

**DRILLING CONTRACT**

between

**VASTAR RESOURCES, INC.**

and

**R&B FALCON DRILLING CO.**

**DATED DECEMBER 9, 1998**

for

**“RBS-8D”**  
“Deepwater Horizon”

**CONTRACT NO. 980249**

**D-1-87.1**

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Vern Buzard

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**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

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

## 1.3 COMPLETION OF CONTRACT

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

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

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

## **ARTICLE 2**

### **DAYRATES**

#### **2.1 GENERAL**

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

#### **2.2 DAYRATES**

Each of the dayrate classifications is as follows:

##### **2.2.1 Moving Rate**

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

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

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

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

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

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

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

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

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

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

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

### 2.3 ADJUSTMENTS IN DAYRATES

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

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

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

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

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

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

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

### **ARTICLE 3**

#### **PERSONNEL AND PAYMENTS**

##### **3.1 PERSONNEL CLASSIFICATIONS, NUMBERS AND REPRESENTATION**

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

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

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

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

3.2 OVERTIME COMPENSATION

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

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

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

**ARTICLE 4**

**OTHER PAYMENTS**

4.1 CHANGE IN HOMEPORT OF OPERATIONS

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

4.2 EXCESS MEALS AND LODGINGS

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

4.3 ANCHOR HANDLING AND TOWING VESSEL CHARGES

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

4.4 OTHER CHARGES

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

**ARTICLE 5**

**DRILLING UNIT MODIFICATIONS**

5.1 **PRE-COMMENCEMENT**

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

5.1.1 **POST-COMMENCEMENT DATE**

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

**ARTICLE 6**

**OTHER REIMBURSEMENTS**

6.1 **LICENSES AND PERMITS**

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

**ARTICLE 7**

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

**7.1 MATERIALS, SUPPLIES, EQUIPMENT, & SERVICES**

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

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

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

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

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

## **ARTICLE 8**

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

#### **8.1 MATERIALS, SUPPLIES, EQUIPMENT, & SERVICES**

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

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

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

## **ARTICLE 9**

### **PAYMENTS**

#### **9.1 TIME OF PAYMENT**

COMPANY shall make payments under this CONTRACT in U.S. currency in accordance with the terms of Article 2, Article 3, Article 4, Article 5, Article 6, Article 7, and Article 8 of this CONTRACT, on or before the last working day of the month following the receipt of a valid invoice 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  
ABA Number  
SWIFT Number

**ARTICLE 10**

**PAYMENT OF CLAIMS**

10.1 CLAIMS

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

10.2 NOTICE OF CLAIMS

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

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

## **ARTICLE 11**

### **TAXES AND FEES**

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

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

#### **11.2 PAYROLL TAXES**

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

#### **11.3 TAXES PAID BY COMPANY**

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

**ARTICLE 12**

**COMPANY'S RIGHT TO QUESTION INVOICES AND AUDIT**

12.1 QUESTION INVOICES

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

12.2 AUDIT

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

**ARTICLE 13**

**DEPTH**

13.1 DEPTH

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

**ARTICLE 14**

**DRILLING UNIT**

14.1 REPRESENTATION OF DRILLING UNIT

The Drilling Unit shall be fully equipped as specified in Exhibit B and shall meet the requirements of Exhibit G, and shall be adequate to drill and complete wells in the Operating Area to the depths as specified in Article 14.2 hereof and in water depths as specified in Article 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-I.

#### 14.4 TECHNOLOGY

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

#### 14.5 APPLICABLE LAWS

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

#### 14.6 SAFETY OF PORT

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

#### 14.7 OPERATING AREA

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

### **ARTICLE 15**

#### **PERFORMANCE OF DRILLING OPERATIONS**

##### 15.1 OPERATIONS OF DRILLING UNIT

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

##### 15.2 PREVENTION OF FIRE AND BLOWOUTS

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

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

#### 15.3 DEVIATION OF THE HOLE

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

#### 15.4 DRILL PIPE MEASUREMENT

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

#### 15.5 CASING PROGRAM

The casing program shall be as specified by COMPANY.

