.: See Above.
: See Above.
: See Above.
no.: See Above.
bbl/min: See Above.

F.2.8 Desander

Quantity
Make/Model
Type
Number of Cones x Sizes
Type/Size Centrifugal Pump
Driven by Electric Motor of what power?
Is pump Dedicated to Desander
Max. Flowrate

no. REMOVED
:
:
no.x inch:
:
hp:
yes/no:
gal / min:

F.2.9 Desilter

Quantity
Make/Model
Type
Number of Cones x Sizes
Type/Size Centrifugal Pump
Driven by Electric Motor of
Is Pump Dedicated to Desilter
Max. Flowrate

no.: REMOVED
:
:
no.x inch:
:
hp:
yes/no:
gal/min:

F.2.10 Mud Cleaner

Quantity
Make/Model
Type
Number of Cones x Sizes

no.: Desilter Cones Over One Linear Motion
Shaker
: Brandt, LCM-2D/LMC
: Desilter Cones Over One Linear Motion
Shaker
no.x inch: 40 x 4 w/Discharge Over Shaker or Overboard

Type/Size Centrifugal Pump
Driven by Electric Motor of
Is Pump Dedicated to Mud cleaner
Max. Flowrate

: 2 ea 8 x 6 x 14
hp: 100 ea.
yes/no: NO
bbl/min: 2400

Inlet & Outlet for Centrifuge to be Provided

F.2.11 Mud/Gas Separator (Poor Boy)
Make/Type
Gas Discharge Line ID
Gas Discharge Location, Primary

: Shall be capable to direct flow from flowline to
MGS
: Swaco
inch: 12" Nominal
: 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

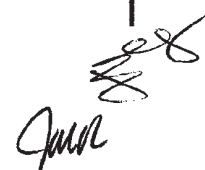
Quantity	no.: 2
Capacity of Each Tank	C.F.: 75
Type Weight Loadcell	: Hydraulic
manufacturer	: Martin Decker
Pressure Rating	PSI: 65
Relief Valve (s) Installed	yes/no: Yes

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	yes/no: Yes
From Barite/Bentonite Discharge Line	

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
Separate Volume Tank & Dryer

yes/no: Yes

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

Amr

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

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 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 no.: User Selectable
(6,8,10,12, etc.)

H.1.1 Weight Indicator

Make/Type : Hitec Smart Drilling Instrumentation

Sensor Type : Electronic Deadend

Calibrated for Number of Lines Strung no.: User Selectable
(6,8,10,12,etc.)

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 Offices
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
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

Make/Type	: Strain Gauges
Pressure Range	: Oteco
Visible from Driller's Position	PSI: 0-10,000
	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	lbs: Yes

H.6 Calibrated Press. Gauges : Strain Gauges

H.7 Rig Communication System

H.7.1 Telephone System

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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 (Synthesized Crystal)	hz: 100 khz - 30 MHz : Synthesized
Facsimile Capable	: No
Telex Capable	: N/A
H.10.2 EPIRBs	
Quantity	no.: 5
Make/Model	: ACR/SAT

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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)

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JMR
56

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:
Frequency	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/Desktop, 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	
Quantity	: Yes - On Bridge
	: 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	

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JMR

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
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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

L.2.1 H2S Monitoring System

Make/Type

: Kongsburg (Autronica/Crowcon/Detcon)

Sampling Points at:

- Bell Nipple
- Drill Floor
- Shakeshaker
- Mud Tanks
- Ventilation System into Living Quarters
- Other
- General Alarm

yes/no: Yes

yes/no: Yes

yes/no: Yes

yes/no: Yes

yes/no: Yes

: Yes

yes/no: Yes

Alarm Types (Audible, Visual, both), at:

- Driller's Console
- Engineroom
- Mud Room
- Living Quarters each Level
- Central Area Each Structural Level
- Other
- Central Alarm Panel
- Located at

