PITAS POINT UNIT
DEVELOPMENT AND PRODUCTION PLAN
TEXACO INC. - OPERATOR

SEPTEMBER, 1979

INDEX

TABLE OF FIGURES

SECTION I - INTRODUCTION

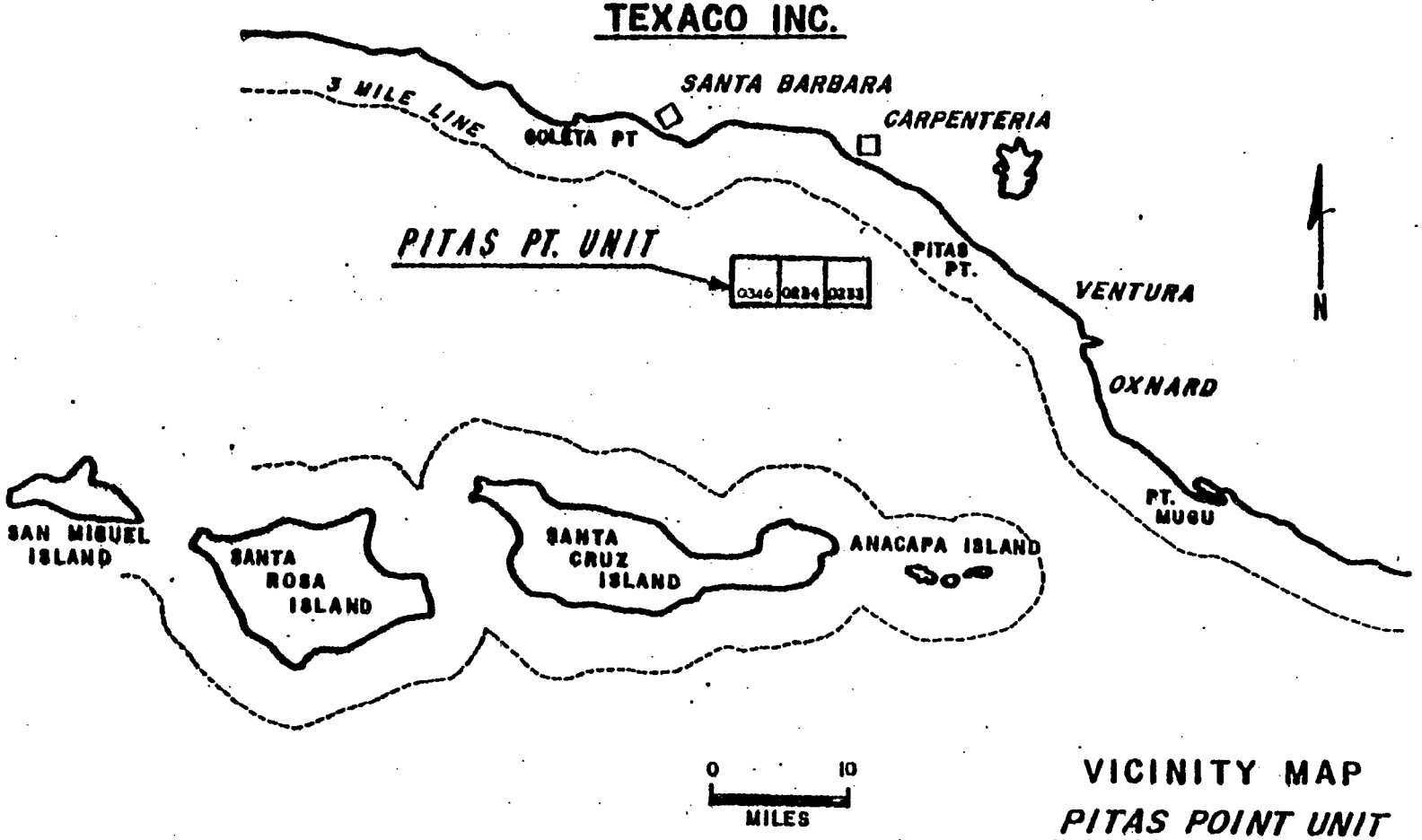
Texaco Inc. is operator of the Pitas Point Unit for itself, Union Oil Co. of California, Mobil Oil Corp. and Gulf Energy and Minerals. The Pitas Point Unit is located in Federal Waters approximately 9 miles south from Carpenteria in the Santa Barbara Channel and consists of U.S. Leases OCS P-0233, OCS P-0234 and OCS P-0346. OCS lease P-0346 was formerly OCS lease P-0235. Leases 0233 and 0234 are held by the four above named companies. Lease 0346 is held by Texaco and Union. Texaco and Union have acquired the working interests of Mobil and Gulf in the portion of the Unit on which natural gas reserves have been identified.

A twenty-four slot drilling and production platform will be set in the second half of 1981 to develop a natural gas field discovered on lease 0234 and to drill one or more exploratory wells. Drilling will begin in January 1982. (Figure I - B).

Initial production is anticipated in mid-1982 with production peaking at approximately sixty-three million standard cubic feet of gas per day(63 MMCFPD) in mid-1983. This rate will be relatively constant for four to five years and decline thereafter producing the total estimated reserves in approximately twenty years. (Figure I - C)

This plan of development is submitted in accordance with Title 30, Code of Federal Regulations, Section 250.34, Article 10 of the Pitas Point Unit agreement, and Pacific Area OCS Order No. 8.

PLAN OF DEVELOPMENT
TEXACO INC.



