In Reply Refer To: MS 5231 August 29, 1995

Amoco Production Company
Attention: Mr. H. C. Van, Jr.
Post Office Box 50879
New Orleans, Louisiana 70150

Gentlemen:

Reference is made to the following plan received August 15, 1995:

Type Plan - Supplemental Development Operations Coordination Document
Lease - OCS 0590
Block - 177
Area - Ship Shoal
Activities Proposed - Wells H and I

In accordance with 30 CFR 250.34, this plan is hereby deemed submitted and is now being considered for approval.

Your control number is S-3750 and should be referenced in your communication and correspondence concerning this plan.

Sincerely,

[Orig. Sgd.] Kent E. Stauffer

For

Donald C. Howard
Regional Supervisor
Field Operations

bcc: Lease OCS 0590 POD File (MS 5032)
MS 5034 w/public info. copy of the plan
and accomp. info.

BNewton:cic:08/21/95:DOCDCOM
H. C. Van, Jr.
Manager, Environment, Health & Safety

August 24, 1995

File: HCV-LF

Minerals Management Service
Office of Field Operations
1201 Elmwood Park Boulevard
New Orleans, LA 70123-2394

Attention: Regional Supervisor

Revision to Supplemental Development
Operations Coordination Document
Ship Shoal Block 177, OCS-G-0590
Offshore, Louisiana

In accordance with Title 30 CFR Part 250.34 effective May 31, 1988, and
letters FO-2, dated October 12, 1988 effective October 24, 1988, FO-2-1,
dated September 2, 1989 and September 27, 1989, please find attached Amoco
Production Company's Revision to the Supplemental Development Operations
Coordination Document for operations to be conducted on Ship Shoal Block
177 OCS-G-0590.

This revision moves the location of well "I" 50' FWL of Block 177.

Amoco respectfully requests your earliest favorable attention to this
matter. Should further information be required, please contact Kathy
Schiro of this office at telephone 504/586-6643.

Sincerely,

H. C. Van, Jr.

HCV

Attachments
LIFE SAFETY & THROW RINGS
Fire-Fighting Equipment
(Both Dry Chemical & Light Water)
Warning Horns
Slow Cut Preventers
Safety Shut-Down Systems
As listed for Environmental!
Personnel Station Bells
For drilling and production
For drilling and production
For drilling
For drilling
For production
For drilling and production

Operations personnel will be in compliance with Title 30 CFR Part 250, Subpart C - Training. All personnel will be trained and will carry on drills and inspections to insure the proper maintenance and the ability to utilize all the existing equipment to the fullest extent to insure as safe an operation as possible.

There are no existing or planned monitoring systems for measuring environmental conditions for impact assessment in the lease area as none are required by the lease stipulations.

In accordance with 30 CFR 250.51(c), Amoco may be required to collect oceanographic, meteorological, and drilling unit performance data. Amoco will record and report this information when required.

A TABLE INDICATING THE SL, BHL, TVD, AND WATER DEPTH FOR EACH PROPOSED WELL. (THE BHL'S AND TVD'S MAY BE OMITTED FROM PUBLIC INFORMATION COPIES OF THE PLAN.)

Ship Shoal Block 177:

Well "H": Surface: 4,300' FSL & 1,350' FWL
Lat: 28deg 36' 09.36" Long: 91deg 15' 07.99"
BHL:
96' Water Depth

Well "I": Surface: 7,300' FSL & 50' FWL
Lat: 28deg 36' 38.57" Long: 91deg 15' 27.77"
BHL:
93' Water Depth

A CURRENT STRUCTURE MAP (8 1/2" X 11") OF THE EXPECTED PRODUCTIVE FORMATIONS SHOWING THE SL AND BHL OF EACH PROPOSED WELL. (THIS MAP MAY BE OMITTED FROM PUBLIC INFORMATION COPIES OF THE PLAN.)

NOTE: Amoco Production Company believes all geologic information submitted under this section to be exempt from disclosure under the Freedom of Information Act and its implementing regulations. All Geological and Geophysical data including interpretations thereof, appearing on the map(s) are the private and confidential property of Amoco Production Company. The publication or reproduction thereof without the written permission of said company is strictly prohibited.

Attachment No. 3 is a structure map on the 1300' sand mapping horizon, demonstrating structural relationships.
H. C. Van, Jr.
Manager, Environment, Health & Safety

August 10, 1995

File: HCV-LF

Minerals Management Service
Office of Field Operations
1201 Elmwood Park Boulevard
New Orleans, LA 70123-2394

Attention: Regional Supervisor

Supplemental Development Operations
Coordination Document
Ship Shoal Block 177, OCS-G-0590
Offshore, Louisiana

In accordance with Title 30 CFR Part 250.34 effective May 31, 1988, and letters FO-2, dated October 12, 1988 effective October 24, 1988, FO-2-1, dated September 2, 1989 and September 27, 1989, please find attached nine copies of Amoco Production Company's Supplemental Development Operations Coordination Document for operations to be conducted on Ship Shoal Block 177 OCS-G-0590.

Amoco respectfully requests your earliest favorable attention to this matter as drilling is scheduled to begin on September 1, 1995. Should further information be required, please contact me at telephone 504/586-6567.

Sincerely,

H. C. Van, Jr.

HCV

Attachments
SUPPLEMENTAL DEVELOPMENT OPERATIONS COORDINATION DOCUMENT

SHIP SHOAL BLOCK 177

OCS-G-0590

OFFSHORE, LOUISIANA

AMOCO PRODUCTION COMPANY
HARTY C. VAN, JR.
SENIOR PETROLEUM ENGINEERING ASSOCIATE
(504) 586-6567
NEW ORLEANS, LOUISIANA

August 10, 1995
A COMPLETE DESCRIPTION OF THE PROPOSED DEVELOPMENT ACTIVITIES TO BE UNDERTAKEN INCLUDING A TENTATIVE SCHEDULE OF THE DATES AND SEQUENCES FOR DRILLING WELLS AND INSTALLING FACILITIES.

Amoco Production Company 50%, and Texaco 50%, acquired Ship Shoal Block 177, OCS-G-0590, in the September 1955 lease sale for $1.215 MM. The block is located in the Gulf of Mexico approximately 34 miles southwest of Terrebonne Parish, Louisiana in approximately 90' of water.

Amoco's plans call for drilling two wells.

Activities proposed in the subject Development Operations Coordination Document are covered by a $3,000,000 area wide bond for subject lease.

Please reference Attachment No. 1 for the detailed Timing Schedule of the development plan.

A BRIEF DESCRIPTION OF THE TYPE OF DRILLING UNIT TO BE USED INCLUDING A DISCUSSION OF ITS IMPORTANT SAFETY AND POLLUTION-PREVENTION FEATURES.

The wells will be drilled with a jack-up type drilling rig, similar to Diamond's Ocean Columbia. The rig is equipped with all the pollution-prevention and drilling equipment required by Title 30 CFR Part 250, Subparts C - Pollution Prevention and D - Drilling Operations. See Attachment 2 for the rig description.

Ship Shoal 177 H location is planned as a disposable pilot hole. If successful, a horizontal well will be drilled off the "A" platform in Ship Shoal Block 177. Amoco's original intent was to drill a deviated well off the "A" platform and then sidetrack from that well bore and drill horizontally. Now it appears it is more economic to drill a disposable straight hole then move the rig to the A platform and subsequently drill the horizontal section. The I location will be drilled if another point of information is needed after drilling the platform well. Production will be processed by existing equipment at the Ship Shoal Block 177 "A" Platform.

A complete safety system will be installed to shut off the wellhead in the event of potentially environmentally damaging occurrences. This system will shut in a wing valve on the Christmas tree and if further progression of unwanted events are initiated, a lower master valve and a down hole surface controlled subsurface safety valve will shut to stop hydrocarbon flow. This safety system will sense and stop unwanted events such as over pressure, low pressure, high level, low level, fire and other characteristics of flow which could result in environmental damage. These systems will be installed and maintained in accordance with current MMS regulations.

Amoco will be in compliance with all applicable safety and pollution standards of the MMS, USCG, OSHA and EPA. These safety standards will include but not be limited to:

- Navigation Lights & Horns
- Survival Capsules
- For drilling and production
- For drilling and production
Life Rafts & Throw Rings  For drilling and production
Fire-Fighting Equipment  For drilling and production
(Both Dry Chemical & Light Water)
Warning Horns  For drilling
 Blow Out Preventers  For drilling
Safety Shut-Down Systems  For production
(As listed for Environmental)
Personnel Station Bills  For drilling and production

Operations personnel will be in compliance with Title 30 CFR Part 250, Subpart O - Training. All personnel will be trained and will carry on drills and inspections to insure the proper maintenance and the ability to utilize all the existing equipment to the fullest extent to insure as safe an operation as possible.

There are no existing or planned monitoring systems for measuring environmental conditions for impact assessment in the lease area as none are required by the lease stipulations.

In accordance with 30 CFR 250.51(c), Amoco may be required to collect oceanographic, meteorological, and drilling unit performance data. Amoco will record and report this information when required.

A TABLE INDICATING THE SL, BHL, TVD, AND WATER DEPTH FOR EACH PROPOSED WELL. (THE BHL'S AND TVD'S MAY BE OMITTED FROM PUBLIC INFORMATION COPIES OF THE PLAN.)