#### 15.6 MUD PROGRAM

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

#### 15.7 COMPLETION OR ABANDONMENT OF WELLS

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

#### 15.8 SAMPLES

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

#### 15.9 CORING

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

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

15.10 FORMATION TESTS

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

15.11 ANCHOR HANDLING AND TOWING

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

**ARTICLE 16**

**INSPECTION OF MATERIALS**

16.1 INSPECTION BY CONTRACTOR

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

16.2 INSPECTION BY COMPANY

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

**ARTICLE 17**

**SAFETY**

17.1 GENERAL

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

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

17.2 UNDER TOW

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

17.3 SAFETY EQUIPMENT

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

17.4 EMERGENCY EVACUATION PLAN

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

**ARTICLE 18**

**PERFORMANCE OF THE WORK**

18.1 INDEPENDENT CONTRACTOR RELATIONSHIP

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

18.2 COMPANY'S REPRESENTATIVE

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

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

### 18.3 DISCIPLINE

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

### 18.4 TAKEOVER BY COMPANY

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

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

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

18.5 CHANGE OF SUPERVISORY PERSONNEL

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

**ARTICLE 19**

**RECORDS TO BE FURNISHED BY CONTRACTOR**

19.1 DAILY DRILLING REPORTS

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

19.2 ACCIDENT REPORTS

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

19.3 DELIVERY TICKETS

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

19.4 LOGS

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

**ARTICLE 20**

**INSURANCE**

**20.1 INSURANCE**

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

**ARTICLE 21**

**INDEMNITY FOR PERSONAL INJURY OR DEATH**

**21.1 CONTRACTOR'S PERSONNEL**

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

**21.2 COMPANY'S PERSONNEL**

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

**ARTICLE 22**

**RESPONSIBILITY FOR LOSS OF OR DAMAGE TO THE EQUIPMENT**

**22.1 CONTRACTOR'S DRILLING UNIT**

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

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

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

**22.2 USE OF CONTRACTOR'S EQUIPMENT**

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

**22.3 CONTRACTOR'S IN HOLE-EQUIPMENT**

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

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

**22.4 COMPANY'S EQUIPMENT**

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

**22.5 RESPONSIBILITY DURING MOBILIZATION FROM KOREA**

CONTRACTOR SHALL ASSUME FULL RESPONSIBILITY FOR AND SHALL PROTECT, RELEASE, DEFEND, INDEMNIFY, AND HOLD HARMLESS COMPANY AND ITS' JOINT OWNERS HARMLESS FROM AND AGAINST ANY LOSS, CLAIM, DAMAGE, FINE, PENALTY, DEMAND OR LIABILITY, FOR POLLUTION OR PROPERTY DAMAGE, WITHOUT MONETARY LIMITATIONS, MADE BY ANY ENTITY OR PERSON WHILE THE DRILLING UNIT IS MOBILIZING FROM KOREA TO THE GULF OF MEXICO PRIOR TO THE 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 DOLLARES (US\$ 15,000,000.00) PER OCCURANCE, SHALL RELEASE INDEMNIFY AND DEFEND COMPANY FOR CLAIMS FOR LOSS OR DAMAGE TO THIRD PARTIES ARISING FROM POLLUTION IN ANY WAY CAUSED BY THE DRILLING UNIT WHILE IT IS OFF THE DRILLING LOCATION, WHILE UNDERWAY OR DURING DRIVE OFF OR DRIFT OFF FROM THE DRILLING LOCATION.

**24.2 COMPANY RESPONSIBILITY**

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

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

**24.3 CLEAN UP OPERATIONS**

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

**ARTICLE 25**

**INDEMNITY OBLIGATION**

**25.1 INDEMNITY OBLIGATION**

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

**25.2 BENEFIT OF INDEMNITIES**

**TO THE EXTENT A PARTY IS ENTITLED TO INDEMNIFICATION IN ARTICLES 21, 22, 23, AND 24, SUCH PARTY’S PARENT, SUBSIDIARIES, AFFILIATES, CO-OWNERS AND JOINT VENTURERS (IF ANY), AND THEIR RESPECTIVE OFFICERS, DIRECTORS, AGENTS AND EMPLOYEES, THE DRILLING UNIT AND ITS LEGAL AND 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.