: Both

: Both

: Both

: Both

: Both

: Both

yes/no: Yes

: Bridge

L.2.2 Combustible Gas Monitoring System

Make/Type

: Simrad Integrated Alarm & Control System

Sampling Points at:

- Bell Nipple
- Drill Floor
- Shale Shaker
- Mud Tanks
- Ventilation System into Living Quarters
- Other
- General Alarm

yes/no:

yes/no: Yes

yes/no: Yes

yes/no: Yes

yes/no: Yes

yes/no: Yes

: Yes

yes/no: N/A

Alarm Types (Audible, Visual, Both) at:

- Driller's Console
- Other

: Both

: 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
- From 100 to 600 RPM

no.: As required

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
- From 250-3000 RPM

no.:
no.:

L.2.5 Explosimeters

Quantity
Make/Type

no.: See H2S Detectors
:

L.2.6 Fire/Smoke Detectors in Accommodations

Make/Type
Fire Detection
Smoke Detection
Central Alarm Panel
Location

: Optical with a few Thermal
yes/no: Yes
yes/no: Yes
yes/no: Yes
: CCR

L.3 Fire Fighting Equipment

L.3.1 Fire Pumps

Quantity
Make/Model
Type
Output
All Offtake Points Supplied by Each Pump

no.: 2
: Patterson
: Centrifugal
US Gal/Min.: 550
yes/no: Yes

Location of Pumps
Location of Pumps
Fire Fighting Water Delivery Conforms to
MODUs
MODU Spec Version

: Aux. Machine Room Port
: Aux. Machine Room STB.
yes/no: Yes
: 1998

L.3.2 Hydrants & Hoses

Hydrants Positioned Such That any Point
May be Reached by a Single Hose Length
from Two Separate Hydrants.
Quantity of Hydrants
Hose Connections/Hydrant
Hose Max. Diam.
Length

yes/no: Yes

no.: 59
no.: 59 x 1
inch: 2.5" OD
ft.: 50

L.3.3 Portable Fire Extinguishers

Quantity (Total)
Type 1 - CO2

Type 2 - Dry Chemical

Type 3 - Foam

no.: 70
no/lbs: 2 @ 4
no/lbs: 37 @ 15
no/lbs: 2 @ 150
no/lbs: 17 @ 5
no/lbs: 9 @ 10
no/lbs: 3 @ 50
no/lbs: 10 AFFF
no/lbs: 0
no/lbs: 0
yes/no: Yes

Mounted Adjacent to Access Ways &
Escape Routes

[Handwritten signature]
[Handwritten initials]

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	

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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

: Envir-Pak / Model 5000

System Type

: Air

Conforms to (Marpol Annex IV, Etc.)

: Yes

M.3 Garbage Disposal/Grinder

Make/Model

: Gulf Gulp / 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.



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980249

ASSIGNMENT AGREEMENT

THIS ASSIGNMENT AGREEMENT (this "Assignment Agreement") is made as of this 6th day of April 2005 by and between BP AMERICA PRODUCTION COMPANY hereinafter called "BP" and BHP Billiton Petroleum (GOM) Inc. hereinafter called "BHPB." BP and BHPB may sometimes be referred to in this Assignment Agreement collectively as "Parties" and individually as "Party".

WHEREAS, TRANSOCEAN HOLDINGS INC. (hereinafter called "CONTRACTOR") and BP entered into that certain Offshore Drilling Contract dated effective as of December 9, 1998, including all exhibits attached thereto (a copy of which, including any pertinent amendments and additional agreements is attached hereto as Exhibit "A") covering and pertaining to the Transocean Deepwater Horizon Drilling Unit and the equipment described therein (hereinafter called "Drilling Unit"), as supplemented by those certain letter agreements which are relevant to this Assignment and which are referenced in the table attached hereto and made a part hereof as Exhibit "B" (Exhibit "A" and "B" hereto collectively comprise and are hereafter referred to as the "Drilling Contract"); and

WHEREAS, BHPB is Operator of record in the OCS-G-20085 Block 654 #2, Shenzi Prospect, Green Canyon area, offshore Louisiana; and