Ship Shoal Block 177:

Well "H": Surface: 4,300' FSL & 1,350' FWL
Lat: 28deg 36' 09.36" Long: 91deg 15' 07.99"
97' Water Depth

Well "I": Surface: 7,300' FSL & 0' FWL
Lat: 28deg 36' 38.57" Long: 91deg 15' 27.77"
97' Water Depth

A CURRENT STRUCTURE MAP (8 1/2" X 11") OF THE EXPECTED PRODUCTIVE FORMATIONS SHOWING THE SL AND BHL OF EACH PROPOSED WELL. (THIS MAP MAY BE OMITTED FROM PUBLIC INFORMATION COPIES OF THE PLAN.)

NOTE: Amoco Production Company believes all geologic information submitted under this section to be exempt from disclosure under the Freedom of Information Act and its implementing regulations. All Geological and Geophysical data including interpretations thereof, appearing on the map(s) are the private and confidential property of Amoco Production Company. The publication or reproduction thereof without the written permission of said company is strictly prohibited.

Attachment No. 3 is a structure map demonstrating structural relationships.

A BATHYMETRY MAP (8 1/2" X 11") SHOWING THE SL OF EACH PROPOSED FIXED STRUCTURE AND WELL.
Attachment No. 4 illustrates the surface locations of the proposed wells on a bathymetry map of the Block.

AN ANALYSIS OF ANY SEAFLOOR AND SUBSURFACE GEOLOGIC AND MANMADE FEATURES AND CONDITIONS WHICH MAY HAVE AN ADVERSE EFFECT ON THE PROPOSED OPERATIONS. THE ANALYSIS SHALL ADHERE TO THE PROVISIONS OF PARAGRAPH II.A OF NTL NO. 83-3.

Attachment No. 5, Shallow Hazard Report, confirms that the proposed surface locations are free of seafloor anomalies, surface faults and shallow gas accumulations.

As this lease was obtained in 1955 an archeological survey was neither required nor conducted.

The entire Marine High-Resolution Geophysical Survey Report for Block 177 was previously forwarded.

Amoco has complied with NTL 83-3 and will take all steps necessary to ensure that development and production operations are conducted in a competent manner, with a minimum risk to human life and the environment.

A SITE SPECIFIC OSCP AS DESCRIBED IN 30 CFR 250.42 OR A BRIEF DESCRIPTION OF THE APPROVED COMPANY REGIONAL OSCP FOR THE GOM THAT INCLUDES, AS IT PERTAINS TO THE PROPOSED OPERATIONS, (1) IDENTIFICATION OF THE PRIMARY LOCATION OF CONTAINMENT AND REMOVAL EQUIPMENT, (2) AN ESTIMATION OF THE TIME REQUIRED FOR MOBILIZATION, TRANSPORTATION, AND DEPLOYMENT ONSITE OF THE EQUIPMENT AND MATERIALS, AND (3) A DISCUSSION WHICH IDENTIFIES THE ZONE(S) THAT APPROPRIATE AND AVAILABLE TRAJECTORY ANALYSES INDICATE MAY BE IMPACTED BY AN OIL SPILL, THE ENVIRONMENTALLY SENSITIVE RESOURCES AND AREAS WITHIN THE IMPACT ZONE(S), AND THE STRATEGIES TO BE USED TO PROTECT THESE RESOURCES FROM OIL SPILLS. IN THE DISCUSSION, IDENTIFY THE SPECIFIC SOURCE DOCUMENTS WHICH WERE USED TO DETERMINE THE IMPACT ZONE(S), THE ENVIRONMENTALLY SENSITIVE RESOURCES AND AREAS THAT COULD BE AFFECTED, AND THE OIL SPILL RESPONSE STRATEGIES.

Amoco's Oil Spill Contingency Plan is on file with the MMS and was last approved by the MMS on January 4, 1993. Amoco has submitted its 1995 OSCP and is currently waiting approval. This plan is considered by Amoco to be a management tool. Its function is to provide the background and planning that are necessary in order to be prepared for rapid and judicious response in the event of a spill. It is not intended to limit or direct the activities of those responsible for containment and cleanup in the event of an actual spill. Under the emergency conditions of a spill, the decisions that must be made will be governed by conditions at the time of the spill and those occurring through the containment and cleanup phases.

Amoco's OSCP addresses company policies and procedures for responding to spills, hierarchy of personnel responsibilities, instructions for notification of spill, and information on various emergency procedures.

To help minimize the possibility of occurrence of a spill, Amoco will utilize state-of-the-art drilling and blowout prevention equipment and the best possible drilling practices by thoroughly trained personnel. In the
unlikely event of an accidental spill, Amoco will utilize Clean Gulf Associates (CGA) equipment for cleanup purposes. The primary stockpile for this operation is located in Grand Isle, Louisiana, but Amoco may utilize additional stockpiles in other Louisiana, Texas, Alabama and Florida locations, if they are needed.

CGA has five general types of equipment -- fast response open-sea skimmer systems, a high volume open-sea skimmer system, shallow water skimmer systems, communications equipment, and boat and helicopter spray systems. CGA also maintains a stockpile of dispersant which can be applied by boat, helicopter, or fixed-winged aircraft. Specific information on CGA equipment and supplies is contained in the CGA Operations Manual. Response and resource mobilization plans are outlined in Amoco's Oil Spill Contingency Plan along with the CGA Operations and "Ready Reference" Equipment Manuals.

In addition to those systems commonly utilized by industry to prevent pollution, Amoco is a member of Clean Gulf Associates which was founded in 1972 as a non-profit organization of energy companies cooperating to provide oil containment and clean-up capabilities in the Gulf of Mexico.

The organization contracts with Halliburton Services, a division of the Halliburton Company, to procure and maintain in 24-hour readiness the most advanced oil spill containment and clean-up equipment available and to train personnel of member companies in its proper use. In addition, Amoco has contracted with Peterson-Reidel and International Cleanup, Inc. to provide trained personnel to respond on a 24 hour per day basis to any spill as directed by Amoco.

Existing CGA oil spill skimming equipment with beach protection and bird cleaning stations can be on hand within 13.0 hours in the event of a spill.

**Procurement Time**

Acquire Vessel/Boat from WD90 4.0 hrs. *3 hrs. used to acquire personnel
Field to Fourchon *2 hr used to assemble equipment

<table>
<thead>
<tr>
<th>Activity</th>
<th>Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Subtotal</td>
<td>4.0 hrs.</td>
</tr>
<tr>
<td>Load Equipment</td>
<td>1.0 hr.</td>
</tr>
<tr>
<td>Travel Time Inland Waters</td>
<td>0.5 hrs. @ 9.2 mph</td>
</tr>
<tr>
<td>Travel Time Gulf Waters</td>
<td>7.0 hrs. @ 11.5 mph</td>
</tr>
<tr>
<td>Deploy equipment</td>
<td>0.5 hrs.</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>13.0 hrs.</td>
</tr>
</tbody>
</table>

This equipment is maintained on standby and in a ready state at locations such as Panama City, Florida; Theodore, Alabama; Venice, Marrero, Metairie, Grand Isle, Houma, Intracoastal City, and Cameron, Louisiana; Texas City, Galveston, Fulton, Port Aransas, and Corpus Christi, Texas.

Amoco will be in compliance with all applicable safety and pollution standards of the MMS, USCG, OSHA, and the EPA. All personnel will be trained in the proper maintenance of existing equipment and will participate in drills and inspections designed to enhance their ability to utilize the equipment to its fullest extent and ensure as safe an operation as possible.

The main emphasis of Amoco's present lease area spill contingency planning will be on at-sea containment and mechanical recovery. However, this
contingency planning effort does not discount the possibility of a spill reaching a sensitive coastal region.

According to the Draft EIS, MMS 95-0017, Figure IV-2, Ship Shoal Block 177 is located within Oil Spill Launch Site C38 and any spill in this site would affect Land Segments 12, 13, 14, 15 and 16 which are Cameron, Vermilion, New Iberia, St. Mary and Terrebonne Parishes in Louisiana. According to Table 6 in MMS 95-0026, the respective spill probabilities are 9%, 9%, 5%, 2% and 2% respectively.

A spill in these land segments would affect those biologically sensitive areas shown on Louisiana Maps 5 and 6 of Volume II of the CGA Operations Manual. Amoco would initiate the outlined protection response modes for the affected biologically sensitive area as provided in the CGA Manual for Louisiana Maps 5 and 6.

In the unlikely event Amoco's cleanup activities require additional support, the U. S. Coast Guard has Basic Ordering Agreements (BOA's) with local cleanup companies throughout the Gulf. These companies are used on a rotational basis. For large spills, the USCG Gulf Strike Team, located in Mobile, Alabama, is available upon request by the on-scene coordinator.

In addition, Amoco is a charter member of the Marine Preservation Association (MPA) and the Marine Spill Response Corporation (MSRC) and would exercise the use of MSRC personnel and equipment for spill response and cleanup in the event of a large spill. See Attachment 6 for information on MSRC.