VICINITY MAP
PITAS POINT UNIT

FIG. I A

SCHEDULE OF ACTIVITIES

PITAS POINT UNIT - PLAN OF DEVELOPMENT

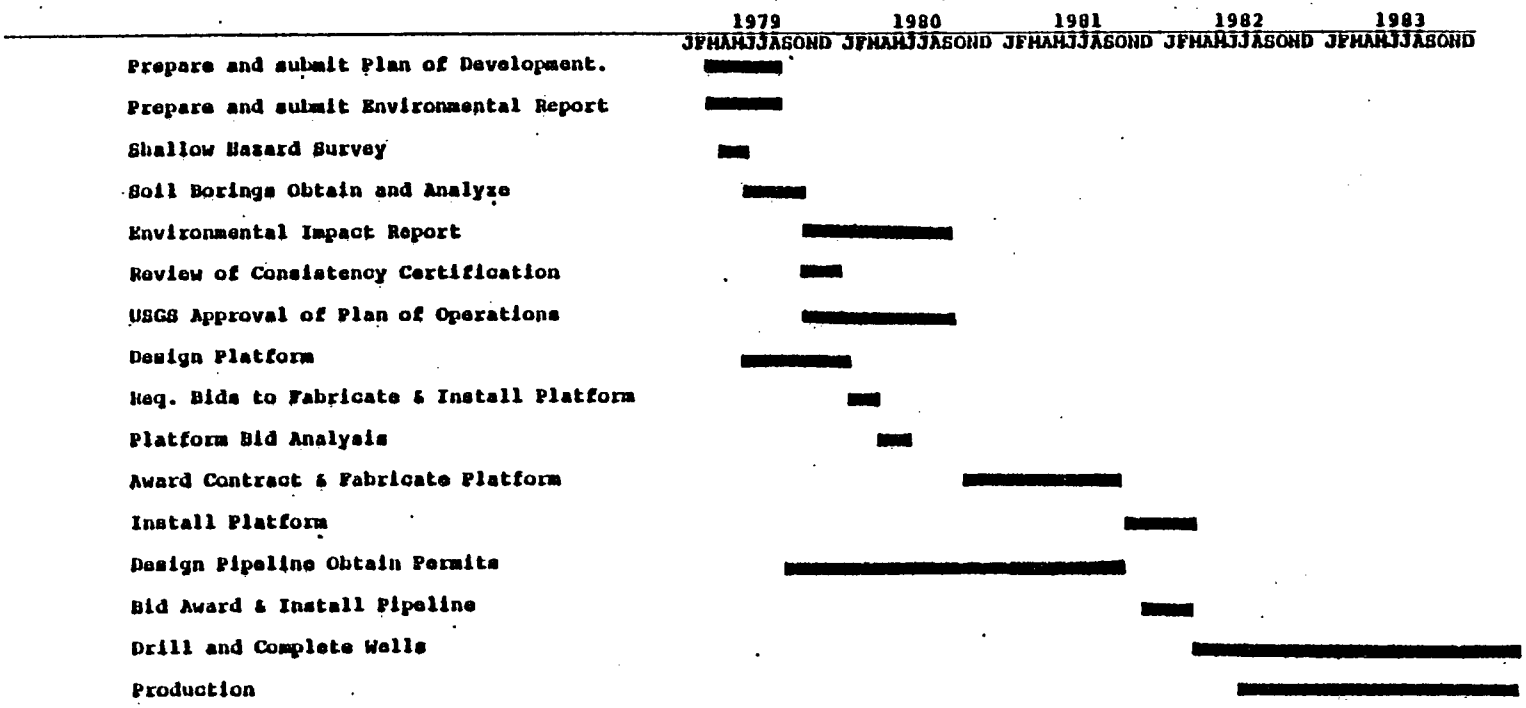


FIG. I-B

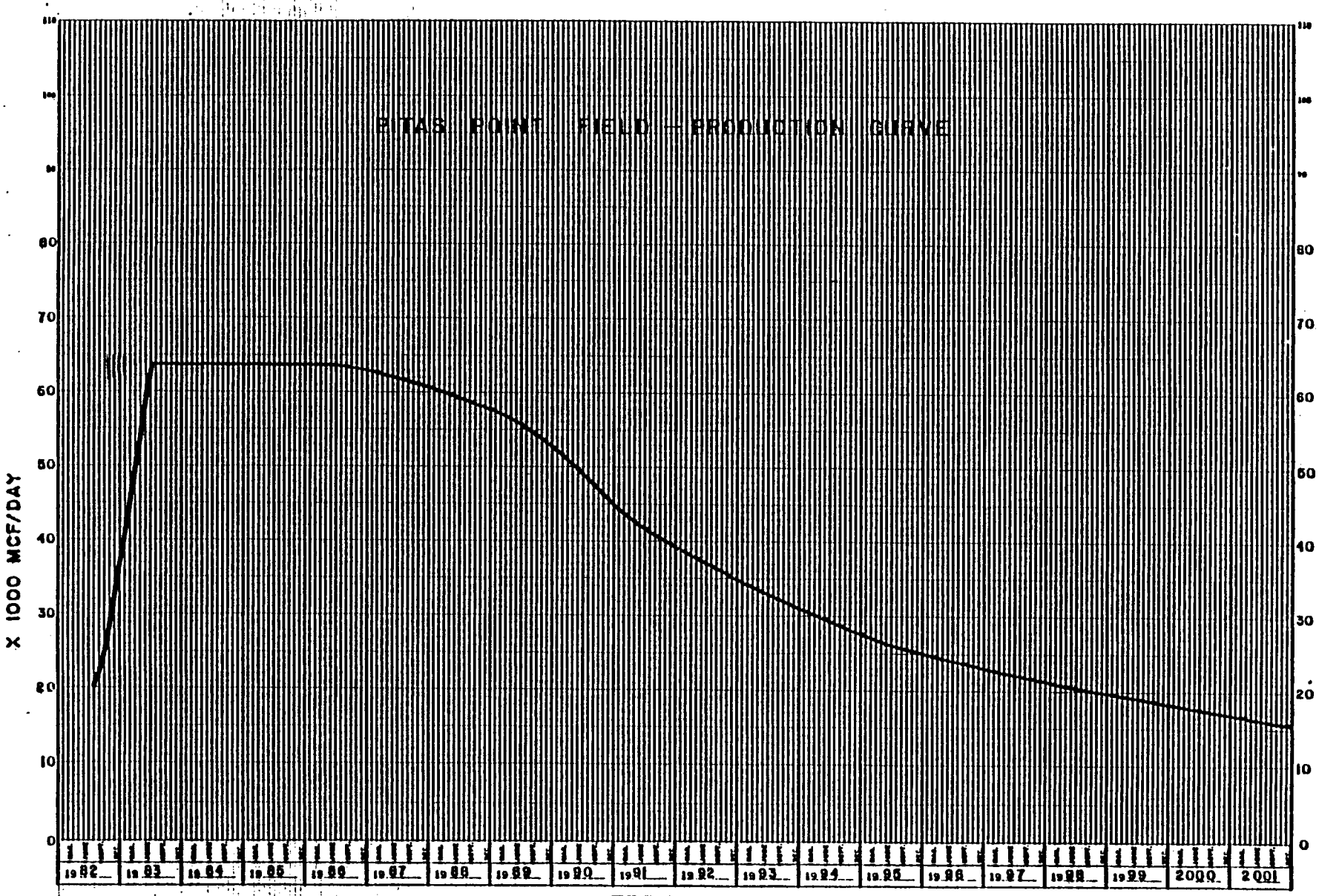

PITAS POINT FIELD - PRODUCTION CURVE
X 1000 MCF/DAY
0
10
20
30
40
50
60
70
80
90
100
110
1982
1983
1984
1985
1986
1987
1988
1989
1990
1991
1992
1993
1994
1995
1996
1997
1998
1999
2000
2001

FIG. I-C

SECTION II PITAS POINT UNIT HISTORY

2.1 General

The Pitas Point Unit consists of three tracts which were initially leased in 1968. The three tracts are located approximately 9 miles south from Carpenteria in the Santa Barbara Channel. From east to west the leases are OCS P-0233, OCS P-0234 and OCS P-0346 (formerly OCSP-0235).

OCS P-0235 was initially leased by Exxon (then Humble Oil). After drilling two exploratory wells Exxon Quit-claimed the lease in 1970. OCSP-0235 was again offered for lease (block 063) in Federal Sale #48 and has been awarded to Texaco and Union and assigned number OCS P-0346.

OCS P-0233 and 0234 were leased by Texaco, Union, Mobil and Gulf with each company having a 25% working interest. Working interests on these leases now vary both areally and with depth due to various elections made by the participants over the years regarding participation or non-participation in proposed operations such as drilling and/or deepening exploratory wells.

Commercial quantities of natural gas have been discovered on lease 0234, the center lease of the Unit. Texaco and Union have acquired the working interests formerly held by Mobil and Gulf in this portion of the Unit.

2.2 Discovery of Natural Gas

Well OCS P-0234 #4, the fourth exploratory well on lease 0234 spudded in November 1977, made the initial

discovery of natural gas on the Unit. Commercial quantities of gas were tested from multiple sands in the middle Pico formation from 5000'+ to 7500'+ deep.

Well OCS P-0234 #1 was drilled in 1968 and suspended after testing measurable quantities of oil from the basal Pliocene Repetto sands in the interval from 11,980' to 12,423'. The well was reentered in 1978 and natural gas was tested from multiple Repetto sands from 10,700' to 11,500'±.

Well OCS P-0234 #5, spudded in June 1978, established the down-dip limit for the middle Pico production and found improved sand development in the Repetto sands which had been tested in well OCS P-0234 #1 earlier in 1978. In addition, lower Pico sands from 10,000' to 10,500' were evaluated as having hydrocarbon saturation.

Well OCS P-0234 #6 was drilled in 1978 and tested natural gas at commercial rates from the lower Pico and Repetto sands.

2.3 Field History

To date, eight exploratory wells have been drilled on the Pitas Point Unit. Six of these wells were drilled by Texaco and two by Exxon.

The six Texaco-operated wells were drilled on OCS P-0234 and the two Exxon wells were drilled on OCS P-0235. (Exxon relinquished Lease OCS P-0235. It was assigned #48-063 for lease sale #48 and has been leased by Texaco.) A map depicting surface and bottom-hole locations is shown on Figure II - A, and summarized in Figure II - B.

Well OCS P-0234 #1, spudded on 3-14-68, was drilled to a TD of 15,247'. The well produced some oil and gas in drill stem tests of the basal Pliocene Repetto. This well was determined by the USGS to be capable of production and was designated as the discovery well for the Pitas Point Unit.

The well was suspended from June of 1968 to January of 1978. The well was reentered in January 1978, and drill stem tests were made in the middle Pico and Repetto formations. Marginal rates of natural gas were obtained from the Repetto formation.

Well OCS P-0234 #2 was spudded in October of 1968 as a confirmation step-out to OCS P-0234 #1. The well was drilled to a TD of 15,456'. Multiple drill stem tests were performed prior to abandonment in October of 1969 with no indication of commercial productivity. All operations on the Pitas Point Unit were then suspended by a Presidential Drilling Moratorium applying to the entire Santa Barbara Channel from 4-21-71 thru 3-31-75.

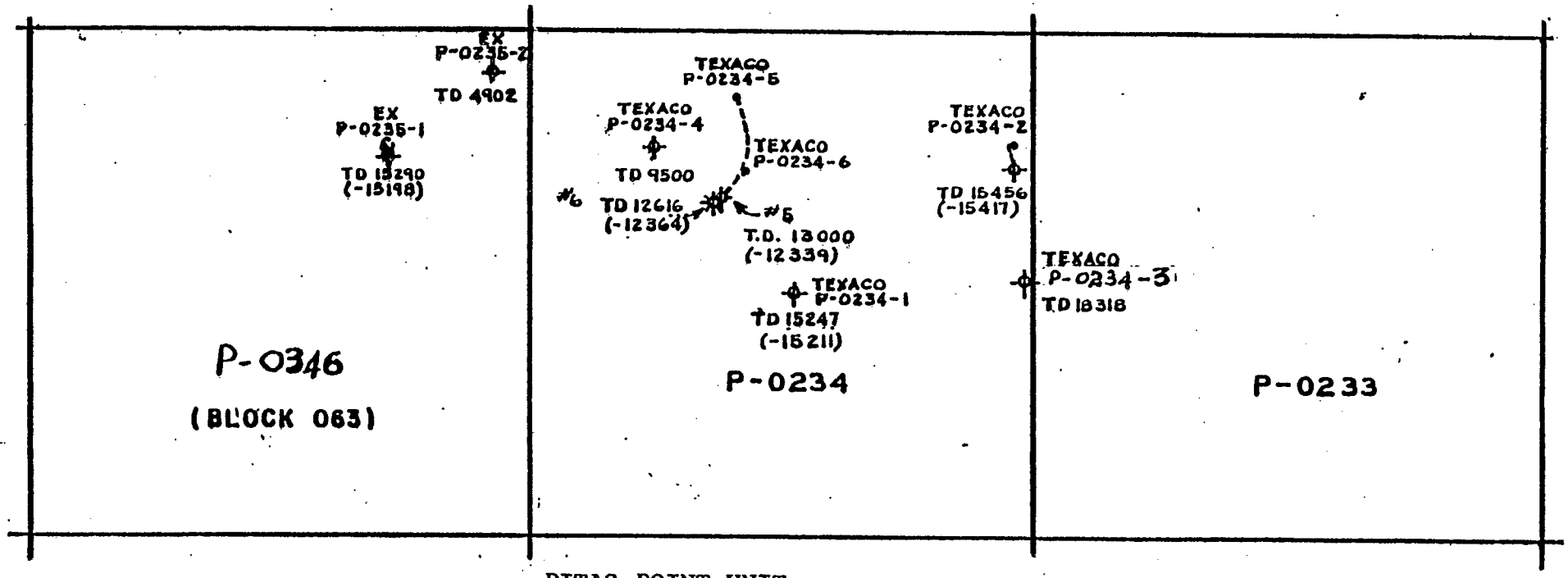
Well OCS P-0234 #3 was spudded in August of 1976, drilled to a total depth of 18,312' and bottomed in the Upper Miocene intervals. No significant oil or gas accumulation was found in the Miocene. Drill stem tests in the Repetto and Pico formations did not indicate commercial productivity. The well was abandoned in January of 1977.

Well OCS P-0234 #4 was spudded in November of 1977 and drilled to a TD of 9,500'. This well tested natural gas

at commercial rates from several middle Pico Intervals. The well was suspended following testing and permanently abandoned in November of 1978.