26.3 CERTIFICATE OF FINANCIAL RESPONSIBILITY

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

ARTICLE 27

TERMINATION

27.1 TERMINATION BY COMPANY

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

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

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

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

27.2 TERMINATION BY CONTRACTOR

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

27.3 LOSS OF DRILLING UNIT

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

27.4 PROVISION AFTER EXPIRATION OF CONTRACT

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

**ARTICLE 28**

**FORCE MAJEURE**

28.1 FORCE MAJEURE

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

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

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

## **ARTICLE 29**

### **CONFIDENTIAL INFORMATION, LICENSE AND PATENT INDEMNITY**

#### **29.1 CONFIDENTIAL INFORMATION**

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

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

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

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

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

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

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

29.3 PATENT INDEMNITIES

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

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

## **ARTICLE 30**

### **ASSIGNMENT OF CONTRACT**

#### **30.1 ASSIGNMENT BY CONTRACTOR**

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

#### **30.2 ASSIGNMENT BY COMPANY**

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

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

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

#### **30.3 ASSIGNMENT OUTSIDE OF OPERATING AREA**

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

## **ARTICLE 31**

### **INGRESS AND EGRESS OF LOCATION**

#### **31.1 INGRESS AND EGRESS OF LOCATION**

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

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

## **ARTICLE 32**

### **COMPANY'S POLICIES**

#### **32.1 UNAUTHORIZED PERSONS ON JOB SITES**

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

#### **32.2 DRUGS, FIREARMS, AND SEARCHES**

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

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

**ARTICLE 33**

**NOTICES**

33.1 NOTICES

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

33.2 FOR COMPANY

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

33.3 FOR CONTRACTOR

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

## **ARTICLE 34**

### **CONSEQUENTIAL DAMAGES**

#### **34.1 CONSEQUENTIAL DAMAGES**

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

## **ARTICLE 35**

### **WAIVERS AND ENTIRE CONTRACT**

#### **35.1 WAIVERS**

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

#### **35.2 ENTIRE CONTRACT**

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

#### **35.3 GOVERNING LAW**

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

35.4 ARBITRATION

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

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

**R&B Falcon Drilling Co.**

**Vastar Resources, Inc.**

BY: /s/ Paul B. Loyd, Jr.  
Paul B. Loyd, Jr.

By /s/ Charles D. Davidson  
Charles D. Davidson

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

TITLE: President and CEO

**EXHIBIT A**

**DAYRATES**

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

**EXHIBIT B-1**

**Drilling Unit Specifications**

**GENERAL DESCRIPTION, DIMENSIONS & CRITERIA**

**General Description**

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

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

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

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

**Principal Dimensions**

	<u>Metric Units</u>	<u>U.S. Units</u>
<b>Overall Structure</b>		
Length (overall)	120.7 m	396.00 ft.
Breadth (overall)	78.0 m	255.91 ft.
<b>Upper Hull</b>		
Length	81.5 m	267.40 ft.
Breadth	61.0 m	200.13 ft.
Depth	8.5 m	27.89 ft.
<b>Main Deck</b>		
Length	84.1 m	275.93 ft.
Breadth	61.0 m	200.13 ft.
<b>Pontoons (two each)</b>		
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.

<b>Columns (four each)</b>		
<b>Horizontal Section (Lx B)</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.
<b>Transverse Braces (two each)</b>		
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.
<b>Diagonal Braces (four each)</b>		
Diameter	3.0 m	9.84 ft.
Centerline Elevation	1.5 m	4.92 ft.
<b>Elevations</b>		
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.
<b>Draft</b>		
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)

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

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

**GULF OF MEXICO**

**METOCEAN DESIGN CRITERIA \*)**

Condition	Item	OPERATION (DP Mode)	SURVIVAL (transit / future moored)	
		Drilling	Moored	Vessel
		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)
<b><i>Current:</i></b>				
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)	Survival Condition	Transit Condition	Remark
		MT	(m)	MT	MT	
<b>Light Ship</b>		22,325	26.15	22,325	22,325	
<b>VDL (Variable Dlg. Loads)</b>	<b>Upper Hull &amp; Abv.</b>	5,596	37.40	5,596		(note 1)
	<b>Columns</b>	2,057	22.85	2,057		
<b>VDL Total</b>	<b>(Dk. + Col.)</b>	7,653	33.49	7,653	7,450	
<b>Pontoon Loads:</b> Drill Water, Potable Water, Water, Fuel Oil, Lube Oil, and Ballast Water		17,530	5.57	10,722	2,984	
<b>Displacement (MT)</b>		47,509	19.68	40,700	32,759	

### Future Mooring + Thruster Assist

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

#### Notes:

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

## Classification Society

American Bureau of Shipping

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

## Rules and Regulations

- SOLAS, 74 Convention, 78 Protocol with Amendments through 1997  
1988 Amendments to the 1974 SOLAS Convention concerning Radio Communications for the Global Maritime Distress and Safety System (GMDSS)
- API /AISC
- OCIMF
- US Coast Guard Requirements
- MARPOL 73 COW, Regulation 13F, etc., (Annexes I, IV, & V) (Oil) IOPP, with the Protocol 1978, and amendments to Annex I and Annex V of 1992.  
(refer to section 053 Damage stability)
- IMO Resolutions A.468(XII), “Code on Noise Levels Onboard Ships”, 1981, and USCG NVIC 12-82 as well
- IMO Resolution A.574(XIV), “Recommendations on General Requirements for Electric Navigational Aids”
  - IMO MSC/circ. 403, “Draft Guidelines on Navigation Bridge Visibility except field of vision (blind sector).
  - IMO MODU Code, 1989 with amendments of 1991 (ABS Statement-of-Fact).
  - 1966 Loadline Conference and all amendments and IMO Resolutions A.513 (XIII) and A.514 (XIII)
  - International Convention on Tonnage Measurement of Ships, 1969, as amended by IMO Resolution A.493 (XII) and Resolution A.494 (XII).
  - 1972 International Prevention of Collision at sea Convention, including amendments of 1981, 1987, and 1989
  - 1988 Amendments to the 1974 SOLAS Convention concerning Radio Communications for the Global Maritime Distress and Safety System (GMDSS)
- International Electro Technical Commission (IEC) Publication No. 60092 for electrical installation of ships.
- International Electro Technical Commission (IEC) Publication No. 61892 for Mobile and Fixed Offshore Units - electrical installations,
  - U.S.C.G. Regulations for Marine Sanitation Devices (CFR title 33-Part 159)