A DISCUSSION OF ANY NEW OR UNUSUAL TECHNOLOGY TO BE EMPLOYED. THIS DISCUSSION MAY BE OMITTED FROM PUBLIC INFORMATION COPIES OF THIS PLAN. (FOR POE'S THAT ARE SUBJECT TO CSM CONSISTENCY REQUIREMENTS, THIS INFORMATION WILL BE PROVIDED WHEN COMPLYING WITH THE ENVIRONMENTAL INFORMATION REQUIREMENTS OF NTL NO. 86-09 WHICH ARE PRESENTED LATER IN THE PLAN.)

No new or unusual technology will be employed during this proposed development operation.

A DISCUSSION OF THE MEASURES THAT HAVE BEEN OR WILL BE TAKEN TO SATISFY THE REQUIREMENTS OF APPLICABLE OPERATIONAL LEASE STIPULATIONS.

The lease agreement for this Block contains no unusual operational lease stipulation requirements.

A DISCUSSION OF THE QUANTITY, RATES OF DISCHARGE, AND COMPOSITION OF SOLID AND LIQUID WASTES AND POLLUTANTS LIKELY TO BE GENERATED BY ONSHORE AND OFFSHORE ACTIVITIES AND TRANSPORTATION OPERATIONS (INCLUDING, BUT NOT LIMITED TO, DRILLING MUDS AND CUTTINGS, PRODUCED WATER SEWAGE, AND CHEMICALS): THE BASIS FOR DETERMINING THE COMPOSITION, QUANTITIES AND RATES OF DISCHARGE OF POLLUTANTS: AND PLANS FOR TREATING, STORING, TRANSPORTING, AND DISPOSING OF SUCH WASTES AND POLLUTANTS.

Any discharges from the drilling rig will be treated and monitored as required by the EPA NPDES permit for the Block (SS 177 GMG290005-076A). -7-
The estimated solid and liquid drilling waste quantities expected to be discharged from each well from the proposed activities are given below:

<table>
<thead>
<tr>
<th>Drilling Cuttings</th>
<th>805 bbl/well</th>
</tr>
</thead>
<tbody>
<tr>
<td>Drilling Muds</td>
<td>97 bbl/well</td>
</tr>
</tbody>
</table>

A brief discussion of these wastes follows. All discharges will be in compliance with the EPA NPDES Permit. The drilling cuttings from this operation will amount to approximately 805 bbl/well. These cuttings, generated at the drill bit and through chemical and mechanical erosion of the well-bore walls, are brought to the surface by the drilling muds. The cuttings are separated from the muds by fine screen shakers and centrifugal separators. After separation, the cuttings are discharged overboard and the muds are retained. The anticipated drilling cuttings discharge volumes and rates are based on the length of the interval to be drilled, hole size, estimated hole washout, and the projected time to drill the interval. See Attachment No. 1, Timing Schedule.

Approximately 97 bbl/well of drilling fluids will be discharged. These discharges include occasional excess cement slurry. The composition of drilling muds used in a particular well drilling program is determined by the conditions encountered as the well is being drilled. Components of the drilling fluid for these wells may include any or all of the following: barite, bentonite, caustic soda, lignosulfonate, lignite, aluminum stearate, soda ash, phosphate, gilsonite, polyanionic cellulose, polyacrylamide, starch, bicarbonate of soda, lime, lost circulation material including KWIK SEAL and walnut hulls, carbomethylcellulose (CMS), non-toxic lubricants including COASTALUBE, ENVIROLUBE, DL-100 and DATALUBE, non-toxic spotting fluids including SPOTTY, NO-OIL, COASTASPOOT, GLO-2000, and bacteriacides excluding halogenated phenols. Any drilling mud, drill cuttings, sand, or other solids will not be discharged into the Gulf unless the toxicity as measured by the EPA "Drilling Fluids Toxicity Test" is above the 30,000 ppm limitation. In addition, no discharges that cause a sheen to appear on the surface of the water, will be made.

The drilling mud program is based on using several of the eight approved generic fluids which have been tested to establish toxicity and bioassay data as part of the Mid-Atlantic Bioassay Program. Special additives may be required on a non-routine basis to help free differentially stuck pipe. These additives are inert, or if mixed with mineral oil, will not be discharged into the Gulf unless all of the free oil has been removed. Any oil contaminated muds will be transported to shore for disposal at an approved facility or sold back to a mud company. All drilling rig discharges will be in compliance with the EPA NPDES Permit.

Solid wastes other than those generated at the onshore base will include combustibles (plastic containers, rags, miscellaneous timber, and paper from charts and forms) as well as some metals generated during the drilling operations. The amount of combustibles generated will be approximately 500 cu. ft. per day during the drilling operations. The drilling and completion operations are expected to take 10 days. The combustibles will be compacted and/or collected in metal trash containers and shipped to the onshore support base for incineration or disposal at an approved disposal facility. Some of the metal, may be reused and reworked. The remaining metal wastes will be transported to the onshore base and sold as scrap. Approximately 300 lb/wk of scrap metal is expected during the drilling phase. This figure is highly variable depending on the phase and circumstances of the operations.
Solid wastes generated at the onshore support base will be variable depending on a variety of factors including the level of drilling and installation activities, the number of supply vessels operating and their travel frequencies, and the number of onshore support personnel required. These wastes, consisting primarily of packing materials, containers, clothes, drums, cables, spools, and domestic refuse, will be recycled or reclaimed. The remaining material will be delivered to an approved disposal facility.

The estimated solid and liquid waste quantities expected to be generated from the proposed activities are given below.

- **Sanitary Wastes (10 days @ 35 bbl/day)** = 350 bbl
- **Solid Wastes:**
  - **Combustibles (10 days @ 500 cu ft/day)** = 5,000 cu ft
  - **Metals (10 days @ 300 lb/week)** = 429 lb
  - **Domestic Wastes (10 days @ 100 bbl/day)** = 1,000 bbl

Approximately 350 bbl of sanitary wastes will be generated. Sanitary wastes originate from commodes and urinals in the drilling rig and tugs. These facilities are equipped with sewage treatment plants approved by the USCG. The sewage treatment plant of the drilling rig has an approximate limit of 85 bbl/day or 120-man capacity. Peak periods of use will occur at 0600, 1200, and 1800 hours.

Domestic wastes from sinks, showers, and washing machines aboard the tugs will not contain any floating solids. The composition of the liquid domestic wastes is freshwater used for cooking, drinking, and washing and is discharged overboard. The total volume of these wastes will be approximately 1,000 bbl, depending on the size of the vessel crews and the number of other company and service personnel on board.

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A DISCUSSION OF THE MEASURES THAT HAVE BEEN OR WILL BE TAKEN TO SATISFY THE REQUIREMENTS OF 30 CFR 250.67 (c) REGARDING H2S AREA CLASSIFICATION AND CONTINGENCY PLANS.

As no previously drilled wells in the area encountered any H2S, Amoco requests that Ship Shoal Block 177 be approved by the Regional Supervisor as an operations area where the absence of H2S has been confirmed.

CERTIFICATE(S) OF COASTAL ZONE CONSISTENCY, AS REQUIRED BY 15 CFR 930 AND DISCUSSED IN SECTIONS III AND IV OF NTL NO. 86-09, PREPARED IN THE FORMAT PRESCRIBED IN SECTION IV OF THE ENCLOSURE TO NTL 86-09.


A LIST SHOWING THE PROJECTED EMISSIONS OF SO2, TSP, NOX, CO, AND VOC. THE LIST SHALL INCLUDE ALL PROJECTED EMISSIONS FROM EACH SOURCE AND FROM EACH OCS FACILITY EXPRESSED IN POUNDS PER DAY AND IN TONS PER YEAR FOR EACH YEAR OF OPERATION AND THE BASIS FOR ALL CALCULATIONS. A SCHEMATIC DRAWING WHICH IDENTIFIES THE LOCATION AND ELEVATION OF EACH SOURCE ON EACH OCS FACILITY SHALL ALSO BE INCLUDED.
Please reference Attachment No. 7 "Air Quality" for specific required data on air emissions during the drilling and installation operations. The drilling rig emission producing equipment is located within the rig hull and the average elevation of each source is 60 feet above the water surface.

IF PROJECTED EMISSIONS ARE BASED ON THE USE OF EMISSION CONTROL TECHNOLOGY, INFORMATION ON THE SOURCE, THE TECHNOLOGY APPLIED, THE REDUCTION ACHIEVED, AND THE PROPOSED MONITORING SYSTEM TO BE USED TO MEASURE EMISSIONS SHALL BE PROVIDED. THE BASIS FOR ALL CALCULATIONS SHALL BE PROVIDED.

Projected emissions calculations were not based on the use of emission control technology and emissions proposed in this plan do not exceed allowable limitations.

IF PROJECTED EMISSION OF ANY OF THE AIR POLLUTANTS IS GREATER THAN THE EMISSION EXEMPTION RATE AS DEFINED IN 30 CFR 250.45(d), THE INFORMATION REQUIRED BY 30 CFR 250.45(e) THROUGH (i) SHALL BE PROVIDED.

Emissions proposed in the plan will not exceed allowable limitations.

