PXP

Plains Exploration & Production Company

Revisions to the Platform Hidalgo Development and Production Plan to Include Development of the Western Half NW/4 of Lease OCS-P 0450

Accompanying Information Volume
Gaviota Facilities

Submitted to:
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Submitted by:
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1.0 Introduction

The development of the western half NW/4 of OCS-P 0450 will not result in any modifications at the Gaviota Facilities compared to what is occurring today with the Point Arguello Field production. With the development of the western half NW/4 of OCS-P 0450 there will be an increase in the volume of oil heated and metered at the Gaviota Facility. However, this volume will be substantially less then the peak Point Arguello oil production level and the production level analyzed in the 1984 EIR/EIS for the Point Arguello Field Project. The Gaviota Facility is located 28 miles west of the City of Santa Barbara. Figure 1 shows the location of the Gaviota Facility.

As part of the Point Arguello Project, PXP has received approval from the County of Santa Barbara for a Final Development Permit modification to allow the shipment of sweet gas from Platform Hermosa to the Gaviota Facility. If the western half NW/4 of OCS-P 0450 is developed some of the gas may be sold to the Gaviota Facility for use as fuel.

This application for revisions to the Hidalgo DPP is for development of the western half NW/4 of OCS-P 0450, which is held by production, and is not part of the OCS leases covered by the Norton decision.

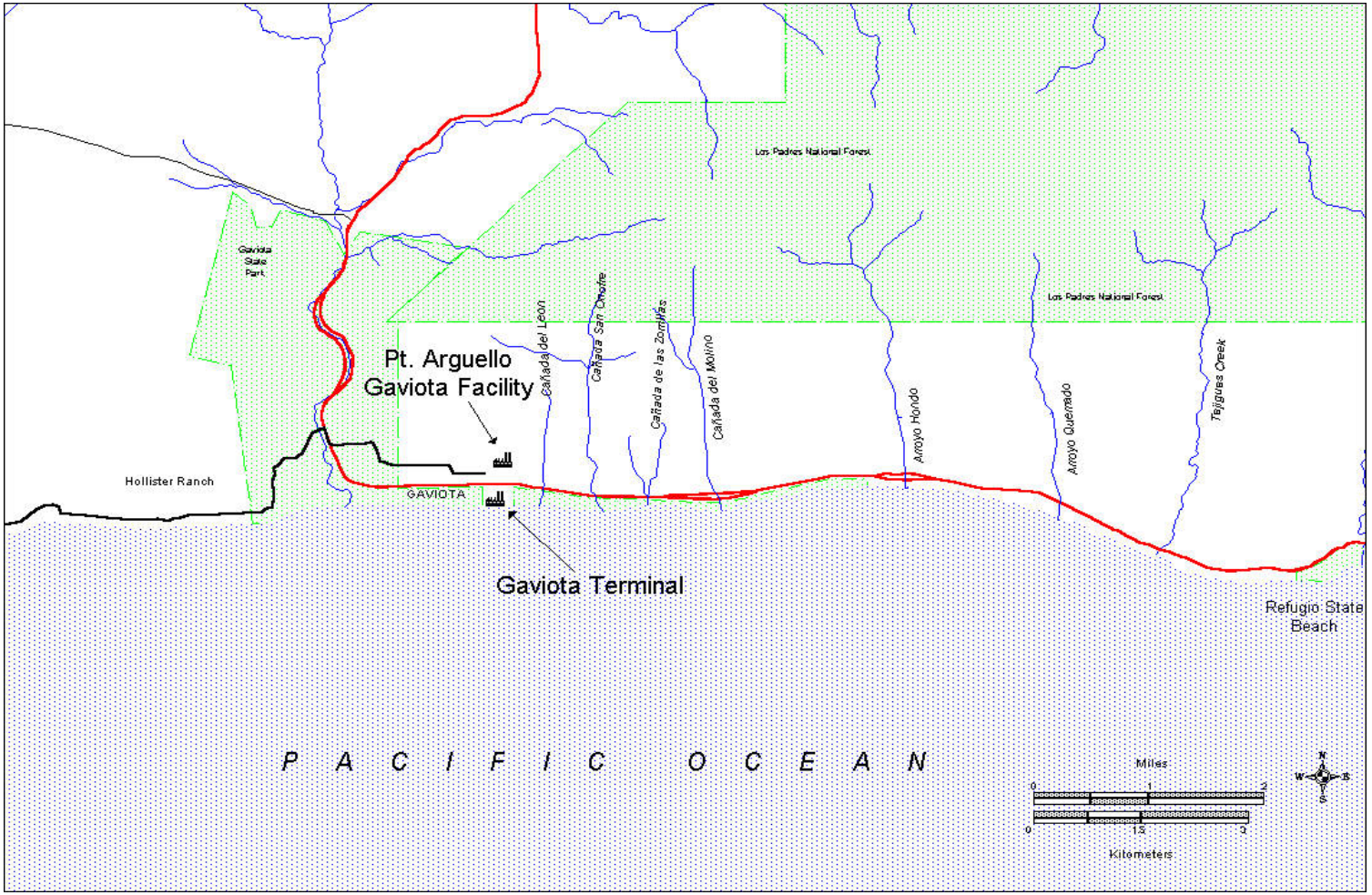
This section of the document provides a general description of the oil heating and metering operations that currently occur at the Gaviota Facilities. The section also contains information on the Sales Gas Project. This information is included as part of the DPP accompanying information to assist the reader in understanding the activities that occur at the Gaviota Facilities, since the production from the western half NW/4 of OCS-P 0450 will use these existing facilities.