Well P-0234 #5 was spudded in June of 1978 as a confirmation well to wells #4 and #1. Well #5 was drilled to a TD of 13,000' and abandoned.

Well OCS P-0234 #6 spudded in August 1978, reached a total depth of 12,616', and drill stem tests confirmed commercial Lower Pico and Repetto gas reserves and further defined the limits of the middle Pico reservoir.



PITAS POINT UNIT

LOCATIONS OF WELLS DRILLED IN THE UNIT FIG. II-A

PITAS POINT OFFSHORE FIELD
WELLS ON LEASE OCS-P 0234

WELL NO.	SURFACE LOCATION X (FT)	Y (FT)	LGZ	BOTTOM HOLE LOCA. X	Y	LGZ	T.D. MEASURED	T.D. VERTICAL	D.F. ELEVATION	WATER DEPTH	YEAR DRILLED
1	994,828	783,730	6	994,608	783,713	6	15247	15242	31'	293	1968
2	1,001,597	788,402	6	1,001,651	787,675	6	15456'	15450	33'	268	1969
3	1,002,007	784,492	6	VERTICAL HOLE		6	18318	18318	32'	283	1976
4	990,169	788,401	6	VERTICAL HOLE		6	9500'	9500'	52'	302	1977
5	992,750	789,911	6	992,327	786,701	6	13000'	12391	52'	288'	1978
6	993,039	787,601	6	992,100	786,662	6	12616	12416	52''	297'	1978

FIG. II-B

SECTION III GEOLOGY AND RESERVOIR EVALUATION

3.1 Area Geology

The Pitas Point Unit is located on an anticlinal trend lying between the Oakridge and Pitas Point faults. The Pitas Point anticline is the dominant feature forming the Pitas Point field.

The sedimentary strata penetrated in the Unit area range from Middle Miocene to Recent. The deepest stratigraphic penetration on the Unit is in Well OCS P-0234 #3 which bottomed in Miocene sands, shales and siltstones.

3.2 Area Geotechnical Conditions

The Pitas Point Unit is located within an area that is recognized as being seismically active. The platform will be designed in accordance with API-RP 2A Zone 4 criteria.

3.3 Reservoir Description

As defined by the eight exploratory wells drilled on the Unit and available geophysical data, the Pitas Point Unit is an anticlinal structure with its axis running generally east-west. It is asymmetrical, having a steeply dipping north flank while having a more gentle dip in all other directions.

Commercial quantities of natural gas have been tested from multiple thin sands at depths of 5,000' to 11,500' on lease 0234. Reserves have been identified in Middle Pico sands from 5,000' to 7,500', in Lower Pico sands from 10,000'

to 10,500' and in Repetto sands from 10,700' to 11,500'.

The sands may be considered in two main groups, the shallower Middle Pico sands being taken separately and the deeper Lower Pico and Repetto sands considered jointly.

The aereal extent of the shallower sands is limited by gas/water contacts in each of the many thin sands to a maximum of approximately 300 acres. The crest of the closure is approximately 3,000' northwest from the proposed platform location.

The extent of the deeper accumulation is limited to the south and west by increasing shale content of the section and to the north and east by gas/water contacts. The deeper sands are expected to be productive over most of the northern half of lease 0234. The gas/water contacts to the northerly and easterly flanks are not well established. The productivity of the deeper sands on lease 0233 will be determined by drilling one or more wells to that lease from the proposed platform.

Average porosity for the shallower sands is approximately 20% and for the deeper sands is 14 to 17%. Calculated permeability to gas within the productive horizons varies from 1 to 20 md. Estimated water saturations vary from 40 to 60% in all productive sands.

3.4 Reservoir fluid characteristics:

a) Gas: 98 to 100% methane (see Gas Analysis Figure III-A).

b) Specific gravity: 0.56 (Air = 1.0).

c) Formation temperature: 211°F at 10,000' VSS. (Figure III-B).

d) Formation pressure: 5900 psi at 10,000' VSS. (Figure III-C).

e) H_2S Content: None (Figure III-A).

GAS SPECTRO ANALYSIS

PITAS POINT FIELD

COMPOUND	MOLE. PCT.
Water	0.074
Air	0.233
Nitrogen	0.339
Carbon Dioxide	0.073
Hydrogen Sulfide	0.000
Methane	99.086
Ethylene	0.101
Propylene	0.047
Propane	0.024
Argon	0.018
Ammonia	0.000
Carbon Monoxide	0.000

Avg. Mole. Wt.	16.171	
Net Heating Value	Btu/LB	21,211.444
Net Heating Value	Btu/SCF	903.896
Gross Heating Value	Btu/LB	23,556.630
Gross Heating Value	Btu/SCF	1,003.833

FIG. III-A

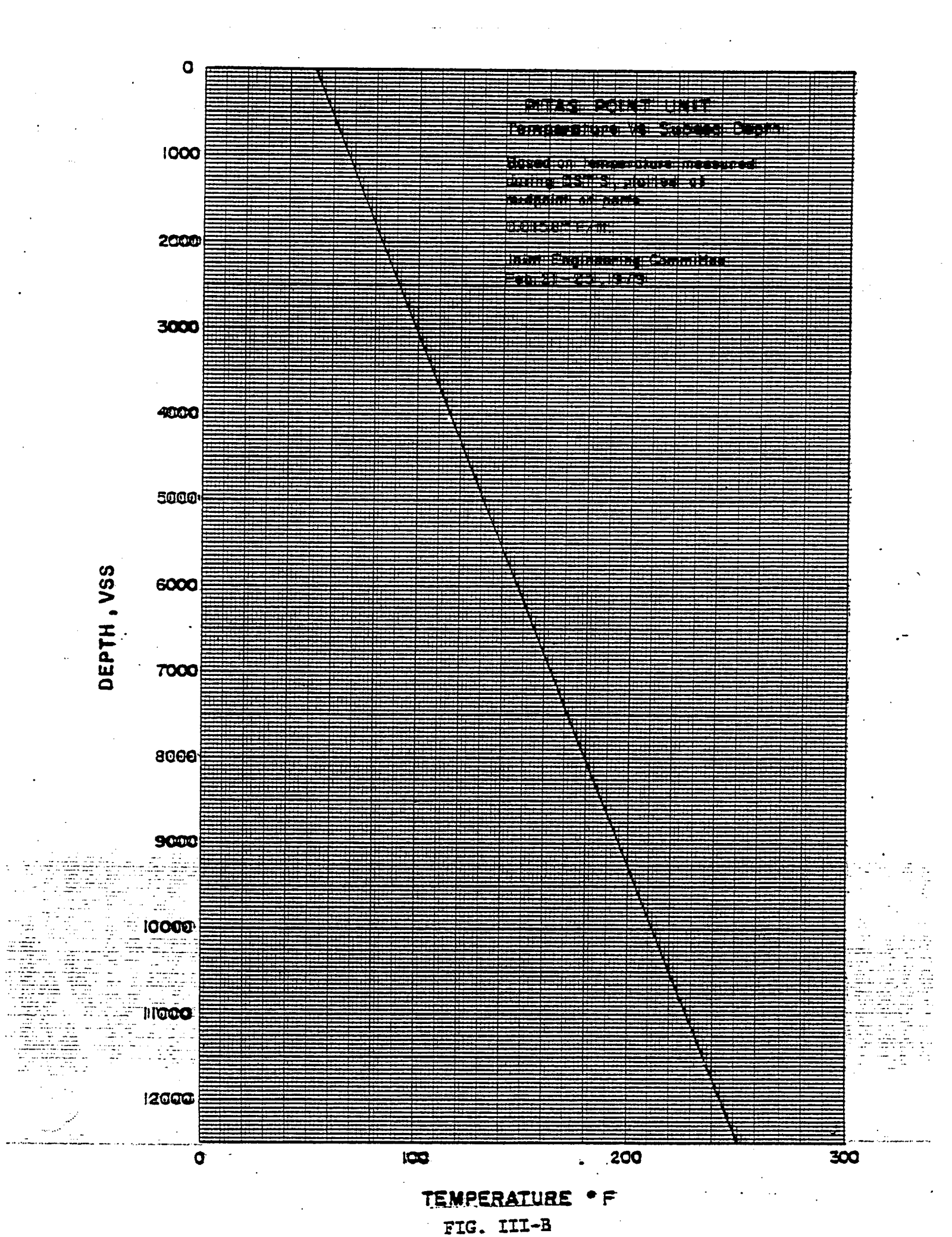

PITAS POINT UNIT
Based on temperature measured during DST 3, plotted at midpoint of perfs
Joint Engineering Committee
0
1000
2000
3000
4000
5000
6000
7000
8000
9000
10000
11000
12000
DEPTH, VSS
0
100
200
300
TEMPERATURE °F