ENVIRONMENTAL INFORMATION, AS DISCUSSED IN SECTIONS I, II, AND IV, OF NTL NO. 86-09, PREPARED IN ACCORDANCE WITH GUIDELINES IN SECTIONS II.A, II.B, OR III OF THE ENCLOSURE TO NTL NO. 86-09. THIS ENVIRONMENTAL INFORMATION SHOULD BE PROVIDED IN A SEPARATE VOLUME. (PLEASE NOTE THAT THE TERM "ENVIRONMENTAL REPORT" AS USED IN NTL NO. 86-09. IS SYNONYMOUS WITH THE "ENVIRONMENTAL INFORMATION" REQUIRED BY THIS PARAGRAPH.)

The Environmental Report required by Section 307 of the Coastal Zone Management Act (CZMA) was previously forwarded.

A BRIEF DESCRIPTION OF THE ONSHORE BASE TO BE USED TO SUPPORT THE DEVELOPMENT ACTIVITIES INCLUDING INFORMATION AS TO WHETHER THE FACILITIES AT THE BASE ARE EXISTING, PROPOSED, OR ARE TO BE EXPANDED; A BRIEF DESCRIPTION OF SUPPORT VESSELS TO BE USED AND INFORMATION CONCERNING THEIR FREQUENCY OF TRAVEL; AND A MAP SHOWING THE LEASE RELATIVE TO THE SHORELINE WHICH DEPICTS PROPOSED TRANSPORTATION ROUTES. (THIS INFORMATION IS REQUIRED ONLY TO THE EXTENT THAT IT IS NOT PROVIDED WHEN COMPLYING WITH THE REQUIREMENTS OF THE ENVIRONMENTAL INFORMATION SECTION LISTED ABOVE.)

Operations will be conducted out of Amoco's base facility at Fourchon, Louisiana located 6 miles southwest of Leeville, Louisiana. No expansion of the existing facility is proposed. The base can be reached by state highway and is equipped with both a heliport and boat handling facility. Ample parking, sewage, water, and electricity are available. There are no known additional impacts that will result from the proposed activities.

Please reference Attachment No. 8, Location Map, which shows the location of Ship Shoal Block 177 in relation to the shoreline and the proposed vessel transportation routes.
WHEN ANY WELL OR ASSOCIATED ANCHORING LOCATIONS ARE PROPOSED IN WATER DEPTHS GREATER THAN 400 METERS, AN ANALYSIS OF THE EVIDENCE AND CONSEQUENCES OF GEOLOGICAL PHENOMENA (SUCH AS HYDROCARBON CHARGED SEDIMENTS, SEISMIC WIPE-OUT ZONES, ANOMALOUS MOUNDS OR KNOLLS, GAS VENTS, OR OIL SEEPS) THAT COULD SUPPORT CHEMOSYNTHETIC ORGANISMS.

As these proposed development operations are in water depths of less than 400 meters, this requirement does not apply.

DURING THE REVIEW OF A DCD, THE SUBMITTAL OF COPIES OF CDF SEISMIC LINES NEAR PROPOSED WELL LOCATIONS MAY BE REQUIRED.

In accordance with Title 30 CFR Part 250.33(b)(1)(ii), full scale and appropriate, migrated Common Depth Point seismic lines are provided as Attachment No. 9. The lines for Block 177 are 1, 2, 3, 102, and 103. The lines include Fathometer, Magnetometer, Side Scan Sonar, Sub-bottom Profiler, Digital Dual Display and 3-D Seismic. The MMS is requested to acknowledge receipt of this material by signing the enclosed copies of Amoco Form 205 and returning same to Amoco Production Company.

THE NAME, ADDRESS, AND TELEPHONE NUMBER OF AN AUTHORIZED REPRESENTATIVE OF THE LESSEE TO WHOM INQUIRIES MAY BE DIRECTED.

HARTY C. VAN, JR.
SENIOR PETROLEUM ENGINEERING ASSOCIATE
AMOCO PRODUCTION COMPANY
P. O. BOX 50879
NEW ORLEANS, LOUISIANA 70150
(504) 586-6567

-11-
Ship Shoal 177  
OCS-G-0590  
Timing Schedule

**Start Date:** September 1, 1995

<table>
<thead>
<tr>
<th>August</th>
<th>September</th>
<th>October</th>
</tr>
</thead>
<tbody>
<tr>
<td>Drill &amp; Complete H</td>
<td></td>
<td>Drill &amp; Complete I</td>
</tr>
</tbody>
</table>
OCEAN COLUMBIA

MARATHON LETOURNEAU CLASS 82-SD-C
INDEPENDENT LEG
JACKUP DRILLING UNIT

DIAMOND OFFSHORE

15415 Katy Freeway
Houston, Texas 77094

Telephone: (713) 492-5300
Telex: 462-0052 DIAMDRL
Fax: (713) 492-5310

ATTACHMENT NO. 2
OCEAN COLUMBIA

GENERAL DESCRIPTION AND EQUIPMENT LIST

A. GENERAL DESCRIPTION:

The OCEAN COLUMBIA is a Marathon Letourneau, Class 82-SD-C independent leg cantilevered type jackup drilling unit designed to operate in water depths from sixteen feet (16') to two hundred fifty feet (250') and for drilling to a nominal well depth of 20,000 feet.

PRINCIPAL CHARACTERISTICS AND DIMENSIONS:

<table>
<thead>
<tr>
<th>Description</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Length overall with heliport</td>
<td>277' 3&quot;</td>
</tr>
<tr>
<td>Length overall of hull</td>
<td>207' 4&quot;</td>
</tr>
<tr>
<td>Width overall of hull</td>
<td>176' 0&quot;</td>
</tr>
<tr>
<td>Depth overall of hull</td>
<td>27' 0&quot;</td>
</tr>
<tr>
<td>Number of legs</td>
<td>3</td>
</tr>
<tr>
<td>Overall length of legs and spud cans</td>
<td>360' 4&quot;</td>
</tr>
<tr>
<td>Longitudinal leg centers</td>
<td>121' 8&quot;</td>
</tr>
<tr>
<td>Transverse leg centers</td>
<td>120' 0&quot;</td>
</tr>
<tr>
<td>Spud tank diameter (across flats)</td>
<td>40' 0&quot;</td>
</tr>
<tr>
<td>Spud tank height</td>
<td>21' 0&quot;</td>
</tr>
<tr>
<td>Preload spud can load</td>
<td>5,730 lbs/ft²</td>
</tr>
<tr>
<td>Spud tank area</td>
<td>1,257 ft²</td>
</tr>
<tr>
<td>Loadline draft</td>
<td>10.58'</td>
</tr>
<tr>
<td>Jack assembly leg length requirement</td>
<td>46' 6&quot;</td>
</tr>
<tr>
<td>Water tower length (flange to bottom)</td>
<td>126' 0&quot;</td>
</tr>
<tr>
<td>Top of rotary table to bottom of barge</td>
<td>47' 6&quot;</td>
</tr>
</tbody>
</table>

NOMINAL VARIABLE DECK LOAD (MAXIMUM):

<table>
<thead>
<tr>
<th>Condition</th>
<th>Load</th>
</tr>
</thead>
<tbody>
<tr>
<td>Operating</td>
<td>3,451 kips</td>
</tr>
<tr>
<td>Storm</td>
<td>2,451 kips</td>
</tr>
<tr>
<td>Jacking</td>
<td>2,451 kips</td>
</tr>
<tr>
<td>Transit</td>
<td>2,451 kips</td>
</tr>
</tbody>
</table>

WATER DEPTH RATING:

<table>
<thead>
<tr>
<th>Condition</th>
<th>Depth</th>
</tr>
</thead>
<tbody>
<tr>
<td>Minimum (depending on loading)</td>
<td>13&quot;</td>
</tr>
<tr>
<td>Maximum (depending on leg penetration)</td>
<td>250'</td>
</tr>
<tr>
<td>Non-hurricane season</td>
<td>200'</td>
</tr>
<tr>
<td>Hurricane season (100 knot wind and 42 ft. waves)</td>
<td>200'</td>
</tr>
</tbody>
</table>

*With rig off-loaded, spud cans de-watered and all mud removed from their tops, rig can obtain a 11.80 ft. draft.
DRILLING AREA:

12 ft. to 40 ft. out from hull (aft) with 10 ft. either side of center (port/starboard.)

MAXIMUM CAISSON OD THAT IS DRIVABLE:

Maximum outside diameter caisson that can be driven with the rotary skid and pollution pan removed:

- No other modifications (max.) 48"
- Minor modifications such as unpin or remove rotary beams, etc. (max.) 60"
- Removal of BOP tracks, guide dolly tracks, some welding, etc. as controlled by main structural beams in drill floor (max.) 84"

AIR GAP:

- Hurricane season (under 100' WD) 40' to 50'
- Hurricane season (over 100' WD) 50' to 43'
- Non-hurricane season (under 100' WD) 26' to 34'
- Non-hurricane season (over 100' WD) 34' to 33'

Maximum as controlled by water tower with 10' submerged (93') and lifeboats (92')

NOMINAL TOW SPEED (using three (3) 4,200 hp tugs): 5 knots.