## Registration

The Vessel shall be registered under USA Flag.

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

<b>Item</b>	<b>M. Tonnes</b>	<b>L. Tons</b>
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
<b>TOTAL</b>	<b>22,325</b>	<b>21,977</b>

**EXHIBIT B-2**  
**MATERIAL EQUIPMENT LIST**

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## SECTIONS

### A. UNIT SPECIFICATIONS

#### GENERAL

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

### A.1 MAIN DIMENSIONS/TECHNICAL

#### DESCRIPTION

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

### A.2 STORAGE CAPACITIES

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

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

**A.3 PROPULSION/THRUSTERS**

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

**DP SYSTEM**

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

Position reference	: HYDRO ACOUSTIC & GLOBAL POSITIONING
--------------------	---------------------------------------

**Integrated Alarm And Control System:**

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

**A.4 OPERATIONAL CAPABILITIES**

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

Transit speed self propelled (historical avg) knots: 7.5

**A.5 VARIABLE LOADING (VL)**

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

**A.6 ENVIRONMENTAL LIMITS**

**Drilling (including station keeping)** See Exhibit B-1

Air gap ft: 32.8  
Sign. Wave Height ft: 26  
Max. wave height ft: 48.2  
Spec. peak period sec: PMS  
Max. wind velocity knots: 60 ( 1 min.)  
Max. current velocity knots: See B-1  
Max. heave ft: N/A  
Max. pitch degrees: N/A  
Max. roll degrees: N/A

**Survival (excluding station keeping)**

Air gap ft: 54.2  
Sig. Wave height ft: 41  
Max. wave height ft: 72.2  
Spec. peak period sec: 15  
Max. wind velocity knots: 103 ( 1 min.)  
Max. current velocity knots: 1.9  
Max. heave ft: N/A  
Max. pitch degrees: N/A  
Max. roll degrees: N/A

**Transit (field move)**

Air gap ft: 79.4  
Max. wave height ft: 30-40  
Max. wave period sec: 8-12  
Max. wind velocity knots: 60-70  
Max. current velocity knots: 2-3  
Max. heave ft: N/A  
Max. pitch degrees: N/A  
Max. roll degrees: N/A

**A.7 MOORING SYSTEM**

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

**A.7.1 ANCHOR WINCHES**

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

Test load	:	
Control locations (local/remote/both)	:	
Emergency release (type/location)	:	
<b>A.7.2 FAIRLEADS</b>		Foundations to be installed in shipyard
Quantity	no:	
Make	:	
Free rotating range	degrees:	
<b>A.7.3 ANCHORS</b>		Company Supplied
<b>A.7.3.1 ANCHORS - Primary</b>		Company Supplied
<b>A.7.3.2 ANCHORS - Spare</b>		Company Supplied
<b>A.7.4 ANCHOR LINES</b>		Company Supplied to be installed at later date
<b>A.7.5 ANCHOR LINE RUNNING / RETRIE'</b>		N/A
<b>A.7.5.1 PENNANT LINES</b>		N/A
<b>A.7.5.2 ANCHOR BUOYS</b>		N/A
<b>A.7.5.3 CHASER</b>		N/A
<b>A.7.6 TOWING GEAR</b>		
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
<b>A.7.7 SUPPLY VESSEL MOORING LINES</b>	:	
Quantity	no.:	4
System	mt:	TO BE EVALUATED BY TEAM
Rating	lt:	TBA
<b>A.8 MARINE LOADING HOSES</b>		
Location of loading manifolds (port/stbd)	:	BOTH
<b>A.8.1 POTABLE WATER HOSE</b>		
Quantity	no.:	2 x 150'
Size	inch:	3
Make/Type	:	TBA
Color coding	yes/no:	YES
Make/Type/Connection		TBA
<b>A.8.2 DRILLING WATER HOSE</b>		
Quantity	no.:	2 x 150'
Size	inch:	4
Make/Type	:	TBA
Color coding	yes/no:	YES
Make/Type connection	:	TBA
<b>A.8.3 GAS OIL HOSE</b>		
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**