WHEREAS, BHPB, BP and Amerada Hess Corporation are Joint Venture Partners in the Shenzi Prospect; and

WHEREAS, BHPB desires to utilize the Drilling Unit to drill the Shenzi-5 Well, subject and pursuant to the terms and conditions of (1) the Drilling Contract, (2) this Assignment Agreement, including the exhibits hereto (3) the Joint Operating Agreement between the Parties and Amerada Hess Corporation for the Shenzi Prospect, as amended by agreement dated April 5, 2005 and (4) the Management of Change Plan (a copy of which is attached hereto as Exhibit "E"); and

WHEREAS, BP is willing to assign the Drilling Contract to BHPB for the aforesaid purpose subject to the following terms and conditions;

NOW, THEREFORE, in consideration of the premises and the mutual obligations as herein provided, BP and BHPB hereby agree as follows:

ARTICLE 1 DEFINITIONS

For purposes of this Assignment Agreement, the following words shall have the meanings ascribed to them in this Article 1:

- 1.1 "Assignment Period" shall mean the period beginning on the Assignment Commencement Date and ending on the Assignment Termination Date.
- 1.2 "Assignment Commencement Date" shall mean the date BP has completed its operations on BP's Walker Ridge Block 508 #1, Stones Well (said completion of operations to include Drilling Unit readiness to transit to the Shenzi-5 Well location), when the Drilling Unit is underway and clear of location (as indicated on the IADC report), or the date the parties have signed this Agreement, whichever is later, and

BHPB has accepted the Drilling Unit. If the Drilling Unit is on the Repair Day Rate at what would otherwise be the Assignment Commencement Date, then the Assignment Commencement Date will not occur until another rate is payable

- 1.3 "Assignment Termination Date" shall mean the day and hour when BHPB has completed its operations on the Shenzi-5 Well, Drilling Unit cleanup, removal of all BHPB equipment, Drilling Unit readiness in all respects to transit to BP's designated location, and the Drilling Unit is underway and clear of location (as indicated on the IADC report).
- 1.4 "Shenzi JOA" shall mean that certain Joint Operating Agreement by and among BP, BHPB and Amerada Hess covering the Shenzi Prospect.
- 1.5 "Well" shall have the meaning ascribed to it in the amendment to the Shenzi JOA .

ARTICLE 2 ASSIGNMENT

- 2.1 For the Assignment Period, BP hereby assigns the Drilling Contract to BHPB for the drilling of one Well. For the Assignment Period, BHPB shall replace BP as "Operator" or "Company" or "BP" or other words of similar intent in the Drilling Contract and shall assume all of BP's rights and obligations contained therein, to the extent same may be assigned (except as to those rights referred to in Article 5 below) For the Assignment Period, CONTRACTOR shall be considered a contractor of BHPB.
- 2.2 BHPB agrees to accept the Drilling Unit at the commencement of the Assignment Period "as is, where is," provided that BHPB's acceptance of the Drilling Unit shall not be deemed a waiver of the operator's rights and obligations under the Drilling Agreement with regard to the Drilling Unit. BP agrees to accept the Drilling Unit at termination of the Assignment Period "as is, where is," provided that BP's acceptance of the Drilling Unit shall not be deemed a waiver of the operator's rights and obligations under the Drilling Agreement with regard to the Drilling Unit. During the Assignment Period, all of the rates and charges applicable to the Drilling Unit shall be paid directly by BHPB to Contractor. It is agreed and understood that the operating day rate applicable during the Assignment Period will be determined pursuant to the terms and conditions of the Drilling Contract.
- 2.3 **Subject to the provisions of Section 8.2, below, BHPB hereby accepts such assignment and agrees to be fully responsible for and shall be fully bound by each and all of the duties, obligations, liabilities and indemnities arising during the Assignment Period which would be borne by BP pursuant to the Drilling Contract, or otherwise in connection with BHPB's use of the Drilling Unit and equipment, and hereby agrees to fully defend, indemnify and to save and hold harmless BP, its parent, affiliate, and subsidiary companies, and the officers, directors, employees, consultants, representatives and insurers of any of them (the "BP INDEMNITEES") in respect of BHPB's failure to fulfill any of the duties, obligations, liabilities and indemnities in accordance with the terms of the Drilling Contract. BHPB further agrees to defend, indemnify and hold the BP INDEMNITEES harmless from and against all claims, including, but not limited to personal injury, death, property damage or loss or costs of pollution asserted by any person or government agency in any way arising from BHPB's operations**