CAPACITIES:

- Bulk mud 3,850 cu. ft.
- Bulk cement 3,850 cu. ft.
- Liquid mud 1,502 bbls
- Diesel fuel 2,287 bbls
- Potable water 983 bbls
- Drill water 6,655 bbls
- Sack material 4,000 sacks

QUARTERS:

Accommodations are provided for 67 men, complete with all normal living facilities, with a sick bay for two (2) men.
DRILLING LOADS:
The cantilever and associated structural components will accept the following maximum loads:

Drive pipe support system 120 kips
Setback load 450 kips
Rotary load 750 kips
Hook load 1,000 kips
- Combined hook, rotary, setback and drive pipe support 1,300 kips

Note: Total varies with drilling slot location.

HELIDECK:
70 ft. diameter cantilevered helicopter landing area on forward end of drilling unit designed to accommodate Sikorsky S-61 helicopter.

JACKING:
Twelve (12) motors power the movement of each of three (3) legs. Each motor is 600 volt 60-cycle AC Induction type motor. Power for AC motors is provided by main AC generators operated at one central console. The jacking system is capable of jacking the barge at a rate of 1-1/2' per minute.

CLASS:
ABS Maltese Cross A1 Self-Elevating Mobile Drilling Unit.

DESIGN:
Marathon Letourneau Class 82-SD-C cantilevered jackup drilling unit.

COMMISSIONED:
Marathon Letourneau of Brownsville, Texas in 1978.

DOCUMENTATION:
U.S. Coastwise with USCG Certificate of Inspection.
B. DRILL FLOOR EQUIPMENT

1. Drawworks - National Model 1220-UE, driven by two (2) EMD D79 800 hp DC motors. Drawworks complete with Lebus grooving for 1-3/8 in. drill line, makeup and breakout catheads, crown-o-matic device, positive clutch, and master control.

   - One (1) Elmagco Model 7838 electric brake with backup power supply consisting of eighteen (18) lead acid batteries continuously charged.

2. Derrick - Pyramid 30' x 30' x 160' standard derrick rated at 1,044,000 lbs. static hook load capacity.

   The derrick is complete with all standard accessories which include:

   - The racking platform to accommodate 20,000 ft. of 5 in. drill pipe and bottom hole assembly, complete with safe catwalk and windbreak frame.
   - One (1) adjustable casing stabbing platform (26 ft. to 46 ft. above derrick floor) complete with air hoist and safety lines.
   - Crown safety platform complete with safe handrails.
   - Derrick is complete with Class 1, Division 1, explosion proof fluorescence fixtures, all with safety chains.

3. Traveling equipment consisting of:

   - One (1) National 750FA crown block, (500 ton) with seven (7) 60 in. sheaves grooved for 1-3/8 in. drill line, complete with sand line sheave grooved for 9/16 in. sand line.
   - One (1) National traveling block, Model 660HA (500 ton) with six (6) 60 in. sheaves grooved for 1-3/8 in. drill line and Dreco traveling block guide track assembly.
   - One (1) National H500 (500 ton) hook.
   - One (1) Continental Emsco LB-650 swivel (650 tons) static, 471 ton API load bearing.
   - One (1) Varco TDS-3 Top Drive (500 tons) with a GE-752 series drilling motor, complete with pipe handler equipped to handle 5 in. drill pipe with tool joints 6 in. to 7-3/8 in, remote upper safety valve and raised backup system.

4. One (1) National Type EB drill line anchor rated for 100,000 lb. line pull with 1-3/8 in. drill line.

5. Rotary - One (1) 37-1/2 in. National C-375 rotary table, driven by an EMD D79 800 hp DC motor (load capacity 650 tons).

   - One (1) National C-700, two speed rotary transmission.

   Low gear ratio = 2:03:1 with maximum torque of 26,000 ft./lbs.
   High gear ratio = 1:1.02 with maximum torque of 13,000 ft./lbs.
- One (1) Varco MPCH No. 6600 hinged pin master bushing.
- One (1) Varco HDP pin type kelly drive bushing.
- One (1) set of No. 3 API 8-5/8 in. insert bowls for drill pipe and drill collars.
- One (1) pneumatic operated EATON disc brake with booster which allows rapid brake shoe changing without disassembly of equipment.

6. One (1) Mathey wire line measuring unit with up to 15,000 ft. of .092 wire line, line guide, depth indicator driven by a hydraulic motor.

7. One (1) Eastman deviation recorder, complete with one (1) recording instrument 0° to 6° and one (1) recording instrument 0° to 12°.

8. Standard drill floor instrumentation consisting of Driller's console with weight indicator and related indicators for mud pump pressure and SPM, mud pits and trip tank volumes, mud flow, mud gain/loss, rotary torque and RPM.

9. Air winches consisting of:
   
   - One (1) on drill floor (4,000 lbs. nominal rating)
   - One (1) on drill floor (10,000 lbs. nominal rating)
   - One (1) on cellar deck (10,000 lbs. nominal rating)
   - One (1) on cellar deck (4,000 lbs. nominal rating)
   - One (1) USCG approved "man-rider" Type for Texas deck basket (2,200 lbs. nominal rating)
C. MUD SYSTEM AND EQUIPMENT

1. Two (2) National 12P-160 triplex mud pumps, each pump chain driven by two (2) EMD D79 800 hp DC motors. Each pump complete with discharge and suction pulsation dampeners and Demco Model 2404-50282 shear pin relief valve. Mud pump discharge lines, 4.063 ID x 5,000 psi WP with 4 in. x 5,000 psi WP valves run from mud pumps to standpipe manifold. Pumps normally equipped with 6-1/2 in. liners and rated at 3,880 psi maximum.

2. Mud service pumps consisting of:
   - Two (2) Mission 6 x 8 centrifugal supercharging pumps driven by 50 hp AC motors. Rated output of 1,000 gpm at 40 ft. of head with 17 ppg mud.
   - Two (2) Mission 6 x 8 centrifugal mud mix pumps driven by 100 hp AC motors. Rated output of 1,200 gpm at 100 ft. of head with 17 ppg mud.
   - Two (2) Mission 6 x 8 centrifugal mud cleaning pumps driven by 100 hp AC motors. Rated output of 1,200 gpm at 100 ft. of head with 17 ppg mud.

3. Mud cleaning equipment consisting of:
   - Two (2) Brandt Advanced Technology Linear Cascading System (ATL-CS) machines. The ATL-CS incorporates a circular motion scalping shaker and a linear motion fine screening shaker into a single modular unit capable of processing large volumes of mud and cuttings at the flow line. Each machine can process up to 900 gpm of 14.0 ppg drilling mud utilizing 20, 40 and 175 mesh screens.
   - One (1) Swaco Model 3-12 desander, with three (3) 12 in. cones (1,500 gpm capacity).
   - One (1) Swaco Model 8T-4 desilter, with sixteen (16) 4 in. cones (1,200 gpm capacity).
   - One (1) Swaco Model 4T4NRM-126 mud cleaner with eight (8) 4 in. cones. Under flow is fed over a vibrating shaker basket (600 gpm capacity).

4. One (1) Diamond Offshore designed mud/gas separator, 48 in. OD x 12 ft. tall, atmospheric type with 8 in. OD gas vent line extending to top of derrick, and with 8 in. liquid leg.

5. One (1) Swaco vacuum degasser with Ingersol Rand Model 255 vacuum compressor (875 gpm capacity).

6. Liquid mud pits consisting of:
   - 2 - active pits
   - 1 - reserve pit
   - 1 - slugging pit
   - 1 - pill pit
   - Sand traps
   - Trip tank

<table>
<thead>
<tr>
<th>Requirement</th>
<th>Capacity</th>
</tr>
</thead>
<tbody>
<tr>
<td>2 - active pits</td>
<td>410 bbls each</td>
</tr>
<tr>
<td>1 - reserve pit</td>
<td>359 bbls each</td>
</tr>
<tr>
<td>1 - slugging pit</td>
<td>42 bbls each</td>
</tr>
<tr>
<td>1 - pill pit</td>
<td>111 bbls each</td>
</tr>
<tr>
<td>Sand traps</td>
<td>120 bbls each</td>
</tr>
<tr>
<td>Trip tank</td>
<td>50 bbls each</td>
</tr>
</tbody>
</table>

TOTAL CAPACITY 1,502 bbls
7. Three (3) Lightin' Model 85Q20 20 hp mud agitators, one (1) in each of the active and reserve pits.

8. Nine (9) Demco 33-LP (50 psi) low pressure mud guns, two (2) in each of the three main pits, two (2) in the pill pit, and one (1) in the slug pit.

9. Pneumatic bulk and cement storage transfer system consisting of:
   - Two (2) 1,925 cu. ft. bulk mud storage P-tanks (3,850 cu. ft. total capacity).
   - Two (2) 1,925 cu. ft. bulk cement storage P-tanks (3,850 cu. ft. total capacity).
   - One (1) 70 cu. ft. pressurized surge tank for use in mud mix area.
   - Manifold and crossover piping to allow bulk mud and cement to be taken on board the rig from either the port or starboard side.
   - One (1) removable crossover line that allows bulk or cement to be stored in any P-tank.

10. Sack storage area located near the mud pits and mixing hoppers, capacity approximately 4,000 sacks.

11. Two (2) Mission low pressure mud hoppers, one (1) sack fed and one (1) surge tank or sack fed. Approximately 600 lb./min. feed rate.

12. One (1) set basic mud testing equipment consisting of mud balance, viscosity funnel/cup, and sand content equipment, complete with sink and cabinet.

