OCS-G 6078

N-3021

In Reply Refer To: FO-2-1

May 31, 1988

Amoco Production Company
Attention: Mr. R. A. Fitch
Post Office Box 50879
New Orleans, Louisiana 70150

Gentlemen:

Reference is made to your Initial Plan of Exploration received May 16, 1988, for Lease OCS-G 6078, Block 535, Brazos Area. This plan includes the activities proposed for Wells A through D.

In accordance with 30 CFR 250.34, revised December 13, 1979, and our letter dated January 29, 1979, this plan is hereby determined to be complete and is now being considered for approval.

Your plan control number is N-3021 and should be referenced in your communication and correspondence concerning this plan.

Sincerely yours,

(Orig. Sgd.) A. D.

D. J. Bourgeois
Regional Supervisor
Field Operations

bcc: Lease OCS-G 6078 (OPS-3-2) (FILE ROOM)
OPS-3 4 w/Public Info. Copy of the plan (PUBLIC RECORDS)

MJTolbert:cck:05/23/88:poecom

JUN 1 10 AM '88

PUBLIC INFORMATION COPY

Amoco Production Company
New Orleans Region
Amoco Building
Post Office Box 50879
New Orleans, Louisiana 70150
Offshore

R. A. Fitch
Division Production
Manager

May 13, 1988

File: GAU-LF

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

Attention: Regional Supervisor

Plan of Exploration
Brazos 535
OCS-G-6078
Offshore Texas

In accordance with 30 CFR 250.33, Exploration Plan, attached please find nine copies of Amoco Production Company's Plan of Exploration for Brazos 535, Offshore Texas.

Amoco respectfully requests your favorable attention to this matter. Should further information be desired, please contact Harty Van of this office at telephone 504/586-6567.

Yours sincerely,

R. A. Fitch

HCV

Attachments

PLAN OF EXPLORATION

BRAZOS 535

OCS-G-6078

OFFSHORE, TEXAS

AMOCO PRODUCTION COMPANY
P. O. BOX 50879
NEW ORLEANS, LOUISIANA 70150

HARTY C. VAN, JR.
504/586-6567
PETROLEUM ENGINEER ASSOCIATE

MAY 13, 1988

A BRIEF DESCRIPTION OF THE PROPOSED TYPE AND SEQUENCE OF EXPLORATION ACTIVITIES TO BE UNDERTAKEN TOGETHER WITH A TENTATIVE TIMETABLE FOR THEIR PERFORMANCE INCLUDING PLAN COMMENCEMENT DATE, SEQUENCE EACH WELL IS TO BE DRILLED, TIME FRAME (DAYS) TO COMPLETE EACH WELL, AND TOTAL TIME TO COMPLETE THE PROPOSED PROJECT.

Amoco Production Company (100%) acquired Brazos Block 535, OCS-G-6078 from Exxon in April, 1986. The block was leased by Exxon in Sale 74, August, 1983 for $1.52 MM.

Brazos 535 is located in water depths ranging from 86 to 98 feet approximately 22 miles offshore and southeast of Matagorda County, Texas. See Attachment No. 1, Location Map.

Amoco's exploratory plan entails drilling four wells with a jack-up rig. The proposed locations of these wells are as follows:

A. Surface: 1,600' FWL & 8,200' FSL

B. Surface: 5,150' FWL & 8,300' FSL

C. Surface: 2,450' FWL & 5,300' FSL

D. Surface: 2,300' FWL & 900' FSL

Drilling of the first well will commence on August 1, 1988 with drilling of the remaining wells to end on approximately June 16, 1989. Please reference Attachment No. 2, "Timing Schedule" for clarification of timing.

A DESCRIPTION OF THE DRILLING VESSEL(S), OR OTHER INSTALLATION(S) OR DEVICE(S) TO BE PERMANENTLY OR TEMPORARILY ATTACHED TO THE SEABED INDICATING THE IMPORTANT FEATURES THEREOF WITH SPECIAL ATTENTION TO SAFETY FEATURES AND POLLUTION PREVENTION AND CONTROL FEATURES INCLUDING OIL SPILL CONTAINMENT AND CLEANUP PLANS.