with the Drilling Unit during the Assignment Period even if caused solely by the negligence, strict liability or other legal fault of the BP INDEMNITEES. The foregoing indemnity shall not apply to the extent said claims are caused by the BP INDEMNITEES' gross negligence or willful misconduct. BP agrees to be fully responsible for and shall be fully bound by each and all of the duties, obligations, liabilities and indemnities arising before and after the Assignment Period which are borne by BP pursuant to the Drilling Contract, or otherwise in connection with BP's use of the Drilling Unit and equipment before and after the Assignment Period, and hereby agrees to fully defend, indemnify and to save and hold harmless BHPB, its parents, affiliates, and subsidiary companies, and the officers, directors, employees, consultants, representatives and insurers of any of them (the "BHPB INDEMNITEES") in respect of BP's failure to fulfill any of the duties, obligations, liabilities and indemnities in accordance with the terms of the Drilling Contract before and after the Assignment Period. BP further agrees to defend, indemnify and hold the BHPB INDEMNITEES harmless from and against all claims, including, but not limited to personal injury, death, property damage or loss or costs of pollution asserted by any person or government agency in any way arising from BP's operations with the Drilling Unit before and after the Assignment Period even if caused solely by the negligence, strict liability or other legal fault of the BHPB INDEMNITEES. The foregoing indemnity shall not apply to the extent said claims are caused by the BHPB INDEMNITEES' gross negligence or willful misconduct.

- 2.4 In the event BHPB requires equipment in or on the Drilling Unit that is either in addition to or different from that which has been agreed to between BP and CONTRACTOR in order to meet any BHPB safety standards which are different than those of BP or CONTRACTOR, BHPB shall have the right, subject to Section 17.1 of the Drilling Contract, to make any such modification or change without the prior written consent of BP. In the event BHPB otherwise requires any other equipment in or on the Drilling Unit that is either in addition to or different from that which has been agreed to between BP and CONTRACTOR, BHPB shall have the right to make any such modification or change subject to the prior written approval of CONTRACTOR and BP. Any such modification or change shall be at BHPB's sole cost and expense, including all Drilling Unit time incurred during the modification period. BHPB shall pay all costs necessary, including Drilling Unit time, to return the Drilling Unit to the same condition as at the Assignment Commencement Date, inclusive of remobilization of services, material or equipment which BP had in place at the time of the Assignment Commencement Date excepting normal wear and tear. BP at its sole option and without compensation or royalty to BHPB, may elect to retain all modifications (subject to agreement with CONTRACTOR) and changes to the Drilling Unit or its equipment made or ordered by BHPB.
- 2.5 If for any reason BHPB is not ready to accept the Drilling Unit on the Assignment Commencement Date, BHPB agrees to compensate BP at the then current effective operating rate for any Drilling Unit standby as well as spread costs associated with the service providers under contract to BP which cannot reasonably be discontinued while waiting for BHPB to accept delivery.
- 2.6 BP shall endeavor to provide the personnel as listed in Exhibit "C" and equipment as listed in Exhibit "D," provided the parties execute a mutually acceptable agreement (s)

governing the activities of such personnel and equipment in the form attached hereto as Exhibit "F". BHPB shall bear the cost of such BP personnel and equipment.