13. One (1) 5 in. dual standpipe manifold, 5,000 psi WP with 4.063 ID standpipes; outlets for pressure gauges, sensors, and transducers with a crossover line to the choke manifold.

14. Two (2) rotary hoses, 3 in. ID x 60 ft., 5,000 psi WP, with 4 in. Weco end connections (10,000 psi test).

15. One (1) 50 BBL trip tank. Continuous fill-up of well bore is accomplished via one (1) 2 x 3 Mission centrifugal transfer pump driven by a 15 hp explosion proof AC motor. Rated output of pump is 250 gpm at 40' ft. of head with 17 ppg mud.

16. One (1) lot of various length chiksan lines with 2 in. Weco No. 1502 end couplings (10,000 psi WP).
D. WELL CONTROL EQUIPMENT

1. Blowout preventers (H₂S rated) consisting of:
   - One (1) 13-5/8 in. - 10,000 psi WP Cameron Type "U" double ram blowout preventer with manual locks, four (4) 4-1/16 in. x 10,000 psi WP flanged outlets and 10M flanged connections top and bottom.
   - One (1) 13-5/8 in. - 10,000 psi WP Cameron Type "U" single ram blowout preventer with manual locks, two (2) 4-1/16 in. x 10,000 psi WP flanged outlets and 10M flanged connections top and bottom.
   - One (1) 13-5/8 in. - 5,000 psi WP Shaffer Spherical annular preventer with 10M flange lower and studded 5M upper connections.
   - Two (2) 4-1/16 in. x 10M hydraulic operated BOP stack valves.
   - Two (2) 4-1/16 in. x 10M manual operated BOP stack valves.

2. Diverter System consisting of:
   - One (1) Hydrol 20 in. - 2,000 psi WP MSP flange bottom (R-73 SS ring groove) by stud top (R-73 SS ring groove) annular type BOP bored to 21-1/4 in. ID.
   - One (1) 21-1/4 in. Drilling Spool flange by flange (RX-73 SS ring groove), two (2) 12 in. flange RTJ outlets (R-57 SS ring grooves) and one (1) 3-1/16 in. flanged outlet (BX-154 SS ring groove).
   - Two (2) 12 in. ANSI Class 900, Demco ball valves, 2,000 psi WOG, flange by flange (R-57 SS ring grooves). Each valve complete with Helac RHMH-180K Hydraulic Actuators.
   - One (1) 3-1/16 10M, hydraulic actuated, gate valve for circulation to C & K manifold and act as spare part for 13-5/8 in. BOP stack.
   - Two (2) vent spools with 12 in. ANSI Class 900 RTJ flanges. Each 8 ft. in length for discharge below hull.
   - One (1) Diverter control system which provides automatic opening of port and starboard vent lines upon closing of diverter package.
   - Has been reviewed by and exceeds 1990 MMS regulations.

3. One (1) BOP and diverter control system consisting of:
   - One (1) 3,000 psi WP automatic pump accumulator unit, complete with the following:
     - Three (3) 80 gallon sphenical, guided float type accumulators.
     - Three (3) Koomy Model 88550 50:1 ratio air driven pumps with manifold and pressure switch, producing 1.4 gpm at 3,000 psi with 100 psi air each.
One (1) Koomey Model T315-20-3 triplex pump driven by a 20 hp, explosion proof motor, producing 8.7 gpm at 3,000 psi.

One (1) 240 gallon mixed fluid reservoir.

One (1) Model ARC-6 remote control panel located on main deck pipe rack, approximately 80 ft. from (well bore), with same selector functions as main accumulator unit.

One (1) backup air supply consisting of three (3) bottles of nitrogen, regulated and plumbed into the rig air supply in case of loss of rig air.

Six (6) 1 in. - four (4) way, three (3) position selection valves.

One (1) annular regulator.

One (1) manifold (BOP) regulator.

4. One (1) 10,000 psi WP, H₂S rated, choke manifold, complete with:
   - Two (2) Thornhill Craver H2 2-9/16 x 10,000 psi WP manual adjustable chokes.
   - One (1) Thornhill Craver unibolt positive choke, 10,000 psi WP.
   - One (1) Swaco 2-9/16 x 10,000 psi WP remote adjustable choke.
   - Eleven (11) CiW 2-1/16 x 10,000 psi WP valves.
   - Five (5) CiW 3-1/16 x 10,000 psi WP valves.
   - Three (3) CiW 3-1/8 x 5,000 psi WP valves.
   - Two (2) buffer chambers (splitting the manifold).
   - Two (2) 10,000 WP droop hoses from manifold to BOP outlets.

5. One (1) 120,000 lb. constant hydraulic drive pipe support system balanced with 22 gallons of accumulator capacity for drive pipe movement.

6. Two (2) Marathon LeTourneau BOP handling overhead cranes with a rated capacity of 20 tons each, combined capacity of 40 tons.
E. DRILL STRING AND HANDLING TOOLS

1. Drill pipe consisting of:

- 5,000 ft. of 5 in. OD, 19.50 lb./ft. Range 2 Grade "E" drill pipe, IEU with 6-3/8 in. OD x 3-1/2 in. ID, 18° taper tool joints, with 4-1/2 IF (NC-50) connections. Pipe internally coated and hard banding.

- 10,000 ft. of 5 in. OD, 19.50 lb./ft. Range 2 Grade "G" drill pipe, IEU with 6-3/8 in. OD x 3-1/2 in. ID, 18° taper tool joints, with 4-1/2 IF (NC-50) connections. Pipe internally coated and has fine particle Hughes hard banding.

2. Drill Collars:

- Twelve (12) 7-3/4 in. OD x 2-13/16 in. ID x 31 ft. long, with 6-5/8 Reg. connections, slips and elevator recesses.

- Fifteen (15) 6-1/2 in. OD x 2-13/16 in. ID x 31 ft. long drill collars with 4-1/2 in. IF connections.

Note: Other sizes may be available upon request (not included).


4. Subs consisting of:

- Two (2) bit subs for 7-3/4 in. drill collars, bored for float.

- Two (2) each crossover subs as needed for use with all contractor furnished drill string and downhole tools.

- Four (4) kelly saver subs.

- Five (5) lift nipples for 7-3/4 in. drill collars.

- Four (4) lift nipples for 6-1/2 in. drill collars.

- One (1) pump-in sub with 4-1/2 IF pin and 2 in. Weco Fig. 1502 outlet.

- One (1) Kelly test sub with 4-1/2 IF box and 2 in. Weco Fig. 1502 outlet.

5. Drill pipe/casing protectors for 5 in. OD drill pipe for use in surface casing. Additional and/or replacement rubber protectors furnished by operator.

6. Drill stem valves consisting of:

- Two (2) lower top drive valves (10,000 psi WP) with 6-5/8 Reg. connections.

- One (1) upper top drive valves (10,000 psi WP) with 6-5/8 Reg. connections.

- One (1) inside BOP valve (float type) (10,000 psi WP) with 4-1/2 IF (NC-50) connections.
7. Fishing tools consisting of:
   - Taper taps and overshots including accessories to catch Contractor furnished drill pipe and drill collars.

8. Drill pipe and drill collar elevators consisting of:
   - Two (2) BJ Type GG center latch elevators (350 ton) for 5 in. OD/18° taper drill pipe.
   - Two (2) BJ Model TA150 (150 ton) 7-3/4 in. drill collar elevators.

9. Elevator links consisting of:
   - One (1) set of BJ Varco 3-1/2 in. x 180 in. (500 ton).

10. Two (2) BJ Type DB manual tongs with lug jaw assemblies for pipe sizes 3-1/2 in. to 17 in.
    - Two (2) Foley SDD Tongs with jaws from 4-1/2 in. to 12 in. Rated at 100,000 ft. lbs.

11. One (1) drill pipe spinner, Varco Model SS10, to handle pipe sizes 3-1/2 in. to 5 in.

12. Slips consisting of:
    - Two (2) sets of Varco Type SDXL for 5 in. drill pipe.
    - Two (2) sets of Varco Type DSC-L for 7-3/4 in. drill collars.

13. One (1) Varco Type MRP drill collar safety clamp for 7-1/2 in. drill collars.

14. One (1) mud saver bucket, OTECO "mud guard."

15. One (1) Varco "Big Foot" iron roughneck drill pipe spinner and torque wrench.
    - Spinner wrench size range: 2-7/8 in. to 8 in.
    - Spinner wrench torque (5 in. D. P.): 1,000 ft. lbs.
    - Torque wrench size range: 4 in. to 8 in.
    - Torque wrench makeup torque (max.): 63,000 ft. lbs.
    - Torque wrench breakout torque (max.): 75,000 ft. lbs.

F. AUXILIARY EQUIPMENT

1. Diesel electric rig power system consisting of:
   - Three (3) EMD Model 16-645-EL diesel engines, each rated 2,100 hp at 900 rpm, each driving one (1) 1,500 kw General Electric A-20-N6 AC generators.
   - One (1) Baylor Thyrig II SCR system.
   - One (1) Detroit 12 cylinder diesel engine driving a 250 kw AC standby generator.