FIG. III-B

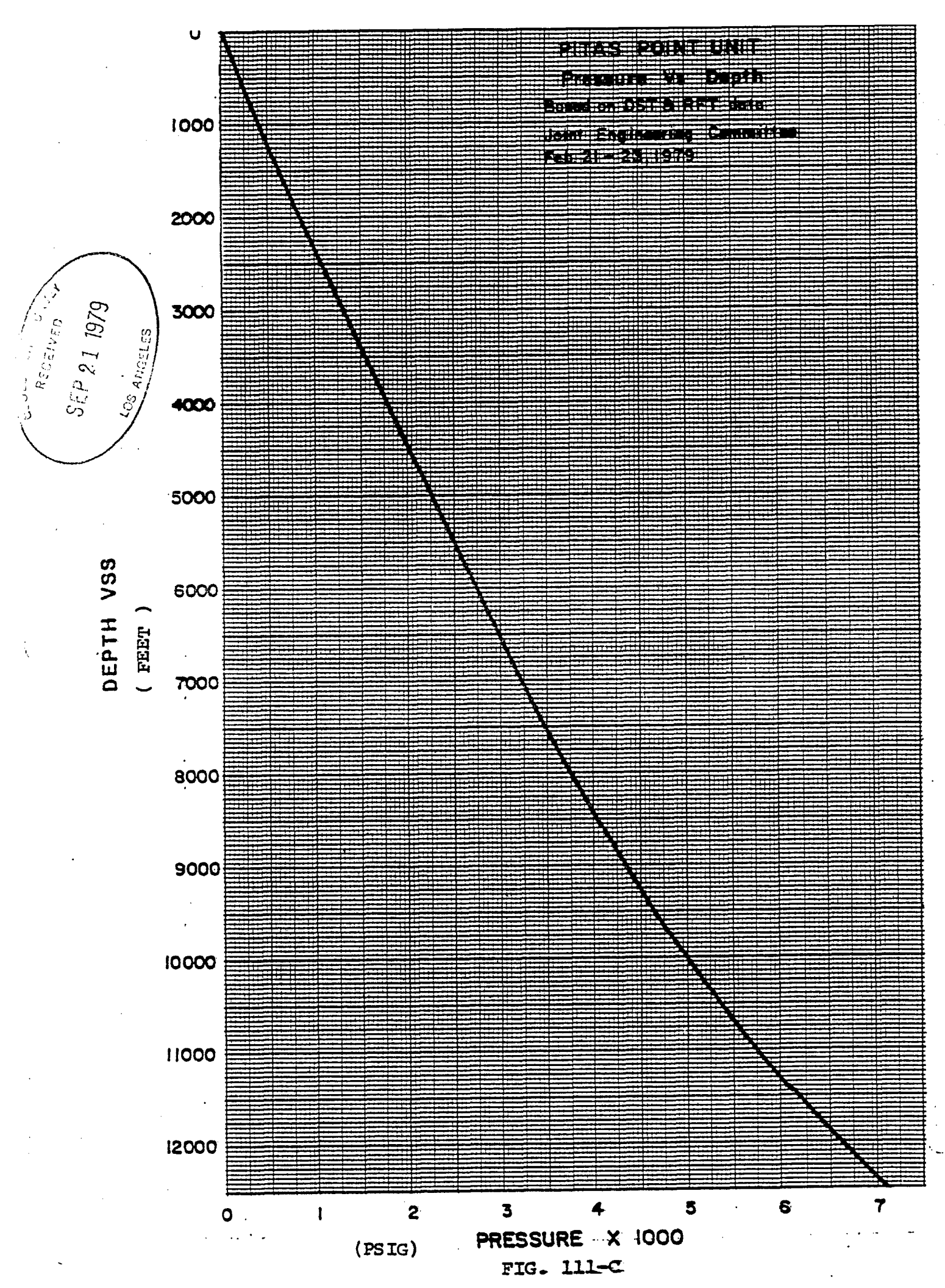


FIG. III-C

SECTION IV - DRILLING PLANS & FACILITIES

4.1 General

Based on current interpretation of stratigraphy and geologic structure, twenty-one development wells will be required to efficiently develop and produce the estimated reserves in approximately 20 years. Two of these wells will be completed in the Middle Pico intervals and the other nineteen in the Lower Pico and Repetto formations. The initial 21-well program will require approximately two years to complete and will provide data to optimize development plans for gas recovery (Figures IV-A and IV-B). The remaining well slots will provide for drilling development wells and exploratory/development wells as required, based upon results of the scheduled development drilling.

Figure IV-A shows the proposed 21 wells in the order they are to be drilled and their bottom hole locations. Modification of the Plan of Development, if necessary, will be completed in compliance with existing regulations.

Exploratory wells drilled on OCS lease P-0234 have furnished data on subsurface formations, fluid content, pressures and temperatures and provide a sound basis for planning a safe and efficient development drilling program.

4.2 Drilling Equipment

The Pitas Point Unit platform will have slots for a maximum of 24 wells. The wells will be drilled using one

drilling rig which will be skidded over individual well slots by hydraulic jacks. The drilling rig with associated crews and services will be contracted and/or subcontracted.

Drilling equipment layouts are shown on Figure IV-D It is anticipated that the rig will be a land-type rig with alterations as necessary for this offshore application. The drilling contractor will have some flexibility in final equipment layouts, but equipment must be compatible with deck designs.

Drilling operations, pollution prevention systems, and safety systems will be in accordance with OCS and E.P.A. regulation and industry standards.

Major drilling equipment will include:

4.2.1 Rig Components

One land-type cantilever mast or standard derrick, 142 feet high with 20,000-foot drilling and 1,000,000-pound hook-load capacities. The mast or derrick will be designed in accordance with existing A.P.I. Standards.

The draw works will be electrically powered (rated at 2500 HP max.) and be complete with sandreel and rotary table drive.

The hook, traveling block, and crown block will be at least a 500-ton load-rated capacity to match the derrick.

The drill string will be 3-1/2", 4-1/2" or 5", Grade G and E drill pipe, or combinations thereof.

4.2.2 Substructure

A drilling subbase is to be provided to support the derrick, draw works subbase, with skid plates to accommodate the 45-foot platform jacket and pile configuration.

The upper drilling deck will provide sufficient area for the drilling contractor's support facilities: power control rooms, temporary quarters, galley, offices, tool rooms, etc.

4.2.3 Drilling Mud System

The rig will be equipped with two 1400 HP mud pumps, a mud mixing tank, a circulating tank, and mud storage tanks.

Return mud will be treated with shale shakers, desanders, desilters, and degassers as necessary. Free oil will be removed from cuttings before disposal. Cuttings that cannot be adequately cleaned by washing will be diverted to a waste cuttings holding tank(s) to be hauled ashore for disposal.

4.2.4 Cementing Unit

One dual diesel powered cementing unit with the necessary bulk storage tanks will be used for cementing operations. Cementing Units will be contractor-supplied.

4.2.5 General Layout

The drilling mud system equipment will be located on the drill deck, with the waste cuttings tank below, switchgear and related support equipment on the cellar deck.

4.3 Drilling Operation

4.3.1 Casing Program

The casing selection and cementing will be in accordance with the requirements of OCS - Order No. 2 or field drilling rules established by the Supervisor. Figure IV - C describes a typical casing program.

4.3.2 Wellhead Equipment

The wells will be completed with wellhead equipment in accordance with OCS Order No. 6. The maximum anticipated shutin pressure will be calculated using pressures from Figure III - C assuming a methane gas gradient to surface.

4.3.3 Blowout Prevention Equipment (Figure IV - E)

A. The Blowout Preventer system will be in accordance with the OCS Order No. 2. The system will be rated for 10,000 psig and will include two hydraulically operated pipe rams, one blind ram, and one annular-type preventer.

B. Pipe rams will be sized to fit the pipe or casing in use, and the bore of all BOPE's and spools will permit the running of the largest tools that the casing below the preventers can accommodate.

C. All BOPE's will be equipped as follows:

1. A hydraulic actuating system that provides sufficient accumulator capacity to close all blowout prevention equipment units with a 50 percent operating fluid reserve at 1200 psi. A high-pressure nitrogen or accumulator back-up system will be provided with sufficient capacity to close all blow-out preventers and hold them closed.
2. A remote control station at the driller's station and a manual control can also be used to activate the accumulator unit.

D. A choke and kill manifold will be installed. (Figure IV - F).

E. All valves, pipe and fittings that can be exposed to pressure from the wellbore will be of a pressure rating at least equal to that of the blowout prevention equipment.

F. A top Kelly cock (valve) will be installed below the swivel.

G. An inside blowout preventer and a full opening drill string safety valve in the open position will be on the rig floor at all times while drilling operations are being conducted. Valves will be on the rig floor to fit all pipe that is in the drill string. A safety valve will be available on the rig floor to fit the casing string as it is being run in the hole.

H. The borehole shall be kept full of drilling fluid at all times to assure early detection and, thereby, early reaction to swabbing, lost circulation or influx of formation fluids. The following mud system monitoring equipment (with derrick floor indicators) will be installed and used throughout the period of drilling after setting the conductor casing:

1. Mud pit level indicators will be used to determine mud pit volume gains and losses. This indicator shall include a warning device.
2. Mud return or "full hole indicator."
3. Trip tank.

I. All BOPE's and associated equipment will be installed, tested and operated in a manner to meet or exceed all applicable regulations and field rules in effect.

4.4 Drilling Procedures - Typical Producer

1. Rig up over cellar.

2. Drill a 30" hole to 450 ' MD (100' BML) with sea water. Returns to be left on the ocean floor.

3. Run and cement 24" casing to 100' BML. Install diverter. (See Fig. VI-G for typical diverter system)

4. Drill a 17-1/2" hole to 850' MD (500' BML). Open the hole to 26".

5. Run and cement 20" casing to 500' BML.

*6. Drill a 17-1/2" hole to 1850' MD (1500' BML). Open the hole to 22".

7. Run and cement 16" casing to 1500' BML. Install API Class 2M-RdRA BOPE.

*8. Drill a 12-1/4" hole to 4850' VD (4500' BML). Run logs. Open the hole to 17-1/2".