<b>Main Hoist</b>	Platform Lift	4 lines	Radius	Metric
			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

<b>Main Hoist</b>	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			

<b>Main Hoist</b>	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			

<b>Main Hoist</b>	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  
 51 15  
 51 10  
 No Load

**Whip Line** Platform Lift  
 Seastate lift

Hook load indicator automatically corrected for boom angle

yes/no: YES  
 : BOTH

Alarm (audible, visual, both)

yes/no: YES

Automatic brake

yes/no: YES

Safety latch on hooks

yes/no: YES

Crown saver (limit switch)

yes/no: YES

Boom illumination

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
<b>(adjustable fingers on the right hand side can have any one of the casing below racked back at any one time, but not all)</b>	<b>Unit is capable of field transiting with 238 stands of drillpipe without exceeding rated design loads of derrick.</b>
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
<b>Auxiliary Derrick (Moonpool)</b>	
Make / Type	Dreco
Capacity	300 Tons
<b>B.1.3 AUTOMATIC PIPE RACKER</b>	
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>B.1.4 CASING STABBING BOARD</b>	
Make/Type	: Dreco / Hyd.
Adjustable from/to height above R/table	ft/ft: Adjustable Casing Stabbing Basket - 45' reach
<b>Auxiliary Pipe Handler (Moonpool)</b>	
Make / Type	National
<b>B.1.5 SUBSTRUCTURE</b>	
Make/Type	: H.H.I
Height	ft : 14.75'
Width	ft: 80
Length	ft: 71
Setback capacity	st: 1000
Hookload	st 1000
Simultaneous setback-hookload capacity	st: 2000
Tensioner capacity	st 1750
Clear height below R/table beams (from	ft: 29.5
<b>B.1.6 WEATHER PROOFING</b>	
Rig floor windbreaks height	ft: 10
Derrickman windbreaks height	ft: 15

**B.1.7 DERRICK TV CAMERA SYSTEM**

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

**B.2 DRAWWORKS AND ASSOCIATED EQUIPMENT**

**B.2.1 DRAWWORKS**

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

**B.2.2 DRAWWORKS POWER**

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

**B.2.3 AUXILIARY BRAKE**

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

**B.2.4 SANDLINE**

NA

**B.2.5 AUTOMATIC DRILLER**

Make/Type : Hitec

**AUXILIARY DRAWWORKS (Moonpool)**

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

### B.3 DERRICK HOISTING EQUIPMENT

#### B.3.1 CROWN BLOCK

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

#### AUXILIARY CROWN BLOCK (Moonpool)

Make / Type Dreco  
Rated Capacity 300 Tons

#### B.3.2 TRAVELING BLOCK

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

#### AUXILIARY TRAVELING BLOCK

Make / Type Dreco  
Rated Capacity 300 Tons

#### B.3.3 HOOK

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. (AC and DC), located at the following points	CENTRAL CONTROL ROOM : RIG FLOOR ENGINE CONTROL ROOM
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**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):

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

**D.1.4 DRILL PIPE PUP JOINTS ( Integral)**

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

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

**D.1.5 DRILL PIPE PUP JOINT:**

Size: N/A

**D 1.6 HEAVY WEIGHT DRILL PIPE (Integral)**

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

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

**D.1.7 DRILL COLLARS**

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

Company Supplied

**D.1.9 NON-MAGNETIC DRILL COLLARS**

Company Supplied

**D.1.10 CORE BARRELS**

Company Supplied

<b>D.1.11 STABILIZERS</b>	Company Supplied
<b>D.1.12 ROLLER REAMERS</b>	Company Supplied
<b>D.1.13 SHOCK ABSORBERS (Damping Sub)</b>	Company Supplied
<b>D.1.14 DRILLING JARS</b>	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 "
<b>D.2.8 TUBING SLIPS</b>	: Company Supplied
<b>D.2.9 TUBING SPIDER</b>	: Company Supplied
<b>D.2.10 DRILL COLLAR LIFTSUBS</b>	: As needed
<b>D.2.11 DC LIFTING PLUGS</b>	: n/a
<b>D.2.12 BIT BREAKER</b>	
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
<b>D.2.13. GAUGE RINGS</b>	
Sizes	26, 17 1/2, 14 3/4, 12 1/4, 8 1/2
<b>D.2.14 ELEVATOR LINKS</b>	
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
<b>D.2.15 DRILL PIPE SPINNER</b>	Type: Varco SSW-40
<b>D.2.16 MUD SAVER BUCKET</b>	
Make	: Dreco
Size	inch: 9 3/4 to 3 1/2"
Operation	: Remote from DWS
<b>D.2.17 EZY TORQUE</b>	
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)	":	11 3/4, 15, 21
Quantity	no.:	1
Make/Type	:	TBA S.H Series 150
Top sub connection type	:	4 IF
Overshot OD	inch:	8.3/8
Max catch size	inch:	7 1/4"
To catch size Spiral grapple	inch:	7 1/4, 7 1/8, 7, 6 7/8,
To catch size Basket grapple	inch:	6 5/8, 6 1/2, 6 3/8, 5 1/2, 5
Control rings		For above grapples
Extension sub length	ft:	2.5
Lipped guide (oversize, regular)	:	8 3/8, 11,