2. Compressors consisting of:
   - Two (2) Ingersol Rand Model SSR 2000, Model 400HAOG9T rotary screw air compressors for general rig service.
   - One (1) Ingersol Rand, Desiccant type rig air dryer rated capacity 750 cfm at 120 psi.
   - One (1) Ingersol Rand Model I750 BKM low pressure bulk air compressor, belt driven with a 75 hp motor, with one (1) Deltic Model HG-750 bulk air dryer. Rated capacity is 400 cfm at 40 psi. Backup low pressure bulk system air is furnished by the rig air compressor through a 125 psi to 40 psi reducing station.

3. Material handling equipment consisting of:
   - Three (3) Letourneau series PCM-120-AS cranes with 100 ft. booms - rated 25 tons at 50 ft. and 48 tons at 26 ft.

4. Two (2) personnel transfer nets.

5. One lot of slings, bridle, and lifting gear necessary for the loading and off-loading of equipment and supplies.

6. Two (2) sets of mooring lines and cargo transfer hoses, one (1) on port side of rig and one (1) on starboard side of rig with sufficient length to reach supply vessels.

7. Three (3) rectifier type welding machines, and one (1) 500 amp unit, and two (2) 400 amp units, complete with normal rig welding supplies.

8. One (1) Alfa-Laval Model JWP-26-C80 water maker rated at 5,300 gal./day.

9. One (1) hot water pressure washer system for cleaning drilling unit.

10. One (1) oil/water separator system with required drip pans, drain lines and collection tanks to meet MMS requirements.

11. Firefighting and life saving equipment to meet ABS and USCG requirements which includes, but not limited to:
   - Individual life preservers.
   - Fire extinguishers.
   - Station bell.
   - General alarms.
   - Identification signs.
12. Ships service pumps consisting of:
   - Drill water pumps, two (2) Worthington 3 x 4 x 8 centrifugal pumps driven by 50 hp AC motors. Rated output of 600 gpm at 140 ft. of head.
   - Saltwater pumps, three (3) 8 in. line shaft pumps driven by 60 hp AC motor.
   - Bilge pumps, two (2) Worthington, Model D-1011 pumps driven by 10 hp AC motors. Rated output of 200 GPM at 56 ft. of head.
   - Fuel oil pumps, two (2) Worthington, Model 5GAU gear pumps driven by 3 hp AC motors rated at 50 gpm.
   - Fuel oil centrifuge, one (1) Alfa-Laval Model MAB-103B rated at 250 gph.
   - Lube oil centrifuge, one (1) Alfa-Laval Model MAB-103B rated at 85 gph.

13. One (1) Gaitronics paging system with stations fixed throughout the rig.

14. Communication equipment consisting of:
   - One (1) dedicated 490 mhz radio telephone link, private line with fax and modem capability, through the Offshore Telephone Company's microwave system (DMO use only).
   - One (1) three watt transportable cellular radio telephone with fax capability for backup or emergency phone communication through Petrocom (DMO use only).
   - VHF radios.

15. One (1) Omnipure Model 12-MX sewage treatment plant

16. One (1) diesel Toyota 4,000 lb. forklift USCG approved to lift and move mud pallets in sack room.

G. THIRD PARTY EQUIPMENT

One (1) Halliburton Services twin Detroit diesel 8V71 (HT-400 hydraulic pumps rated at 10,000 WP) Model SKD-4 skid unit with 8 BBL Re-circulating Mixing Systems (RCM-II) driven by a 100 hp electric motor and 80 cubic foot surge tank (maintenance, operation, and rental for operator's account).

NOTE: From time to time it will be necessary to substitute like or near like equipment for the reason of inspection, overhaul, manufacture recall, upgrade, etc. of the listed equipment in this exhibit.

Load ratings are nominal and may vary, depending on manufacturer's wear tolerances.

From time to time it will be necessary to send in spare units, parts, etc. for repair and overhaul as needed.
August 10, 1995

Minerals Management Service
1201 Elmwood Park Blvd.
New Orleans, LA  70123

Attn: Regional Supervisor

Subject: Shallow Hazard Report
Supplemental Development Operations Coordination Document
Ship Shoal 177 (OCS-G 0590)

A high resolution geophysical survey shot by Offshore Transportation & Services, Inc.
in April, 1983, entirely covers Ship Shoal block 177. The site specific shallow
hazard evaluations conducted by John E. Chance & Associates Inc., indicate a smooth
seafloor and no magnetic anomalies at the following surface locations:

“H”  4300’ FSL  1350’ FWL
“T”  7300’ FSL  0’ FWL

The “H” location is planned as a disposable pilot hole.
If successful a horizontal well will be drilled of the “A” platform
in Ship Shoal 177. Amoco’s original intent was to drill a deviated well off the “A”
platform and then sidetrack from that well bore and drill horizontally. Now it appears it is
more economic to drill a remote disposable straight hole then skid the rig to the “A”
platform and subsequently drill the horizontal section. The “H” location is drilling a
shallow gas sand that has been penetrated in the Gulf #3 in Ship Shoal 176, the “A-1” well
in Ship Shoal 176, and other wells in the area successfully.

The Hazard Survey Report for Ship Shoal 177 is currently on file with your agency.
Please find attached the corresponding letters from John E. Chance & Associates, Inc.,
and the support data for these locations.

Dan Chappell
Manager, Technology
Offshore Business Unit

BAM
AMOCO Production Company
1340 Poydras Street
New Orleans, Louisiana 70112

August 9, 1995

Attention: Mr. Brian Manno

RE: Proposed "I" Location
Block 177 (OCS-G-0590)
Ship Shoal Area

Gentlemen:

AMOCO Production Company contracted John E. Chance & Associates, Inc. to provide a Proposed Wellsite Clearance letter associated with the Proposed "I" Location within Block 177, Ship Shoal Area. Offshore Transportation & Services, Inc. (OTS) performed a high resolution Hazard Survey across Block 177, Ship Shoal Area, on April 30 - May 3, 1980, aboard the M/V OTS-1. Horizontal positioning of the survey vessel was accomplished with an IDS "Hyperange" Multiple L.O.P. Integrated Radiopositioning and Guidance System. Geophysical systems employed during the survey included a Subbottom Profiler, Echosounder, Side Scan Sonar, Magnetometer, and a Quantum Electronics Model DAS-1A 12-Channel Digital Seismic Recording System coupled with an EPR "Mini-Sleeve Exploder" Seismic Sound Source. The survey grid consisted of 17 north-south primary tracklines spaced 300 meters apart (lines 1 - 17) and 5 east-west tie lines spaced 1,000 meters apart (lines 101 - 105). Shot points (navigational fix marks) were recorded at every 500 foot interval. Trackline spacing was designed to provide complete lateral seafloor coverage with the sonar system and a representative sampling with the magnetometer and seismic systems.

The geophysical survey within Block 177, Ship Shoal Area, was conducted in compliance with the Minerals Management Service NTL-83-3 which is currently in effect for the Gulf of Mexico OCS Region. NTL-83-3 stipulates that a shallow hazard survey be conducted prior to drilling operations. Cable lengths were measured for each towed sensor, and the setbacks behind the positioning antenna were compensated for when mapping the data with reference to post-plotted shot points. The purpose of this letter is to address specific seafloor and subbottom conditions at the Proposed "I" Surface Location. John E. Chance and Associates, Inc. cannot guarantee the accuracy of the positioning system provided by Offshore Transportation & Services, Inc.

The Proposed "I" Surface Location is situated within Block 177, Ship Shoal Area at:

7,300 feet FSL \( Y = -18,684.93' \) \( X = 2,015,600.00 \) 
0 feet FWL \( Y = 28' \) \( 36' \) \( 55.006'' \) N

Latitude: 28° 36' 55.006'' N
Longitude: 91° 17' 05.010'' W
The water depth at the Proposed "I" Surface Location is approximately -93 feet. Sonar data indicate a featureless seafloor that is clear of topographic anomalies in the immediate vicinity of the Proposed Site. Seafloor sediments across the survey area are reported to consist silty clay (Minerals Management Service, Visual No. 3, 1983). Studies performed by McClelland (1979) indicate about 110 feet of Recent Age sediment currently overlie the study area.

There were no channels or near-surface faults observed within the survey area.

The Composit Anomaly Map produced by OTS show numerous shallow gas zones observed at 60 - 65 milliseconds. In addition, several medium to high amplitude anomalies and their depths in milliseconds are shown on the Composit Anomaly Map. The Proposed Surface Location is located about 450 feet northwest of a shallow gas zone. The Proposed Surface Location is not located within 500 feet of a amplitude anomaly. However, the 3-D seismic data supplied by Amoco suggest that a straight hole drilled at the Proposed "I" Surface Location will intersect an amplitude anomaly "Brightspot" at about 450 milliseconds. This high amplitude anomaly correlates with the distinct horizon mapped by OTS to produce the structure map (450 msec Horizon Map). An increase in resistive drilling pressure could occur if this particular elevation is penetrated during future drilling operations, therefore, proper precautions should be taken in this vicinity.

There were 13 unidentified magnetic anomalies shown on the Composite Anomaly Map. The study map and the magnetometer data show that there were no unidentified anomalies located within 5,500 feet of the Proposed Surface Location. In addition, there are no man-made features located within 2,100 feet of the Proposed Surface Location. Based on the acquired geophysical data collected by OTS, the vicinity surrounding the Proposed "I" Surface Location is clear of debris or obstacles to future drilling and construction activities.