Amoco intends to utilize Noble Drilling's jack-up rig, Ed Holt, or similar type equipment to drill these prospects. A descriptive brochure for this jackup has been filed with the MMS. The jack-up rig is equipped with all pollution-prevention and drilling equipment required by Title 30 CFR Part 250, Subparts C - Pollution Prevention and D - Drilling Operations. Operations personnel will be in compliance with Title 30 CFR Part 250, Subpart O - Training. Please reference Attachment No. 3, "Air Quality" for specific data on air emissions. Note that all operations are covered by Amoco's Oil Spill Contingency Plan approved by the MMS on April 19, 1988.

GEOLOGICAL AND GEOPHYSICAL SURVEY RESULTS IDENTIFYING GEOLOGICAL HAZARDS AND/OR SUSPECTED ARCHAEOLOGICAL ANOMALIES RELATIVE TO PROPOSED WELL(S), A MAP IDENTIFYING ANY SUSPECTED ARCHAEOLOGICAL ANOMALIES RELATIVE TO PROPOSED WELL(S) WHERE AN ARCHAEOLOGICAL SURVEY IS REQUIRED, AND A DESCRIPTION OF SURVEY EQUIPMENT UTILIZED.

Attachment No. 4, Shallow Hazard Report, confirms that the proposed well locations are free of surface faults, seafloor anomalies and gas accumulations.

In accordance with the stipulation outlined in the lease agreement, an archeological survey was performed between March 12 and 18, 1985, by Comap GeoSurveys, Inc., on board the M/V "Pine River". According to Mr. Jack C. Hudson, Marine Survey Archeologist of Cultural Resource Services, Inc. "The block is located within Zone 2 of the 'Cultural Resources Evaluation.' The water level curve in the 'Evaluation' indicates that the area has been submerged for approximately eleven thousand years. Although this date falls within the theoretical range of human occupation along the Gulf Coast, such sites as have been discovered along the Texas Coast from the Paleo Indian period (from about nine to twelve thousand years ago) have consisted of isolated artifacts such as projectile points (see Aten, 'Indians of the Upper Texas Coast,' 1983, chapter 9). No evidence of geological features which might suggest locations for drowned prehistoric sites was seen at the sea floor level; the older channels beneath the deposition were considerably disturbed. No such features are recommended for avoidance.

The two anomalies noted in the magnetometer records are isolated and not strongly suggestive of archeological features, but they are sufficiently distinct to suggest substantial targets; it might be advisable to avoid the immediate vicinities (perhaps two hundred meters) of these anomalies as possible hazards.

No evidence of archeological features was seen in the remainder of the data presented for block 535, Brazos Area, for Exxon Company U.S.A."

The entire Geohazard and Archeological Survey Report for Block 535 in 4 copies is inclosed as Attachment No. 5.

In accordance with Title 30 CFR Part 250.33(b)(1)(ii), full-scale and if appropriate, migrated Common Depth Point seismic lines intersecting at or near the primary well locations will be presented to the MMS Gulf of Mexico Regional Office.

A LOCATION MAP OF THE LEASE BLOCK(S) RELATIVE TO THE SHORELINE, INCLUDING A DESCRIPTION OF ONSHORE SUPPORT BASE FACILITIES, A LOCATION MAP SHOWING EACH PROPOSED WELL, INCLUDING SURFACE AND PROJECTED BOTTOM-HOLE LOCATION, WATER DEPTH (BATHYMETRY), PROPOSED TRUE VERTICAL AND MEASURED DEPTH OF EACH WELL.

Please reference Attachment No. 1, Location Map. This map shows the relationship of Block 535 Brazos area, to the shoreline as well as each of the proposed surface locations of the four wells. Water depths in the area range from 86 to 98 feet. See Attachment No. 5 for detailed Bathymetry Maps.

Operations will be conducted out of Brown & Root's dock facility at Port O'Connor, Texas. The dock is equipped with both a heliport and boat handling facilities.

CURRENT STRUCTURE MAPS AND, AS APPROPRIATE, SCHEMATIC CROSS SECTIONS SHOWING EXPECTED DEPTH OF MARKER FORMATIONS.

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.

Attachment No. 6 is a Structure Map demonstrating structural relationships. Attachment No. 7 is a Schematic Cross-Section showing the geologic setting of the prospects and depicting structural relationships as determined by interpretation of proprietary data.