2.0 Onshore Oil Handling

The crude oil from the western half NW/4 of OCS-P 0450 and Point Arguello Field will be co-mingled on the platform at the production well head manifold. The co-mingled production is then dehydrated and stabilized offshore before it is pumped to the Gaviota Facility via the PAPCO pipeline. Once the oil reaches the Gaviota Facility it is metered as part of the PAPCO leak detection system.

The oil then passes through a heat exchanger where it is heated to about $125^{O}F$ using waste heat from the onshore cogeneration units. The oil is then metered at the dry LACTs before being transferred via pipeline to the Gaviota Terminal Company storage tanks located on the south side of Highway 101. From the Gaviota Terminal Company storage tanks the oil is sent to the All American Pipeline for transport to various refining destinations.

Figure 1 Location of Point Arguello Gaviota Facilities



The only operations that are occurring at the Gaviota Facility are crude oil metering and heating. Oil processing no longer occurs at the Gaviota Facility. None of the operations at the Gaviota Facility will change with production from the western half NW/4 of OCS-P 0450. No modifications at the Gaviota Facility will be needed to handle the production from the western half NW/4 of OCS-P 0450.

The following oil handling operations occur at the Gaviota Facility.

Pigging Operations. The existing Gaviota oil pig receiver remains in service at the Gaviota Facility. Pig receiver drains are sent to T-25, the oily water tank. The pig receiver vents are routed to the flare.

Metering. LACT metering operations and SCADA/Leak Detection functions continue to operate as they always have.

Heating. The crude oil is heated in heat exchangers using waste heat from the cogeneration units.

Oily Water Handling. All the process drains from the facility are collected in T-25, the oily water tank, where the oil and water are separated. The oil is routed to GTC, and the water is routed to a wastewater disposal system. The T-25 vents are routed to the flare. The oil wastewater from T-25 is sent to a set of filters to remove any solids. The water is then routed to a set of pumps, which are used to inject the water into disposal wells. These wells have been used for the entire life of the Gaviota Facility for handling oily water. The water is injected into an old oil and gas reservoir located near the Gaviota Facility. These injection wells are permitted through the California Division of Oil and Gas.

Power Generation. Currently gas from the Point Arguello Field is used to fuel the cogeneration system, which produces electricity and provides heat for the crude oil and other facility systems.

Other ancillary systems that would continue to be operated at the Gaviota Facility include impoundment basins, utility and instrument air, nitrogen system, desalinization system, fresh water system, firewater system, fuel gas system, sewage treatment system, control room, administration building, and the flare.

3.0 Onshore Gas Handling

The gas plant at the Gaviota Facility ceased operating in October of 1998 when the Point Arguello partners began injecting the gas in to the Point Arguello reservoir. Since that time no produced gas has been sent to the Gaviota Facility from the Point Arguello platforms.

As discussed above, PXP received an FDP modification from the County of Santa Barbara to allow sweet sales gas to be shipped from Platform Hermosa to the Gaviota Facility for use as fuel in the cogeneration system. This project was approved as part of the Point Arguello Project.

The Sales Gas Project was implemented in order to comply with the Bureau of Safety and Environmental Enforcement (BSEE) directive requiring PXP to sell gas from the Point Arguello Unit. The sweet gas is used to fuel up to three of the power generating turbines and to meet the heat needs of the facility. Electricity which is a by product of the generation process is sold to the grid.