**D.3.2 HYDRAULIC FISHING JAR**

Company Supplied

**D.3.3 JAR INTENSIFIER**

Company Supplied

**D.3.4 SURFACE JAR**

Company Supplied

**D.3.5 FISHING BUMPERSUBS**

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

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

**D.3.6 SAFETY JOINTS** Company Supplied

**D.3.7 JUNK BASKETS (REVERSE CIRC.)** Company Supplied

**D.3.8 JUNK SUBS** Company Supplied

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

**D.3.9 FLAT BOTTOM JUNK MILL** Company Supplied

**D.3.10 MAGNET FISHING TOOL**

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

**D.3.11 TAPER TAPS** Company Supplied

**D.3.12 DIE COLLARS** Company Supplied

**E. WELL CONTROL/SUBSEA EQUIPMENT**

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

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

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

**E.2.1 ALTERNATE HYDRAULIC CONNECT N/A**

**E.2.2 HYDRAULIC WELLHEAD CONNECTOR**

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

**E.2.3 RAM TYPE PREVENTERS**

Preventers:	
Quantity	no.: 5
Bore size	inch: 18.3/4"
Working Pressure	psi: 15000
Make	: CAMERON or equivalent
Model	: TYPE T1
Type (single/double)	: Double x2 , Single x 1
Stack Configuration	: 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 advse

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

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

Position of side outlets - choke  
 LMRP : Below upper Annular (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 prUS gallons) : 13.1  
 Bottle working pressure : psi: 5000 (team to evaluate)

**E.2.9 HYDRAULIC CONTROL POD/RECEPTACLES**

Quantity : no.: 2  
 Redundancy : %: 100  
 Color Coded : yes/no: YES  
 Remote regulation of operating pressure for functions requiring lower operating press : yes/no: YES  
 Spare control pod : yes/no: NO  
 Deadman system : yes/no: YES  
 Pressure & 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 P N/A**

**E.6 PRIMARY MARINE RISER SYSTEM**

**E.6.1 MARINE RISER JOINTS**

Make/Model : To be designed for 10,000' wd  
: 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 buoancy, 54,424 for 3k buoancy, 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
<b>E.6.8 MARINE RISER SPIDER</b>	
Make/Type	: VETCO / HYDRAULIC
<b>E.6.9 Marine Riser Gimbal</b>	
Make/Type	: VETCO
<b>E.6.10 RISER HANDLING TOOLS</b>	
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
<b>E.6.11 RISER TEST TOOLS</b>	
Quantity	no.: 2
Type	: HMF- Class H Hydraulic Test Tool
<b>E.6.12 INSTRUMENTED RISER JT</b>	
	: N/A
<b>E.7 SECONDARY MARINE RISER</b>	
	: N/A
<b>E.8 DIVERTER BOP</b>	
<b>(For installation in fixed bell nipple)</b>	
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
<b>E.8.1 DIVERTER FLOWLINE</b>	
Quantity	no.: 1
I.D of flowline	inch: 16" Nominal
Valve types	: Diverter Sleeve
Size	inch: 16
Working pressure	psi: 500
Control valve type (air/hydraulic/etc.)	: HYDRAULIC
Remote controlled from	location: DRILLERS WORKSTATION
<b>E.8.2 DIVERTER CONTROL PANELS</b>	
Driller's panel	
Make	: CAMERON OR EQUIVALENT
Model	: MULTIPLEX
Location	: DRILLERS WORKSTATION
Locking/unclocking control	yes/no: YES

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

**E.9 SUBSEA SUPPORT SYSTEM**

**E.9.1 RISER TENSIONERS**

Quantity	no.:	6	Ability To Skid Tensioners From Well Centerline
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



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

**E.13.5 ROV System** Power and foundations supplied

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

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

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

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

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

**E.15 BOP TESTING EQUIPMENT**

**E.15.1 HYDRAULIC BOP TEST PUMP**

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

Chart recorder

yes/no: 0-5000 0-30000

**E.15.2 BOP TEST STUMP**

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

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

**E.16.1 RT's FOR CASING INSTALLATION** Company Supplied  
**E.16.2 RRT's FOR CASING INSTALLATION** Company Supplied  
**E.16.3 MISCELLANEOUS TOOLS** Company Supplied  
**E.16.4 DP HANG-OFF SUBS** Company Supplied  
**E.16.5 MINI HOSE BUNDLE FOR HYD. R. TOOLS** Company Supplied