Thank you, and please do not hesitate to call should further information or assistance be deemed necessary concerning this matter.

Sincerely,

JOHN E. CHANCE & ASSOCIATES, INC.

[Signature]
Melissa C. Jeansonne
Geophysicist
Research and Development

MSRC administers a large research and development program to improve knowledge and technology used to respond to and clean up spills. This program complements other R&D programs in government, academia, and industry. MSRC studies include those on remote sensing (to support operations during limited visibility and at night), oil-on-water recovery; treatment and handling of recovered oily materials; preventing and mitigating shoreline impacts; mitigating impact on wildlife, health and safety; and effective application of dispersants and in-situ burning.

Cost

MSRC’s five-year costs for operations, capital equipment, and research and development are estimated at more than $900 million.
On March 24, 1989, an oil tanker struck a reef in Alaska’s Prince William Sound, causing the biggest oil spill in the history of the United States. While thousands worked to clean up the spill, a small task force, organized under the auspices of the American Petroleum Institute, took a hard look at existing resources for responding to catastrophic oil spills—its sobering conclusion: the capability did not exist, either in industry or government.

As a result 20 oil companies created the Petroleum Industry Response Organization (PIRO). In August 1990, the oil companies created two new organizations: the Marine Spill Response Corporation (MSRC) and the Marine Preservation Association (MPA). MSRC, which succeeds PIRO, is an independent non-profit oil spill response organization. MPA, a non-profit organization which includes about 70 oil companies and shippers and receivers of oil. MPA provides grant funding to MSRC, but does not control MSRC operations.

Geographic Coverage

MSRC is headquartered in Washington, D.C., and its five regional response centers are located in Edison, New Jersey; Miami, Florida; Lake Charles, Louisiana; Port Hueneme, California; and Everett, Washington. Each region has three to six preposition sites (23 nationwide) where equipment and most often vessels and personnel are strategically located. The regional centers and preposition sites were located based on proximity to the sea, air and highway transport, and the potential for rapid response based on oil transportation patterns. MSRC provides a "best-effort" response to large spills of persistent oil (i.e., oils that do not evaporate or degrade quickly) in U.S. coastal and tidal waters (out to the limits of the U.S. Exclusive Economic Zone (EEZ)).

MSRC’s Gulf Region

MSRC’s Gulf Region covers coastal areas from the Mexican border to the Fenholloway River, east of St. Marks, Florida. The Gulf Region has four of MSRC’s 16 Oil Spill Response Vessels (OSRVs). These 210-foot response ships are stationed near high-volume oil ports and are designed to operate offshore and in deepwater channels. "Gulf Coast Responder" is stationed at the regional headquarters in Lake Charles, Louisiana, and "Louisiana Responder" is located in Fort Jackson, Louisiana. Additional response vessels are stationed at two of Texas' major crude oil ports: Galveston ("Texas Responder") and Port Aransas, near Corpus Christi ("Lone Star Responder"). MSRC in the Gulf also has a preposition site at Pascagoula, Mississippi. Spill response equipment is stored at the regional center and at each preposition site, as well as onboard each OSRV. Prepositioned equipment includes four large offshore oil storage barges (each of 40,000 or more barrel capacity), 16 towable storage barges, more than nine miles of various oil containment boom, three Shuttle Barge Systems, (self-propelled and storage shuttle barges for shallow water oil recovery), and a variety of skimmers, pumps, and boats. MSRC's Gulf Region employs a total of 86 personnel, including 11 assigned to "Central Watch", where an authorized representative from an MPA member company may call to activate an MSRC spill response.

Spill Response and Cleanup

On August 18, 1993 MSRC became "operational"—on call for spill response. Our goal is to have ships underway, and equipment and people mobilized within two hours of notification, and to be on scene quickly from our strategically placed pre-position sites. When the size of an oil spill dictates, we have plans to "cascades" people and equipment to or from any of the four other MSRC regions. The quick mobilization and attack on major oil spills in deep water is our fleet of 210-foot oil spill response vessels. In shallower waters, MSRC's Shuttle Barge System, MSRC Skimmers, "vessels of opportunity", and local contractors and co-ops provide a significant capability. MSRC has planned for maximum effectiveness with quick response; comprehensive equipment inventory; strategically located deployment sites; sophisticated mobile command, control and communications; mobilization of support contractors and co-ops; and cascading of key resources.

Relation to MPA

MPA members pay annual dues, based on the volume of oil they transported in the area covered by MSRC in the previous year. MPA provides grants to MSRC and these funds are used to pay MSRC's operating, capital, and research and development costs. If an MPA member is the "Responsible Party", they will respond to an oil spill. If MSRC is not the "Responsible Party", MSRC will provide spill response support to the MPA member. MPA members are responsible for transporting their own spill response equipment and personnel.

Relation to Coast Guard

When called into service, MSRC operates under the direction of its client MPA member, which in turn would coordinate response efforts with the Federal On Scene Coordinator - the Coast Guard Captain of the Port in the area affected by an oil spill. Under some conditions MSRC might be called out by the Federal On Scene Coordinator.

Relation to Local Response Organizations

MSRC is not intended to compete with or replace existing oil spill cooperatives and independent response contractors. These local entities constitute an important spill response resource. MSRC will respond when this infrastructure does not have sufficient resources to respond to a large spill. MSRC has contracted and trained with local contractors - to ensure that a timely and coordinated response to a major oil spill.
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**BEST AVAILABLE COPY**
## AIR EMISSION CALCULATIONS

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### PIPELINE INSTALLATION

| Pipeline lay barge diesel | 0    | 0      | 0      | 0    | 0    | 0.00 | 0.00 | 0.00  | 0.00 | 0.00  | 0.00 | 0.00 | 0.00 | 0.00 |
| Support vessel diesel    | 0    | 0      | 0      | 0    | 0    | 0.00 | 0.00 | 0.00  | 0.00 | 0.00  | 0.00 | 0.00 | 0.00 | 0.00 |
| Pipeline bury barge diesel | 0   | 0      | 0      | 0    | 0    | 0.00 | 0.00 | 0.00  | 0.00 | 0.00  | 0.00 | 0.00 | 0.00 | 0.00 |
| Support vessel diesel    | 0    | 0      | 0      | 0    | 0    | 0.00 | 0.00 | 0.00  | 0.00 | 0.00  | 0.00 | 0.00 | 0.00 | 0.00 |

### FACILITY INSTALLATION

| Derrick barge diesel | 0    | 0      | 0      | 0    | 0    | 0.00 | 0.00 | 0.00  | 0.00 | 0.00  | 0.00 | 0.00 | 0.00 | 0.00 |
| Material Tug diesel   | 0    | 0      | 0      | 0    | 0    | 0.00 | 0.00 | 0.00  | 0.00 | 0.00  | 0.00 | 0.00 | 0.00 | 0.00 |

### PRODUCTION

| Recip + 600hp diesel | 0    | 0      | 0      | 0    | 0    | 0.00 | 0.00 | 0.00  | 0.00 | 0.00  | 0.00 | 0.00 | 0.00 | 0.00 |
| Recip + 600hp diesel | 0    | 0      | 0      | 0    | 0    | 0.00 | 0.00 | 0.00  | 0.00 | 0.00  | 0.00 | 0.00 | 0.00 | 0.00 |
| Support vessel diesel | 0    | 0      | 0      | 0    | 0    | 0.00 | 0.00 | 0.00  | 0.00 | 0.00  | 0.00 | 0.00 | 0.00 | 0.00 |
| Turbine net gas       | 0    | 0      | 0      | 0    | 0    | 0.00 | 0.00 | 0.00  | 0.00 | 0.00  | 0.00 | 0.00 | 0.00 | 0.00 |
| Recip 2 cycle lean net gas | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Recip 4 cycle lean net gas | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Recip 4 cycle rich net gas | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Burner net gas        | 0    | 0      | 0      | 0    | 0    | 0.00 | 0.00 | 0.00  | 0.00 | 0.00  | 0.00 | 0.00 | 0.00 | 0.00 |

### EMISSIONS

| Source | BFO | SCF/MR | COUNT | TSP | SOX | NOX | VOC | CO | TSP | SOX | NOX | VOC | CO |
|--------|-----|--------|-------|-----|-----|-----|-----|----|-----|-----|-----|-----|----|----|
| Tank-  | 0   | 0      | 0     | 0.00| 0.00| 0.00| 0.00| 0.00| 0.00| 0.00| 0.00| 0.00| 0.00|
| Flare- | 0   | 0      | 0     | 0.00| 0.00| 0.00| 0.00| 0.00| 0.00| 0.00| 0.00| 0.00| 0.00|
| Process Vent- | 0 | 0 | 0 | 0.00| 0.00| 0.00| 0.00| 0.00| 0.00| 0.00| 0.00| 0.00| 0.00|
| Fugitives- | 0 | 0 | 0 | 0.00| 0.00| 0.00| 0.00| 0.00| 0.00| 0.00| 0.00| 0.00| 0.00|
| Oil Burn- | 0 | 0 | 0 | 0.00| 0.00| 0.00| 0.00| 0.00| 0.00| 0.00| 0.00| 0.00| 0.00|
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10:40 AM 8/1/95
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