DATE 13-17-82

TO: OMS-2-2

FROM: OS-2-2

1982 DEC 23 A 12:03

Supplemental Plan of [redacted] Development/Production, Lease OCS-G 2608

Control No. S-985.

SP61

Arco Oil & Gas Co.

10.29.82

HOUD_JOSEPH

ARCO Oil and Gas Company
South Louisiana District
Post Office Box 51408, Oil Center Station
Lafayette, Louisiana 70505
Telephone 318 264 4000

October 8, 1982

Mr. D. W. Solanas
United States Department of the Interior
Minerals Management Service
Gulf of Mexico OCS Region
P. O. Box 7966
Metairie, Louisiana 70010-7966

Re: Modification of Development and Production Plans
South Pass Block 61 Field

Dear Mr. Solanas:

ARCO Oil and Gas Company, a division of Atlantic Richfield Company has enclosed twelve copies of a modified Development and Production Plan for a portion of Atlantic Richfield Company's properties in the South Pass 61 Field. These copies are hereby submitted in compliance with the applicable provisions of 30 CFR 250.34.

This plan supersedes previous plans except for the plan submitted April 7, 1980 for platform 60 "E", the plan approved May 30, 1979 for platform 60 "A", and the plan submitted July 2, 1980 and July 8, 1982 for modification of development and production plans.

ARCO Oil and Gas Company is planning to expand their present facilities for an enhanced oil recovery project (EOR). This expansion involves the laying of additional pipelines. Refer to Figure 1, a plat for the proposed South Pass Block 60 facilities. Listed below are the pipeline additions or changes for the EOR expansion:

ENHANCED OIL RECOVERY EXPANSION

EOR projects are currently underway in the four largest oil reservoirs in the South Pass Block 61 Field. The process being used is gravity stable enriched gas miscible displacement. Enriched gas is generated by using NGL which is separated from field gas production by a cryogenic gas plant located on platform "B". The NGL is then mixed with plant residue gas to produce an enriched gas, which is injected by high pressure compressors located on "F" platform. When operating at capacity, the cryogenic plant can generate only enough NGL to mix with 4000 MCFPD of residue gas.

At capacity operation, another 15,000 MCFPD of residue gas is available but cannot be enriched. This gas is currently being injected into storage reservoirs for future use in displacing the enriched gas slugs in the EOR reservoirs. Much more enriched gas could be injected if additional NGL were available.

We are proposing to lay a 6" NGL supply pipeline approximately 30 miles in length from platform "A" to a facility operated by Warren Petroleum Company (a division of Gulf) near Venice, Louisiana. Warren currently has a large surplus of normal butane and propane which they are storing in underground caverns in salt domes. They are very interested in selling us some of this surplus. Butane/propane in large volumes is barged to their facility at Venice where it is fractionated. The normal butane and propane is not currently being marketed and has to be stored. ARCO proposes to purchase butanes or propanes and transport it to South Pass Block 60 through the below mentioned pipelines.

1. Lay a 164,740 ft. long 6" NGL pipeline from the Warren Refinery to South Pass Block 60, "A" Platform.

   The 6" NGL line will supply a maximum rate of 170 M gallons per day of .58 or .507 specific gravity NGL fluids initially 590 psig, and 60°F, to the South Pass Block 61 field to expand the EOR facilities. The NGL pressure at Warren is normally large enough to propell the NGL to Platform "A". When the pressure at Warren drops to 690 psig, pumps located at the Warren Refinery will be the power source for the NGL. The first 23 miles of pipe will be 1" concrete coated with a 6 5/8" O.D., .312" wall thickness at 21.07 #/ft of API 5L Grade B seamless pipe and have a specific gravity of 1.57 (empty pipe). It will have a maximum design working pressure of 2,183 psig. The remaining 8.2 miles will not be concrete coated to have the flexibility to install the pipeline with a reel barge. To maintain the necessary specific gravity, the wall thickness will increase to .375"; 25.04 lb/ft., 1.63 specific gravity (empty pipe). This part of the line will have a maximum design working pressure of 2,663 psig. The pipeline expected installation and commissioning dates are first quarter of 1983.

2. Lay a 4,130 ft. long 6" bidirectional NGL pipeline from platform "A" to "F".

The 6" bidirectional NGL pipeline will continue transporting the .58 or .507 specific gravity liquids from platform "A" to "F" at a maximum rate of 170 M gallons per day. The pipeline will be bidirectional to transport NGL from platform "F" to the "A-D" complex in the case where the supply from Warren is disrupted. The 6 5/8" O.D. API 5L Grade B seamless pipe has a wall thickness of .375" and is 25.04 lb/ft. with an empty pipe specific gravity of 1.63. It has a maximum design working pressure of 2,663 psi. To obtain the required gravity, the design working pressure, 2,663 psi, must be greatly larger than the operating pressure, 550 psig at 60°F. The 6" pipeline will not make any pipeline crossings. This pipeline is expected to be installed in the first quarter of 1983. The MMS will be notified upon commissioning.

All instrumentation and safety systems will be installed in accordance with OCS Order No. 5. A Simultaneous Operation Plan and a Welding and Burning Safe Practices and Procedures Plan, as required by OCS Order No. 5, will be in force when these operations are started. These plans will be similar to those currently in effect for our operations in South Pass Block 60.

To prevent the pollution of the Gulf of Mexico, all necessary prevention and control features such as drip pans, curbs, drain line and sumps will be utilized in accordance with OCS Order No. 7. Should there be an occurrence of pollution at the platform site, control and cleanup procedures will be implemented according to the approved "Oil Spill Contingency Plan" on file with the MMS Area Supervisor by Atlantic Richfield Company. Atlantic Richfield Company is a member of Clean Gulf Associates which has response bases at Venice, Grand Isle, Intracoastal City and Cameron in Louisiana. The response time of Clean Gulf Associates is within approximately 12 hours.

The platform production facilities and pipelines will be designed installed, and maintained according to OCS Order No. 9 and DOT regulations in 49 CFR parts 192 and 195. They will also have all safety systems and devices as specified in API RP 14 C and in the body of this test. In accordance with OCS Order No. 5, all individual wells will have surface controlled surface and subsurface safety valves installed. Life jackets, life rafts, ring bouys, escape ropes, fire extinguishers, and other safety features such as warning lights and horns, as required by the U.S. Coast Guard's "Rules and Regulations for Artificial Islands and Fixed Structure on the Outer Continental Shelf" will be installed.