9. Run and cement 13-3/8" casing to 4500' BML. Install API Class 10M-SRdRA BOPE.

10. Drill a 12-1/4" hole to 12,000' VD (up to 13,000' MD). Run logs.

11. Run and cement 9-5/8" casing to T.D.

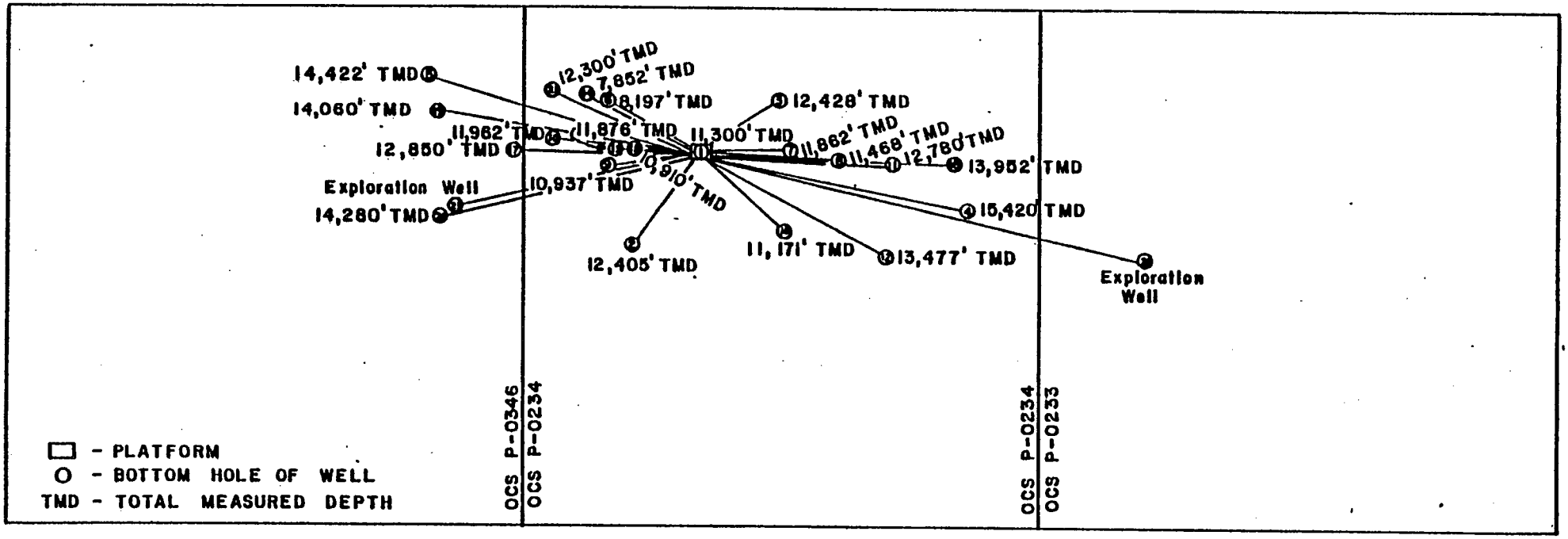
12. Perforate for production.

13. Run 2-7/8" tubing. Set production packer above uppermost perforation.

14. Tear out BOPE and install Christmas tree.

15. Place well on production.

*Setting depths to be consistent with requirements of USGS Pacific Area Orders.



PITAS POINT UNIT

PROPOSED WELL LOCATIONS

FIG. IV-A

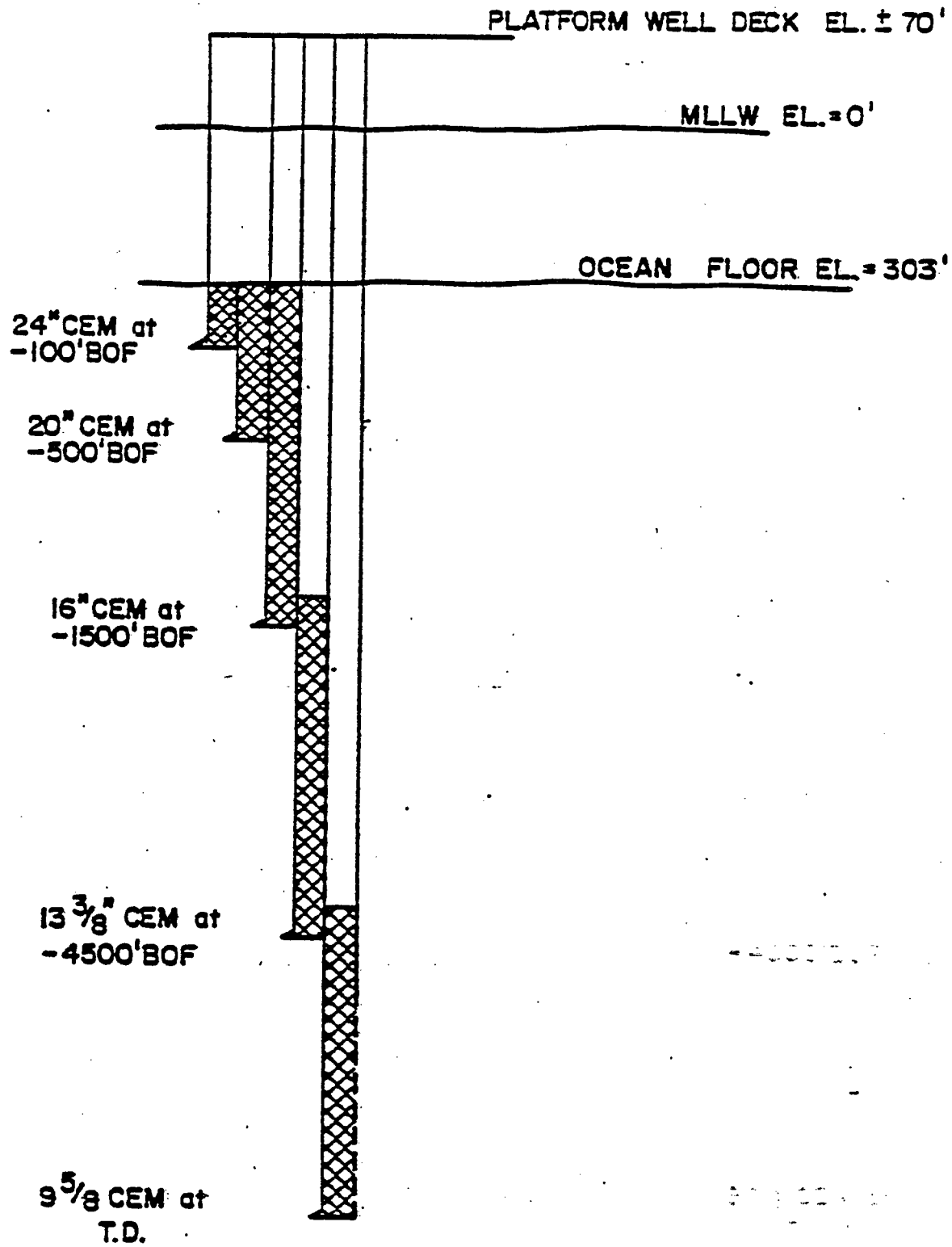
PITAS POINT UNIT

TABLE OF PROPOSED WELL LOCATIONS

WELL #	COMPLETION INTERVAL	LOCATION OF TOP OF ZONE X'	Y'	LOCATION OF TOTAL DEPTH X'	Y'
1	11,100 Sand	991,690	787,500	991,690	787,500
2	10,500 Sand	989,500	784,650	989,250	784,310
3	10,500 Sand	993,900	789,200	994,140	689,367
4	10,000 Sand	999,800	785,800	1,001,160	785,460
5	11,100 Sand	983,300	789,840	982,985	789,930
6	6,800 Sand	988,700	789,100	988,445	789,235
7	11,100 Sand	994,400	787,600	994,505	787,620
8	10,000 Sand	995,900	787,300	996,120	787,290
9	10,000 Sand	988,900	787,100	988,770	787,080
10	10,500 Sand	987,100	787,900	986,855	787,960
11	10,500 Sand	997,500	787,300	997,785	787,285
12	11,100 Sand	997,260	784,350	997,485	784,220
13	11,100 Sand	989,100	787,600	988,995	787,600
14	6,100 Sand	988,200	789,350	987,795	789,550
15	10,000 Sand	994,200	785,100	994,340	784,970
16	11,100 Sand	999,400	787,200	999,660	787,190
17	11,100 Sand	986,000	787,500	986,230	787,500
18	10,500 Sand	990,300	787,600	990,220	787,600
19	10,000 Sand	983,600	788,700	983,110	788,785
20	11,100 Sand	983,700	785,500	983,385	785,405
21	11,100 Sand	987,100	789,400	986,910	789,475
*22	-	-	-	1,005,300	784,300
*23	-	-	-	984,120	785,740