- 2.7 No Repair Day Rate allowances which have been "banked" by Contractor under the Drilling Contract at the Commencement of the Assignment Period shall be applicable to the Assignment Period. Any such allowances shall be carried forward and applied to BP's account beginning immediately subsequent to the Assignment Period BHPB agrees to keep BP advised with respect to its best estimate of the end of the Assignment Period hereunder and shall provide BP approximately thirty (30) days advance notice of its completion of operations and use of the Drilling Unit. In addition, BHPB shall keep BP continually informed of the anticipated day and hour of the redelivery of the Drilling Unit. At the Assignment Termination Date, BHPB's rights under the Drilling Contract assigned to BHPB shall, except for indemnification provisions which shall, as to liabilities which may arise during the Assignment Period, be ongoing, automatically and unconditionally terminate, and all rights and obligations under the Drilling Contract will be transferred back to BP, subject to BP's inspection of the Drilling Unit to determine that it is in the same condition as at the Assignment Commencement Date, excepting only normal wear and tear. In the event the Drilling Unit is not in the same condition as at the Assignment Commencement Date, BHPB must take reasonable efforts to place the Drilling Unit into the previous condition at BHPB's expense.
- 2.8 Notwithstanding anything to the contrary herein, BP shall retain any and all extension options provided for under the Drilling Contract and it is hereby specifically agreed that such rights shall not be assigned or transferred to BHPB.
- 2.9 The "Term" as defined in the Drilling Contract shall continue to "run" during the entire Assignment Period of this Assignment Agreement.
- 2.10 Inspections and Maintenance: Inspection or maintenance of the Drilling Unit that normally occur during the drilling of the well shall be the responsibility of BHPB, during the term of this, Assignment Agreement unless other arrangements are agreed in writing
- 2.11 BHPB will endeavor to remove its equipment by the end of the Assignment Period. If any of BHPB's equipment remains on board the Drilling Unit at the end of the Assignment Period, BHPB and BP will cooperate to effect removal of such equipment after the Assignment Period. BHPB shall not be obligated to pay BP or Contractor for the time needed to effect such removal unless such removal impedes BP's operations.

ARTICLE 3 NO WARRANTY

- 3.1 **PRIOR TO THE EXECUTION OF THIS ASSIGNMENT AGREEMENT, BHPB HAS INSPECTED THE DRILLING UNIT AND DETERMINED THAT IT IS FULLY CAPABLE OF PERFORMING THE ACTIVITIES FOR WHICH IT IS CONTRACTED INCLUDING, BUT NOT LIMITED TO, DRILLING THE SHENZI-5 WELL SAFELY AND IN ACCORDANCE WITH STANDARD OFFSHORE PRACTICES. IT IS UNDERSTOOD AND AGREED THAT BP MAKES NO EXPRESS OR IMPLIED REPRESENTATION OR WARRANTY TO BHPB OR TO ANY OTHER PARTY WITH RESPECT TO THE DESIGN, CAPABILITY OR OTHERWISE OF THE DRILLING UNIT OR ANY OF THE**

SUPPORT SERVICES THAT MAY BE ASSIGNED BY BP, OR THE EQUIPMENT AND FACILITIES COVERED BY THE ASSIGNMENTS HEREIN.

**ARTICLE 4
SERVICE CONTRACTS**

- 4.1 During the Assignment Period, and with the exception of those contractors set forth on Exhibit "E", BHPB shall utilize those contractors currently under contract with BP and/or the CONTRACTOR, as the case may be, for providing services on the Drilling Unit, including, but not limited to, the Drilling Unit crew and caterers. Other than the Drilling Contract, however, such services will, however, be provided to BHPB pursuant to the terms and conditions of existing contracts between BHPB and such contractors. No contracts (other than the Drilling Contract) will be assigned to BHPB by BP or Contractor. **BHPB shall release, defend and hold harmless BP for non-payment to such contractors for services provided during the Assignment Period, including attorneys' fees and costs. BP shall be solely responsible for making such arrangements as may be necessary to suspend or terminate their contracts with such contractors and for the costs associated therewith.** BHPB shall be responsible for mobilization and demobilization costs associated with its own support service contracts and BP shall be responsible for the demobilization and re-mobilization costs associated with the removal and reinstatement of any BP replaced support service contractors.
- 4.2 Except as provided above, BHPB shall have the sole right to select and hire all third party vendors to provide services during the drilling of the Shenzi-5, including, without limitation, logging crews; provided, however, such contracts shall in no way be binding upon BP.