The purpose of the Sales Gas Project was to reduce the volume of gas that is being injected back into the Point Arguello reservoir, thereby complying with the BSEE directive to initiate sales gas onshore from the Point Arguello Project. In addition, the project is reducing operating costs by eliminating the need to purchase natural gas from The Gas Company to fuel the turbines. The project also has the ability to provide the electrical grid system with up to 10 megawatts (MW) of power. The amount of power sold to the grid is dependent on the amount of gas available for shipment from the Point Arguello Platforms.

With the Sales Gas Project, produced gas from the Point Arguello Field is sweetened (i.e., the H_2S and some of the CO_2 removed from the gas) on Platform Hermosa. The sweet gas is then shipped via the Point Arguello Natural Gas Pipeline (PANGL) to the Gaviota Facility, where the gas is metered and fed to the turbines to generate electrical power and heat. The Sales Gas Project was implemented with only minor piping changes at the Gaviota Facility.

Incoming gas to Gaviota is routed through V-1000 to allow liquids to drop out, in the unlikely event that liquids form in the gas during transport through the PANGL pipeline.

The gas from V-1000 is routed through existing piping to an existing meter run on the outlet of V-1000 that has been modified for royalty accounting purposes. The gas is then routed through the two existing gas plant fuel meters for distribution. One of the meters measures the gas going to the cogeneration unit and other existing users on the lower level of the plant, such as the facility flare. The second meter is used to measure gas that is sent to the upper level of the plant.

In the unlikely event that liquids drop out of the gas during transport through the PANGL pipeline, they accumulate in V-1000. The accumulated liquids from V-1000 are drained to Relief Knock Out Drum V-50. Liquids from V-50 are then pumped to T-2. The vapors from V-50 go to the flare. The liquids from T-2 are handled in the existing oil or wastewater disposal systems.

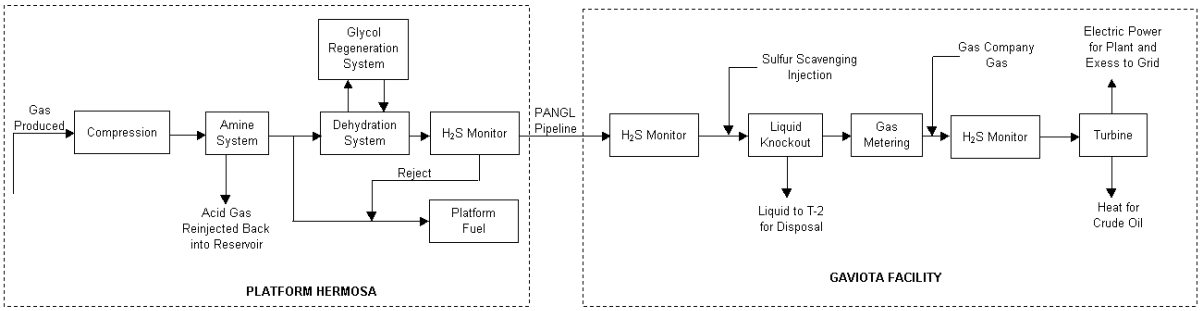
The Gaviota Facility has five cogeneration turbines, each one with a nominal capacity of about 3.7 MW. The current electrical load at the Gaviota Facility is about 0.8 MW. Under Phase I of the project approximately 1.15 mmscfd of sweet gas is shipped from Platform

Hermosa to the Gaviota Facility. The electricity generated is used as needed at the Gaviota facilities (approximately 0.8 MW) with the excess being sold to the public utility grid (approximately 2.9 MW). It should be noted that the amount of fuel used and the amount of power generated is dependent on a number of factors such as the BTU content of the fuel, and the atmospheric conditions. Given that these factors will vary with time, the fuel use and electrical power generating numbers presented in this document are on a nominal basis.

The waste heat from the turbine is used to generate steam, which is used at the Gaviota facilities to heat the oil and for other in plant utilities such as the deaerator and flare assist.

Figure 2 shows a simplified block flow diagram of the Point Arguello gas handling system.

Figure 2 Block Flow Diagram of Point Arguello Gas Handling System



In normal operating mode, gas from The Gas Company is replaced by sweet gas from Platform Hermosa. When the turbine is run at a higher load, then excess steam is vented to the atmosphere. With one turbine at full load approximately 14,000 lbs. per hour of steam is vented to atmosphere.

The Gaviota gas system provide for a contingency option to run all turbines with gas purchased from The Gas Company in the event that gas is not available from the offshore platforms. This option allows the Gaviota facilities to continue to operate if problems occur offshore that would prevent the delivery of sweet gas ashore. The operational contingency plan also allows for the venting of steam in the event of a fin-fan cooler system failure.