**E.16.6 EMERGENCY BOP RECOVER** yes/no: yes  
Make/type : CAMERON

**F.1 HIGH PRESSURE MUD SYSTEM**

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

**F.1.1 MUD PUMPS**

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

**F.1.2 TRANSFER PUMPS/MIXING PUMPS (centrifugal)**

**Treatment pumps (Desilter/Desander)**

Quantity 4  
 Make Halco  
 Model 2500  
 Drive motor type Electric  
 Power output 100 hp  
 Impeller 14"  
 Impeller speed 1200 rpm  
 Packing type Mechanical seal

**Mixing Pumps**

Quantity no.: 2  
 Make : Halco  
 Model : 2500  
 Drive motor type : Electric /Belt  
 Power output hp: 100  
 Impeller : 14"  
 Impeller speed RPM: 1200  
 Packing type ; Mechanical seal

**Shearing Pumps**

Quantity no.: 2  
 Make : Halco  
 Model : T 6550  
 Drive motor type : Electric /Belt  
 Power output hp: 100  
 Impeller : Shearing type  
 Impeller speed RPM: 1800  
 Packing type ; Mechanical seal

**Charging Pumps**

Quantity no.: 4  
 Make : Halco  
 Model : 2500  
 Drive motor type : Electric /Belt  
 Power output hp: 100  
 Impeller : 14"  
 Impeller speed RPM: 1200  
 Packing type ; Mechanical seal

**Column Transfer**

Quantity no.: 4  
 Make : Halco  
 Model : 2500  
 Drive motor type : Electric /Belt  
 Power output hp: 125  
 Impeller : 12  
 Impeller speed RPM: 1800  
 Packing type ; Mechanical seal

**F.1.3 BOOSTER PUMP**

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

Drive motor type :  
Power output hp:

#### F.1.4 STANDPIPE MANIFOLD

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

#### F.1.5 ROTARY HOSES

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

#### F.1.6 CEMENTING HOSE

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

#### F.1.7 CHIKSAN STEEL HOSES

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

### F.2 LOW PRESSURE MID SYSTEM

#### F.2.1 MUD TANKS

Quantity no.: 15  
**Column Tanks**  
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.;11)	yes/no: Yes

**F.2.5 STRIPPING TANK**

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

**F.2.6 CHEMICAL MIXING TANK**

Capacity	Separate mixing tank above for mixing caustic
Chemical mixer type	bbls: See F.2.1 Tks. 7- 10

**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 It: 70  
Type weight loadcell : Hydraulic  
Manufacturer : Martin Decker  
Pressure rating psi: 65  
Relief valve(s) installed yes/no: yes

**F.3.4 CEMENT SILOS**

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



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

**G.1.8 CASING TONGS** Company Supplied

**G.1.9 POWER CASING TONGS** Company Supplied

**G.1.10 POWER UNIT FOR CASING AND TUBING TONGS**

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

**G.1.11 CASING CIRCULATING HEAD (Swedge)** Company Supplied

**G.1.12 CASING SPEARS (Internal)** Company Supplied

**G.1.13 CASING CUTTERS (Internal)** Company Supplied

**G.1.14 CROSSOVER CASING TO DRILL PIPE** Company Supplied

**G.1.15 CASING SCRAPERS** Company Supplied

**G.2 CEMENTING EQUIPMENT**

**G.2.1 CEMENT UNIT** Company Supplied

**G.2.2 CEMENTING MANIFOLD**

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

**G.2.3 CEMENT KELLY** N/A

**G.2.4 CEMENTING TUBING** N/A

**H. INSTRUMENTATION/COMMUNICATION**

**H.1 DRILLING INSTRUMENTATION AT DRILLER'S POSITION**

**H.1.1 WEIGHT INDICATOR**

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

**H.1.2 STANDPIPE PRESSURE GAUGES**

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

**H.1.3 CHOKE MANIFOLD PRESSURE GAUGE**

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

**H.1.4 ROTARY SPEED TACHOMETER**

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

**H.1.5 ROTARY TORQUE INDICATOR**

: HITEC SMART DRILLING INSTRUMENTATION

**H.1.6 MOTION COMPENSATOR INSTRUMENTS**

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

**H.1.7 PUMP STROKE COUNTERS**

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

**H.1.8 TONG TORQUE INDICATOR**

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

**H.1.9 PIT VOLUME TOTALIZER**

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

**H.1.10 MUD FLOW INDICATOR**

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

**H.1.11 TRIP TANK INDICATOR**

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

**H.1.12 GENERAL ALARM SYS.**

yes/no: YES

**H.1.13 AUTOMATIC DRILLER**

Make/Type : HITEC SMART DRILLING INSTRUMENTATION

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

Make/Model : Houston Digital

**H.2 DRILLING PARAMETER RECORDER**

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

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

**H.3 INSTRUMENTATION AT CHOKE MANIFOLD**

**H.3.1 STANDPIPE PRESSURE GAUGE**

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

**H.3.2 CHOKE MANIFOLD PRESSURE GAUGE**

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

**H.4 STANDPIPE PRESSURE GAUGE**

Make/Type : Strain Gauges  
 : 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