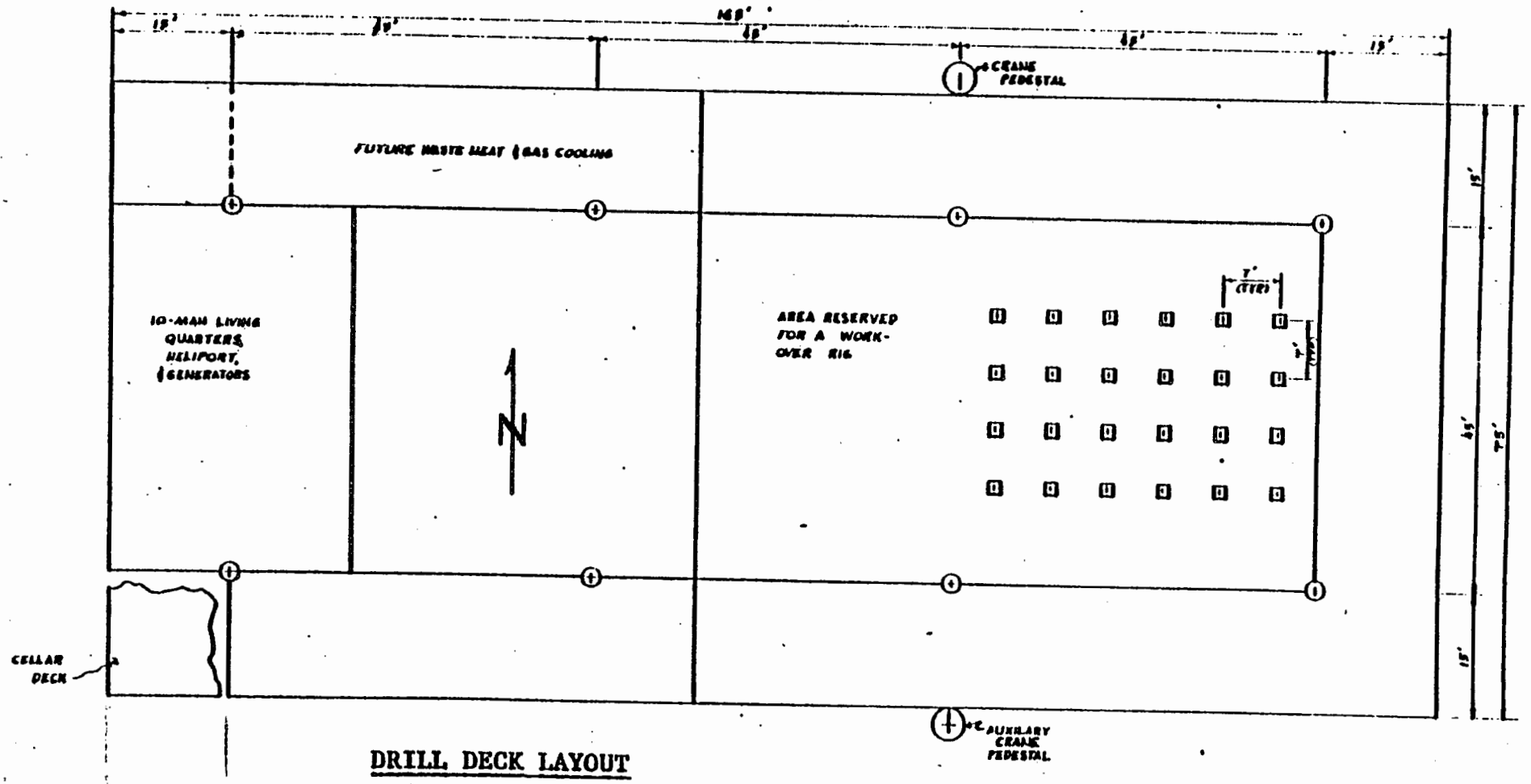
*Exploratory Well

FIG. IV-B



CASING PROGRAM
PITAS POINT UNIT
TEXACO INC.

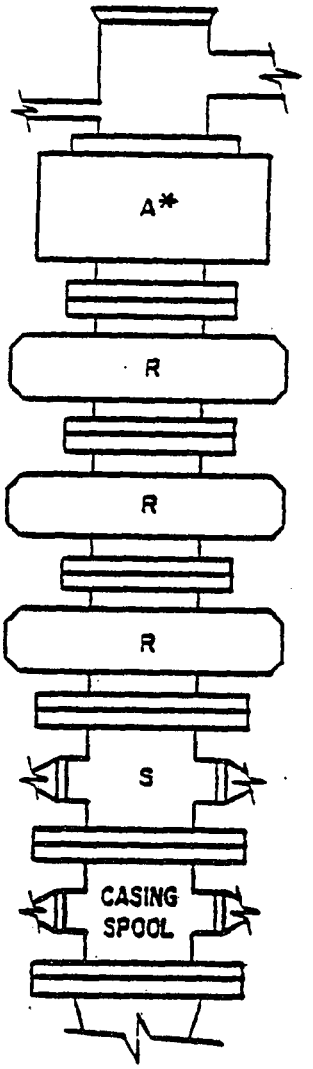
FIG. IV-C



DRILL DECK LAYOUT

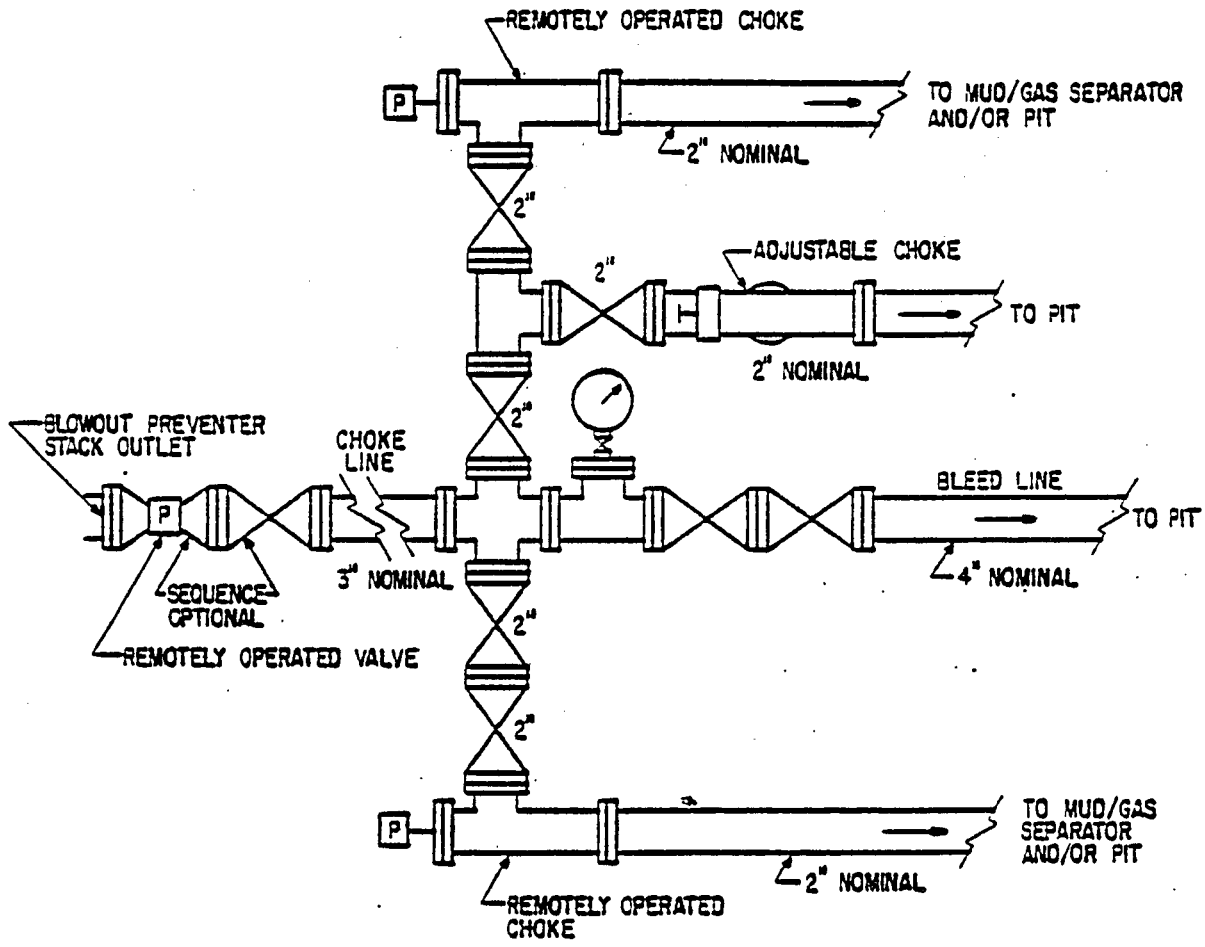
FIG.. IV-D

PITAS POINT – SANTA BARBARA
PLOT PLAN – Drill Deck



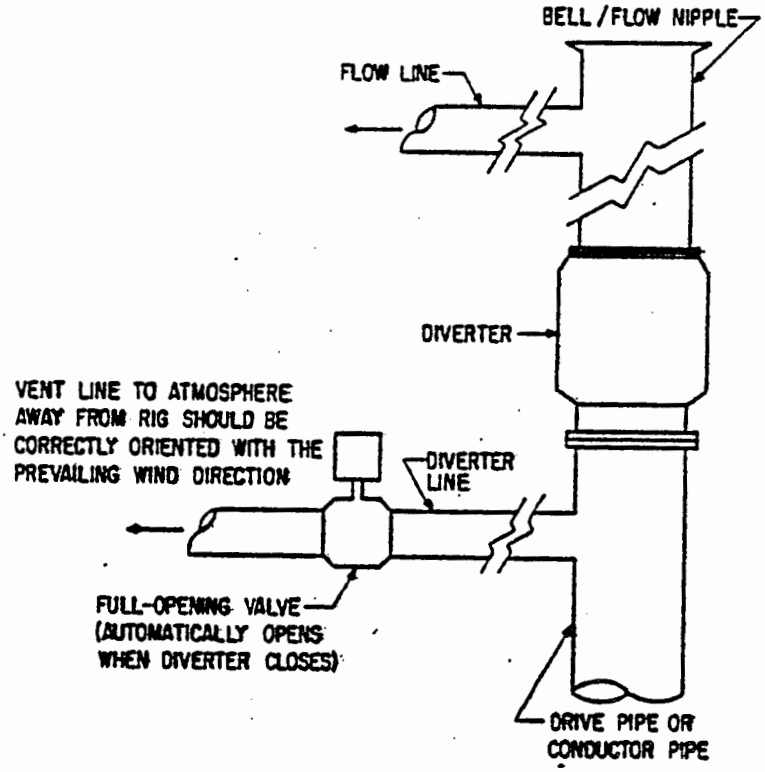
BOP STACK
Pitas Point Unit
Plan of Development
Texaco Inc.

Figure IV - E



CHOKE & KILL MANIFOLD
Pitas Point Unit
Plan of Development
Texaco Inc.

Figure IV - F



TYPICAL DIVERTER SYSTEM

FIG. IV-G

SECTION V - PLATFORM SITE AND SPECIFICATION

5.1 GENERAL

The proposed platform will be an eight pile structure set in 303 feet of water at Lambert coordinates X = 991,740' and Y = 787,500', California Grid Zone VI OCS P-0234, approximately 9 miles south of Carpenteria. Piling will be installed to a depth sufficient to satisfy all safety requirements as set out in API RP-2A zone-4 Criteria tenth edition.

The superstructure will consist of a drilling deck 165' x 75' at 57± MLLW elevation, and a cellar deck 165' x 85' at 40±' MLLW elevation. The platform will have a heliport, quarters for 10 persons, 2 pedestal mounted cranes, and 2 boat landings.

5.2 DESIGN CRITERIA

The platform will be designed to produce, gather, treat and deliver a maximum of 70,000 MCF/D of gas at a discharge pressure of 1050 psig.

5.3 BATHYMETRY

The bathymetry of OCS P-0234 is shown on Fig. V-A. Water depth in the survey area ranges from 260 feet in the northeast to 330 feet in the southwest. At the proposed platform site the water depth is approximately 303 feet and the gradient is 0.3% (0.2 degrees).