**ARTICLE 5
EXERCISE OF RIGHTS**

- 5.1 Without the prior written consent of BP (which consent shall not be unreasonably withheld), BHPB shall not:
- (a) give any notice or direction to CONTRACTOR to take any action whatever which would serve to terminate or have the effect of terminating, altering or amending the Drilling Contract; or
 - (b) assign, sublet, or transfer any right(s) or duty(ies), in whole or part, in the Drilling Contract; or
 - (c) order or make any modification or change to the Drilling Unit or its equipment, except as set forth in Article 2.3.
 - (d) make any change in CONTRACTOR's personnel or reduce staffing levels without BP's written approval, such approval shall not be unreasonably withheld.
- 5.2 Notwithstanding the provisions of Article 2, should any major dispute arise during the Assignment Period between BHPB and CONTRACTOR, or with contractors with whom both BHPB and BP have contracts to provide services on the Drilling Unit and which may impact

BP's orderly resumption of operations after the Assignment Period, BHPB shall without delay inform BP and coordinate any further action with BP.

ARTICLE 6 PAYMENTS

- 6.1 All payments to the CONTRACTOR due or which are accrued and become due and payable under the Drilling Contract during the Assignment Period and under BHPB's contracts with other service providers at any time (unless attributable to operations conducted for BP by such service provider with respect to the Drilling Unit before or after the Assignment Period) shall be made directly by BHPB. All payments to the CONTRACTOR due or which are accrued and become due and payable under the Drilling Contract before and after the Assignment Period and under BP's contracts with other service providers at any time (unless attributable to operations conducted for BHPB by such service provider with respect to the Drilling Unit during the Assignment Period) shall be made directly by BP.
- 6.2 Any CONTRACTOR or other service provider invoices incorrectly delivered to BP or BHPB shall be returned to the original billing contractor for correction and appropriate invoice issuance.

ARTICLE 7 INVENTORY RECONCILIATION

- 7.1 The inventory lists appended to the Drilling Contract set forth the drill tools and equipment furnished with the Drilling Unit. Each item of said drill tools and equipment are presumed to be in good and serviceable condition unless established otherwise by BHPB and the owner of said drill tools and equipment at the commencement of the Assignment Period, and will be returned to BP on the Assignment Termination Date in the same condition as received, excepting only normal wear and tear. BHPB will promptly replace or pay BP at replacement prices, for items lost or damaged during the Assignment Period to the extent BP would otherwise be responsible for the replacement cost thereof.
- 7.2 A beginning inventory of consumable items which BHPB elects to retain on the Drilling Unit for its use, including but not limited to cement, mud material, fuel, water, lube oil, etc., which are the responsibility of the operator, shall be made by BP and BHPB on or about the Assignment Commencement Date to determine the quantity and condition of said consumable items. BHPB will reimburse BP or BP's third party vendors, at BP's discretion, the actual cost of such consumables as of the Assignment Commencement Date. BHPB may direct BP to remove mud and cement materials remaining on the Drilling Unit on the Assignment Commencement Date, as mutually agreed, and BHPB shall have no reimbursement obligation with respect thereto.
- 7.3 An ending inventory of consumable items which BP elects to retain the Drilling Unit for its use, including but not limited to cement, mud material, fuel, water, lube oil, etc., which are the responsibility of BHPB, shall be made by BP and BHPB on or about the Assignment Termination Date to determine the quantity and condition of said consumable items. BP shall reimburse BHPB or BHPB's third party vendors, at BHPB's discretion, the actual cost of such consumables as of the Assignment Termination Date. BP may direct BHPB to remove mud and cement materials remaining on the Drilling Unit

on the Assignment Termination Date, as mutually agreed, and BP shall have no reimbursement obligation with respect thereto.