A BRIEF DESCRIPTION OF PROCEDURES, PERSONNEL, AND EQUIPMENT USED IN YOUR OIL SPILL CONTINGENCY PLAN THAT ARE TO BE USED FOR PREVENTING, REPORTING, AND CLEANING UP A POLLUTION SPILL, INCLUDING EQUIPMENT LOCATION AND TRAVEL AND DEPLOYMENT TIME.

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 equipment available and to train personnel of member companies in its proper use.

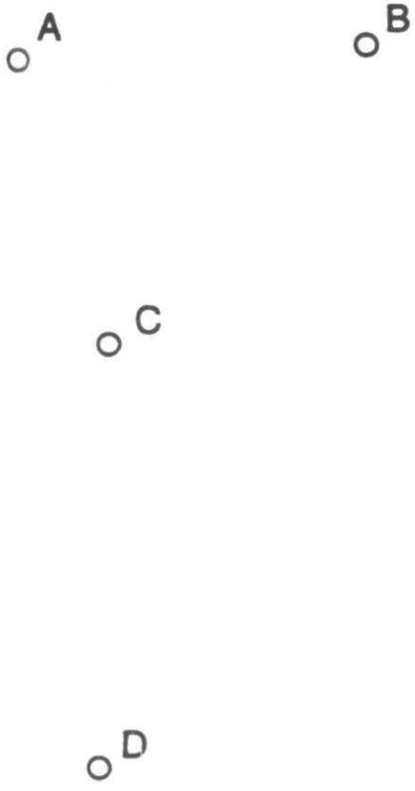
Existing oil spill cleanup equipment with beach protection and bird-cleaning stations can be on hand within 8 hours in the event of a spill. This equipment is maintained on standby and in a ready state at locations such as Panama City, Florida; Theodore, Alabama; Venice, Louisiana; Grand Isle, Louisiana; Houma, Louisiana; Intracoastal City, Louisiana; Cameron, Louisiana; Galveston (Texas City), Texas; and Port Aransas (Fulton), Texas.

All applicable safety and pollution standards of the MMS, USCG, OSHA, and the EPA will be complied with. 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.

A DETAILED LIST OF MUD COMPONENTS AND ADDITIVES, INCLUDING THE COMMON OR CHEMICAL TRADE NAME OF EACH.

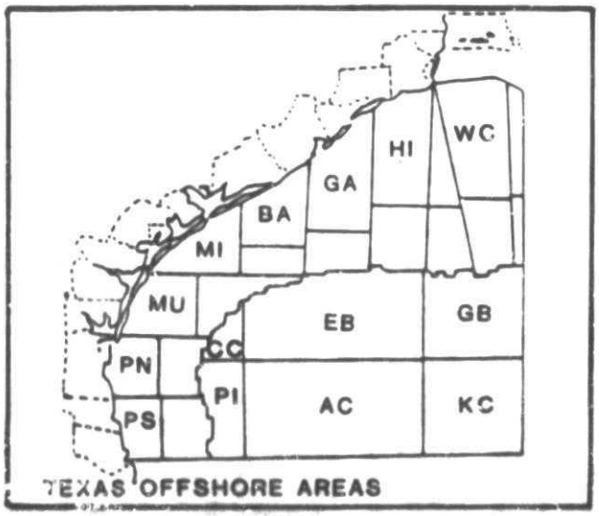
Components of the drilling mud may include any or all of the following: barite, gel, caustic, soda, chrome lignosulfonate, lignite, sapp, aluminum stearate, soda ash, phosphate, gilsonite, surfactant (methanol), Quick Seal, Spotty and CMC. No bactericides that contain halogenated phenols will be used in the mud system. Any drilling mud, drill cuttings, sand, or other solids will not be disposed of into the Gulf unless all of the free oil has been removed.

WELL	SURFACE LOC.
A	1600' FWL, 8200' FSL
B	5150' FWL, 8300' FSL
C	2450' FWL, 5300' FSL
D	2300' FWL, 900' FSL



SCALE: 1" = 2000'