5.4 PLATFORM ELEVATION

The platform elevation is shown on Fig. V-B.

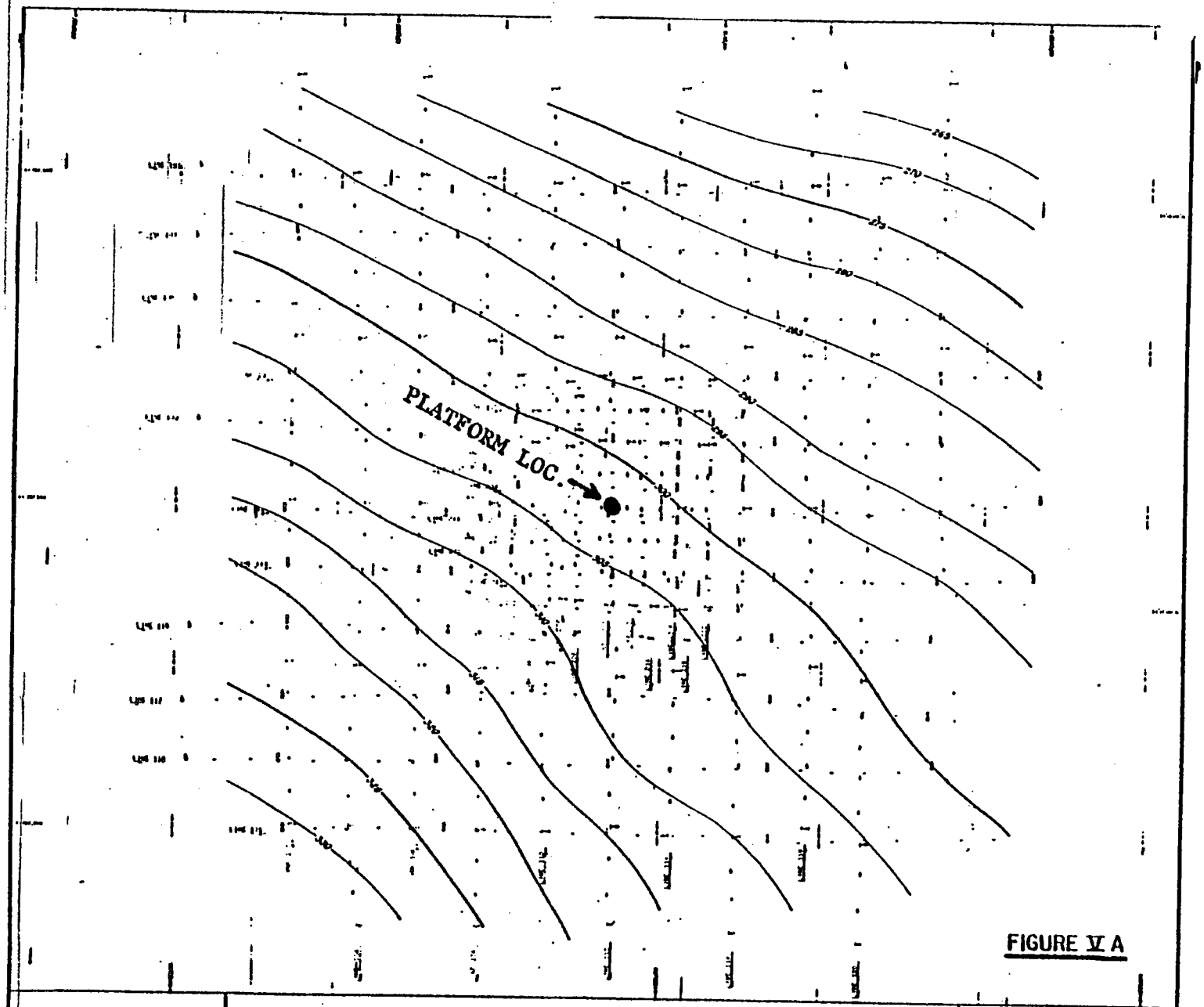


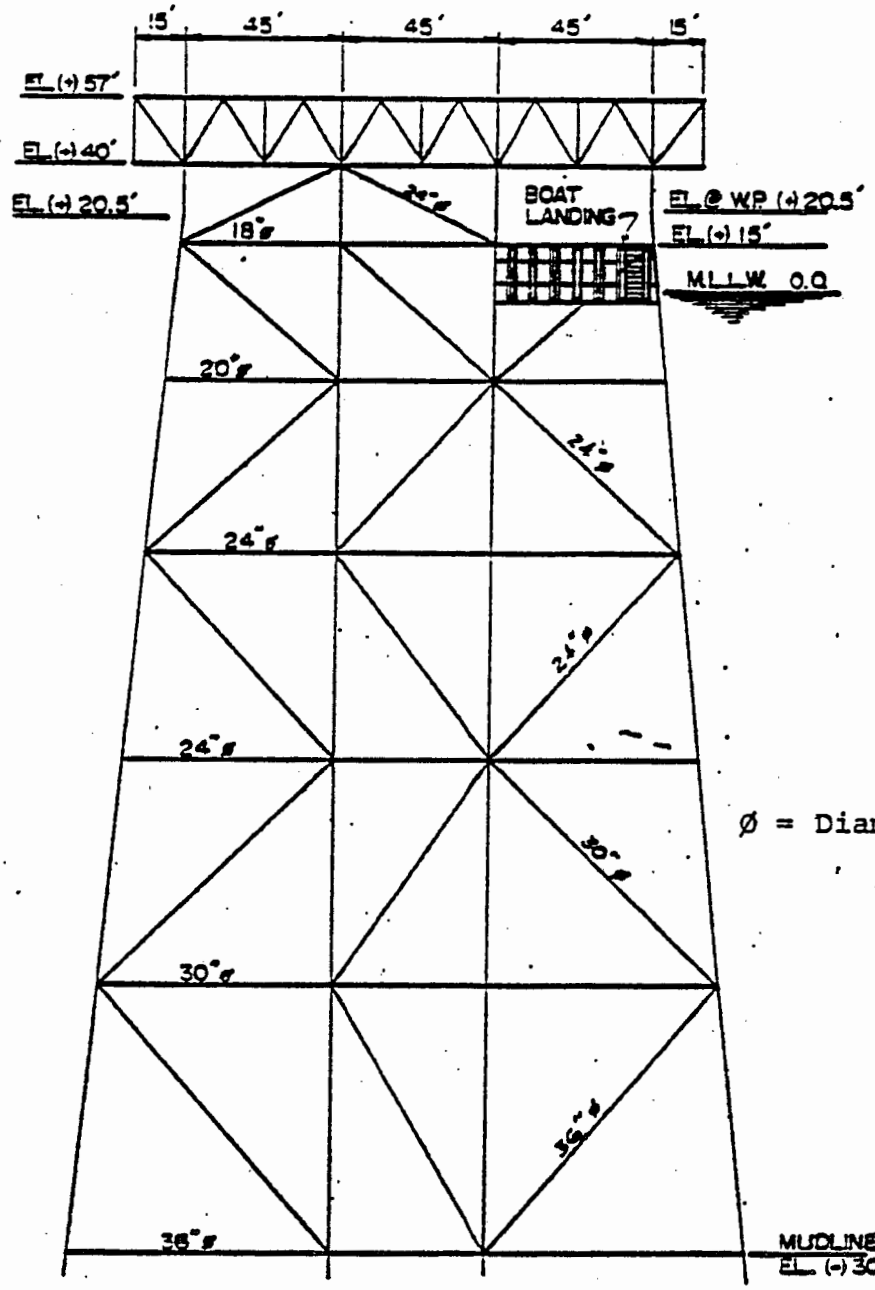
FIGURE V A

LEGEND

FAIRFIELD INDUSTRIES

TEXACO, INCORPORATED

BATHYMETRY MAP



Ø = Diameter

FIG. V-B

TEXACO Inc.

CIVIL ENGINEERING DEPT.

SANTA BARBARA
PITAS POINT
SELF-CONTAINED PLTFM.
PLATFORM ELEV.

DRAWN BY	CHECKED	DATE	DRAWING NO.
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SECTION VI - PRODUCTION FACILITIES

6.1 Introduction

This section describes the production equipment and related facilities to be installed on the platform and is divided into Production Process Facilities, Support Facilities, Pollution Prevention and Safety Facilities.

6.2 Production Process Facilities

The platform will contain complete production facilities for the treatment of the produced gas and water. All gas will be dehydrated to a 45°F dew point and will be of marketable quality.

6.2.1 Gas Production Equipment

Process description flow schematics of the primary production equipment, Figure VI - A shows the basic process flow. Generally, gas will be produced from the wellhead and heated by a heat exchanger as necessary to prevent formation of hydrates. After pressure reduction, it will be commingled into a production manifold and processed thru free-water separators. Water from the separators will run thru a skimmer, to remove solids and oil as per EPA (NPDES) criteria, and discharged below sea level (see Waste Water Treatment for details). All discharged waters will be sampled, tested and results reported in accordance with NPDES

permit requirements. The wet gas will be dehydrated to a design dew point of 45°F by treating in a Glycol Contactor Absorbor (see Gas Dehydration Flow Schematic, Figure VI - B). The glycol will be regenerated for reuse in a glycol reboiler. Natural gas liquids will be recombined with the dry gas for shipment to shore. All hydrocarbon vapors (low and high pressure) will be gathered, scrubbed, and returned to the gas processing system at the production separator. A preliminary layout of the production facilities is shown in Figure VI - C. Process equipment has been located to minimize the length of interconnecting piping and to provide equipment segregation.

6.2.2 Wellheads and Flow Manifolds

Twenty-four well conductors will be provided; twenty-three wells are presently planned, with the one remaining reserved for future use. The wells will be arranged in four rows on a 7' x 7' spacing with short flow-lines connecting each tree to a wall-mounted manifold system.

The manifold system will consist of a test manifold, production manifold and a blowdown manifold. Provision for future gas lift input, hydraulic and pneumatic control, and chemical injection lines will also be made. All wells will be equipped with surface controlled subsurface and surface safety valves in accordance with OCS Order No. 5.