- 7.4 Neither Party is obligated to purchase any type of consumables not on the original inventory but BHPB is obligated to remove any such items from the Drilling Unit on or before the Assignment Termination Date.

ARTICLE 8 RELATIONSHIP OF THE PARTIES

- 8.1 BP and BHPB acknowledge that the relationship between BHPB, as Operator of the Shenzi-5 Well, BP Exploration & Production Inc. and Amerada Hess Corporation, as Non-operators, shall be governed by the terms and conditions of the Shenzi JOA. Notwithstanding anything to the contrary herein, to the extent any liabilities, risks, expenses or costs are incurred by BHPB, as Operator of the Shenzi-5 Well, they shall be allocated between BHPB, BP Exploration & Production Inc. and Amerada Hess Corporation in accordance with the terms of such Shenzi JOA.

ARTICLE 9 NOTICES

- 9.1 Any notice to be given hereunder will be deemed properly given and delivered to the party to which it was directed if it is delivered in person, sent by mail, courier service, postage or charges prepaid, or facsimile to such party at the appropriate address stated below or to such other person and/or address as such party or its directed representatives may hereinafter notify the other party in writing:

BP AMERICA PRODUCTION COMPANY
501 WestLake Park Boulevard
Houston, Texas 77079
Attention: Jeff Sjurseth
Fax: 281-366-7973
Tel.: 281-366-3098

BHPB Billiton Petroleum (GOM) Inc.
1360 Post Oak Boulevard, Suite 150
Houston, Texas 77056
Attention: Derek Cardno
Tel.: 713-961-8500
Fax: 713-961-8400

ARTICLE 10 RELEVANT LAW

- 10.1 **THE PROVISIONS OF THIS CONTRACT SHALL BE CONSTRUED IN ACCORDANCE WITH THE GENERAL MARITIME LAW OF THE UNITED STATES OR, IF IMPERMISSIBLE, WITH THE LAWS OF THE STATE OF TEXAS, WITHOUT**

**REGARD TO PRINCIPLES OF CONFLICTS OF LAWS THAT WOULD OTHERWISE
REFER THE MATTER TO THE LAWS OF ANOTHER JURISDICTION.**

**ARTICLE 11
GENERAL**

- 11.1 If any provisions of this Assignment Agreement or the application thereof to any person, party or circumstances shall be invalid or unenforceable to any extent, the remainder of this Assignment Agreement and the application of such provision to other persons, parties or circumstances shall not be affected thereby and shall be enforced to the greatest extent permitted by law.
- 11.2 Any failure by any Party to enforce the strict terms of this Assignment Agreement or to exercise any rights hereunder shall not constitute a waiver of such terms or rights, nor shall it constitute any precedence nor bind the Party making the waiver to make a subsequent waiver of the same or any other term or right.
- 11.3 This Assignment Agreement shall not be modified or amended, in whole or in part, unless such amendment or modification is in writing and executed by BP and BHPB and consented to by CONTRACTOR.
- 11.4 This Assignment Agreement shall be binding upon the Parties hereto and their successors and authorized assignees.

The parties hereto have executed this Assignment Agreement as of the day first above written.

APPROVED AND ACCEPTED:

BP AMERICA PRODUCTION COMPANY

By: *O. Kirk Wardlaw*
Name: *O. Kirk Wardlaw*
Title: *Attorney-In-Fact*

BHP BILLITON PETROLEUM (GOM) INC.

By: *Bernard A. Wiath*
Name: *Bernard A. Wiath*
Title: *Vice President Global Exploration*

*one
SAC*

Consented to pursuant to Article 30.2.2 of the Drilling Contract by:

TRANSOCEAN HOLDINGS INC.

By: 

Name: Christopher S. Young

Title: S. Mktg. Rep.