VICINITY



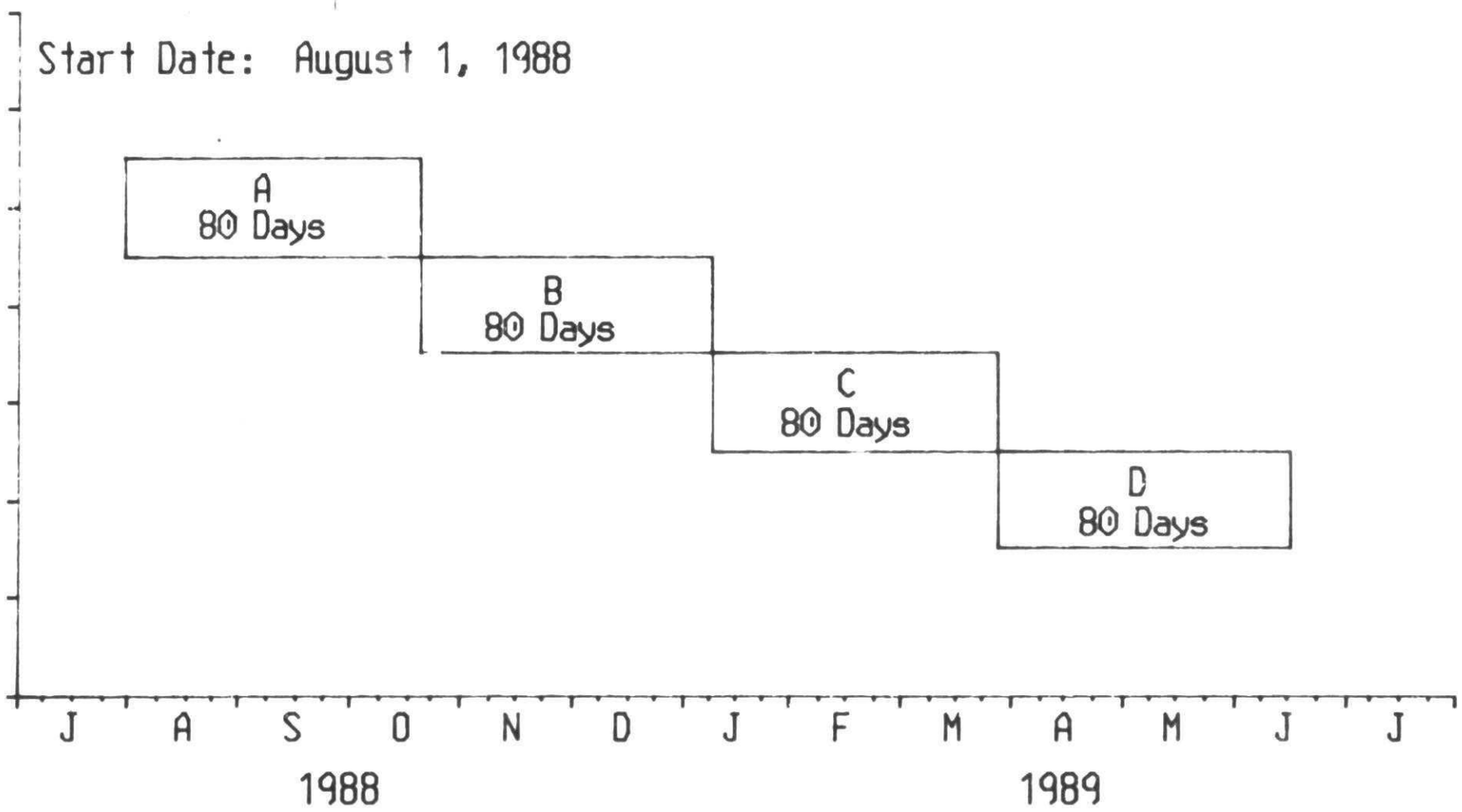
ATTACHMENT #1

Amoco Production Company
NEW ORLEANS REGION

BLOCK: BRAZOS 535
OCS-G-6078

LOCATION MAP

BRAZOS BLOCK 535
OCS-G-6078
TIMING SCHEDULE



ATTACHMENT NO. 2

Plan of Exploration for Brazos Block 535
OCS-G-6078
Air Quality

This attachment includes the information required under 30 CFR Part 250.45, to make the necessary findings under that section.

Exemption Formula

The distance of the proposed facility from the closest onshore area of a state is 22 statute miles:

The proposed facility is at: latitude 28° 19' 4.09" north, and
longitude 95° 46' 31.67" west.

The closest onshore area of a state is in Matagorda county, Texas, at:

latitude 28° 37' 30.26" north, and
longitude 95° 54' 14.68" west.

This produces the exemption amount of 732 tons/year for particulates, sulfur dioxide, nitrogen oxides and volatile organic compounds, and the exemption amount of 26,694 tons/year for carbon monoxide.