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

**H.10.6 AEORNAUTICAL VHF TRANS**

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

**H.10.7 WATCH RECEIVER**

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

**H.10.8 SCRAMBLER**

Quantity no.: No  
Make/Model :

**H.10.9 TELEX**

Quantity no.: N/A  
Make/Model :

**H.10.10 SATELLITE COMM. SYS**

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

**1. PRODUCTION TEST EQUIPMENT**

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

**1.3.1 OIL LINE**

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

**1.3.2 GAS LINE**

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

**1.3.3 WATER LINE**

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

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

#### **I.3.4 AIR LINE**

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

#### **I.3.5 PILOT GASLINE**

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

#### **I.4 SPRINKLER SYSTEM**

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

#### **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**

**K. ACCOMMODATION**

**K.1 OFFICES**

Company Supplied

**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	1
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**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
----------	-----

**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
----------	---

**K.2.5 MESS SEATING CAPACITY**

Main mess	60
Aux. mess	N/A

**K.2.6 MEETING ROOMS**

Quantity	1
----------	---

**K.2.7 RECREATION ROOMS**

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

**K.2.8 OTHER ROOMS**

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

**L. SAFETY EQUIPMENT**

**L.1 GENERAL SAFETY EQUIPMENT**

**L.1.1 GENERAL PERSONNEL PROTECTIVE GEAR**

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

**L.1.2 EYE WASH STATIONS**

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

**L.1.3 DERRICK SAFETY EQUIPMENT**

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

**L.1.4 DERRICK CLIMBING ASSISTANT**

Make/Type

**L.1.5 FRESH AIR BLOWERS (Bug Blowers)**

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

**L.2 GAS/FIRE/SMOKE DETECTION**

**L.2.1 H2S MONITORING SYSTEM**

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

**L.2.2 COMBUSTIBLE GAS MONITORING SYSTEM**

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

**L.2.3 H2S DETECTORS (Portable)**

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

**L.2.4 CO2 GAS DETECTORS (Portable)**

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

**L.2.5 EXPLOSIMETERS**

Quantity no.: TBA  
Make/Type :

**L.2.6 FIRE/SMOKE DETECTORS IN ACCOMODATION**

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

**L.3 FIRE FIGHTING EQUIPMENT**

**L.3.1 FIRE PUMPS**

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

**L.3.2 HYDRANTS AND HOSES**

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

**L.3.3 PORTABLE FIRE EXTINGUISHERS**

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

**L.3.4 FIRE BLANKETS**

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

**L.3.5 FIXED FOAM SYSTEM**

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

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

**L.3.6 HELIDECK FOAM SYSTEM**

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

**L.3.7 FIXED FIRE EXTINGUISHING SYSTEM**

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

**L.3.8 MANUAL WATER DELUGE SYSTEM**

Protected spaces	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
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**L.5.2 BURN KITS**

Quantity	no.: TBA
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**L.5.3 RESUSCITATORS**

Quantity	no.: TBA
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Charged (spare) oxygen cylinders no.:

**L.5.4 STRETCHERS**

Quantity no.: TBA  
Type :  
Located at :

**L.6 HELIDECK RESCUE EQUIPMENT**

**L.6.1 STORAGE BOXES**

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

**L.6.2 EQUIPMENT**

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

**L.7 RIG SAFETY STORE**

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

**L.8 EMERGENCY WARNING ALARMS**

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

**L.9 SURVIVAL EQUIPMENT**

**L.9.1 LIFEBOATS**

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

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

**L.9.2 LIFERAFTS**

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

**L.9.3 RESCUE BOAT**

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

**L.9.4 LIFE JACKETS**

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

**L.9.5 LIFE BUOYS**

Make/Type : TBA  
Quantity no.: 10

**L.9.6 WORK VESTS**

Make/Type : TBA  
Quantity no.: 25

**L.9.7 ESCAPE LADDERS/NETS**

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

**L.9.8 DISTRESS SIGNALS**

Type : TBA  
Quantity no.: 1 SET

**M. POLLUTION PREVENTION EQUIPMENT**

**M.1 SEWAGE TREATMENT**

Make/Model : 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.