Projected Emissions

Drilling

The wells proposed to be drilled on this plan are as follows:

Proposed Well	Proposed Measured Depth (Feet)	Rig Type
OCS-G-6078 A		Jack-up
OCS-G-6078 B		Jack-up
OCS-G-6078 C		Jack-up
OCS-G-6078 D		Jack-up
Total Feet Drilled	56,000	

ATTACHMENT NO. 3

Assuming that the r e of drilling will be constant, the total feet drilled during each year of the plan are as follows:

1988	26,775 feet
1989	29,225 feet

Assuming 60 horsepower hours required to drill one foot l on an offshore oil and gas drilling rig, this plan will require 1,606,500 horsepower hours to complete the 1988 portion. The duration of the operations is 153 days. Using the emission factors for diesel powered industrial equipment from Table 3.3.3-1 of EPA publication AP-42, Compilation of Air Pollutant Emission Factors, the following total emissions are expected from this plan:

	Carbon Monoxide	Nitrogen Oxide	Hydrocarbons	Sulfur Dioxide	Particulates
Drilling Rig	5.37	24.79	1.98	1.65	1.77

We estimate to have two helicopter landing-takeoff cycles each day at the drilling location for the 153 day period of drilling activity. The emission factors per landing-takeoff cycle for helicopters from Table 3.2.1-3 of EPA Publication AP-42 produce the following helicopter emissions in tons:

Helicopters	0.87	0.09	0.08	0.03	0.04

We plan one 2,000 horsepower workboat landing with six hours of idling three times each week at the drilling location. The fuel consumption while idling at the drilling location is seven gallons per hour. The emission factors (7 gallons/hour x 6 hours/landing x 3 landing/week x 22 weeks of drilling = 2,772 gallons) for CO, VOC and NOx from diesel vessel emission factors by operating mode, Table 3.2.3-3, and the factors for SO 2 and particulates from Table 3.3.3-1 produce the following workboat emissions, in tons, at the drilling location:

Workboats	0.41	0.34	0.13	0.04	0.05
Subtotal	6.65	25.22	2.19	1.72	1.86

These emissions are planned to occur in 1988.

---

1 Atmospheric emissions from offshore oil and gas development and production (EPA 450/3-77-026, p. 82-83, June 1977).

In 1989, we plan to drill 29,225 feet. The emissions from the 1989 drilling operations are as follows:

Emissions in tons/year

	Carbon Monoxide	Nitrogen Oxide	Hydrocarbons	Sulfur Dioxide	Particulates
Drilling	5.86	27.06	2.16	1.80	1.93
Helicopters	0.95	0.10	0.09	0.03	0.04
Workboats	0.44	0.37	0.14	0.05	0.05
Subtotal	7.25	27.53	2.39	1.88	2.02

These emissions are planned to occur in 1989.

The annual emission totals, in tons, are as follows:

1988					
Drilling	6.65	25.22	2.19	1.72	1.86
1989					
Drilling	7.25	27.53	2.39	1.88	2.02

Therefore, since none of these amounts approach 732 tons (26,694 tons for carbon monoxide), we request that you determine under Section 250.57(d) that this plan be exempt from further air quality review.

Amoco Production Company

New Orleans Region
Amoco Building
Post Office Box 50879
New Orleans, Louisiana 70150

May 12,1988

Minerals Management Service
1201 Elmwood Park Boulevard
New Orleans, Louisiana 70123
Attn: Regional Supervisor

Dear Sir:

Subject: Shallow Hazard Report
Plan of Exploration
Brazos Block 535, OCS-G-6078

A multi-sensor, high-resolution, geophysical survey was conducted over the entire block. The results indicate a smooth seafloor, no surface faults, seafloor anomalies, or shallow gas accumulations at the following surface locations:

A. 1600' FWL, 8200' FSL
B. 5150' FWL, 8300' FSL
C. 2450' FWL, 5300' FSL
D. 2300' FWL, 900' FSL

Conventional CDP and "bright-spot" seismic data, with associated velocity analyses, are free from anomalies at these locations.

Geological control is available from Brazos Blocks 494 and 550, approximately five miles northeast and southwest, and a similar geologic sequence is expected at the proposed locations.

Sincerely,

for Byron L. Gilleon
Division Geophysical Manager

ATTACHMENT NO. 4