6.2.3 Gas Lift

Formation water is often produced together with natural gas. Under certain conditions water can accumulate in the wellbore and restrict or totally block the flow of gas. If this condition occurs high pressure gas will be used to unload (produce the water) the well and restore gas flow.

6.2.4 Gas Compressors

As the reservoir is depleted, wellhead flowing pressure will decline. An electrically-driven 400± HP compressor will be used to compress the small volume of low pressure gas produced early in the life of the field. The electrically driven compressor will be supplemented or replaced with approximately 4000 HP of gas turbine driven compression facilities when required. Adequate room for future compressor installations has been provided in the platform design.

6.2.5 Stack and Flare Systems

The high pressure balanced relief valves on vessels and gas compressors, as well as stack regulators on the gas collection systems, will be manifolded together to an emergency high pressure stack scrubber and flare. Low pressure relief valves from the vapor recovery system, tanks, compressor spacer block vents, etc., will be manifolded together to an emergency low pressure vapor stack scrubber and flare.

Both the emergency high pressure and vapor stack flares

will be incorporated into a single flare boom. Liquids collected in the stack scrubbers will be drained to a separator for recombination with the process flow.

6.3 Support Facilities

The platform will be equipped with the following systems which are considered support for the platform operations.

6.3.1 Power

Power will be provided via a submarine cable from a nearby platform.

6.3.2 Emergency Power Generation

Emergency power generation will be supplied by a diesel powered generator. This unit will provide electric power under emergency conditions for critical services, such as lights, navigational aids, etc.

6.3.3 Fuel Gas

The primary use of fuel gas on the platform is for the glycol regeneration.

6.3.4 Diesel Fuel

The diesel fuel, which is the emergency fuel supply, will be stored in a 200 bbl. permanent diesel storage tank located in the crane pedestal. Transfer pumps, filters and distribution piping will be included. Connections at the boat landing level will be provided for the transfer of the diesel fuel from work boats to the storage tank.

6.3.5 Lighting

Platform lighting will be in compliance with the I.E.S. Recommended Levels of Illumination.

6.3.6 Cooling System

Process system cooling will be required for the inter-stage gas compression and certain other equipment (compressor cylinder jackets, etc.). This cooling will be accomplished by the use of aerial coolers.

6.3.7 Utility Air and Instrument Air

A utility air system will be provided to distribute a supply of ±150 psig air throughout the platform for such uses as air tools and hoists.

Air compressors will be powered by electric motors. 120 psi Instrument Air will be dehydrated air from the Utility Air System.

6.3.8 Freshwater System

Approximately 2,000 bbls. of freshwater storage will be provided in the platform legs. A submersible pump will permit pumping the water to a surge tank and distribution system. This water will be used primarily for mixing drilling muds and also for makeup to the cooling system.

6.3.9 Potable Water System

Potable water will be supplied by boat transport from shore and stored in a ±200 bbl. tank. This water will be utilized in the personnel quarters and the wash-room on the upper drilling deck.

6.4 Pollution Prevention

Pollution prevention and control is included as part of Texaco's Oil Spill Contingency Plan for OCS operations in the Santa Barbara Channel. The Plan is on file with the USGS. This contingency plan is based on compliance with OCS Order No. 7, which is primarily directed at oil operations but also applies to gas operations.

Major pollution prevention systems on the platform include:

6.4.1 Sewage Treatment

A sewage treatment unit will be incorporated to process the sewage from the personnel building and drilling crew washrooms. The effluent from this unit will be discharged in compliance with EPA and USGS requirements.

6.4.2 Waste Water Treatment

Produced waste water from the natural gas liquid separators and sump tank will be processed for hydrocarbon and solids removal. Representative samples of the waste water will be taken at a point prior to discharge into the ocean and analysed for: suspended solids, settleable solids, pH and total oil and grease content. The water will be returned to the sump tank for reprocessing if not in compliance with EPA NPDES Permit requirements. Processed water will be discharged below sea level.

6.4.3 Platform Drainage

All decks will be equipped with curbs and drains to prevent accidental spillage into the ocean. Water will be processed for removal of oil and grease prior to discharge into the ocean.

6.5 Safety Facilities

All applicable OCS, U.S. Coast Guard and OSHA safety regulations will be followed.

6.5.1 Hydraulic Control System

A hydraulic pressure system will be provided for subsurface and surface safety control valves. The system will include pneumatic-powered pumps, reservoir tanks, filters and a distribution system.

6.5.2 Control and Monitoring Systems

All platform operations will be monitored from the central control room as follows:

a. Automatic control of process equipment pressures, temperatures, fluid level control and conditions.

b. Automatic monitoring of process and production equipment (supervisory control) with annunciator panels indicating critical equipment status and alarms.

c. Gas detection systems with automatic emergency shutdown.

d. Fire detection equipment will include ultraviolet flame detectors, heat detectors and fusible plugs.

6.5.3 Fire Suppression

The platform design provides a fire suppression system including:

a. A saltwater pumping system to include one electric driven and one diesel driven back-up pump.

b. Fixed water fog suppression system with automatic area controls capable of wetting critical surfaces with a water density of not less than 0.25 GPM/ft.^{2}.

c. Two 250 GPM monitors on the main deck to cover the BOP stacks and the upper well bay area.

d. Fire hydrants with hoses to provide coverage on each deck.

e. Dry chemical/CO_2 extinguishers strategically located throughout the platform.

f. Standpipe connections to both boat landings for fire boat use.

6.5.4 Safety Equipment

The platform will be equipped with lifesaving equipment such as life jackets, life rafts and escape ropes for emergency egress. The above equipment will be provided for the maximum amount of personnel on the platform. First aid and other required safety equipment will also be provided. Handrails, stairways, etc., shall all be installed and maintained to OSHA standards.

6.5.5 Corrosion Control

Corrosion will be controlled using corrosion resistent coatings on the topside structures and equipment and an underwater cathodic protection system for the platform jacket structure. Special provisions will be made for protection of the structure in the splash zone.

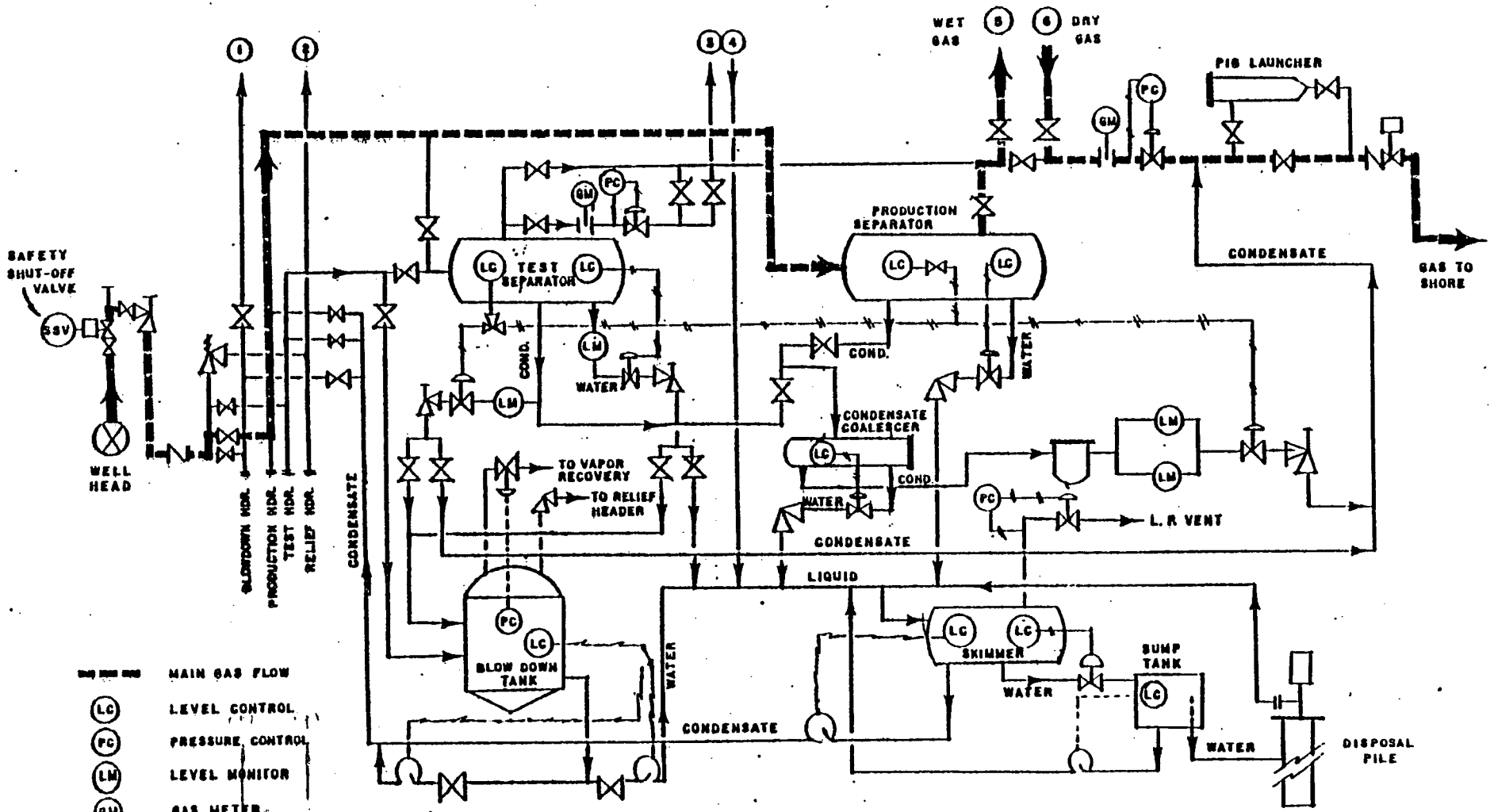
6.5.6 Navigational Aids

A navigational aid system will be provided in conformance with U.S. Coast Guard requirements including all necessary horns, lights, signs, etc.

6.5.7 Alarms and Signals

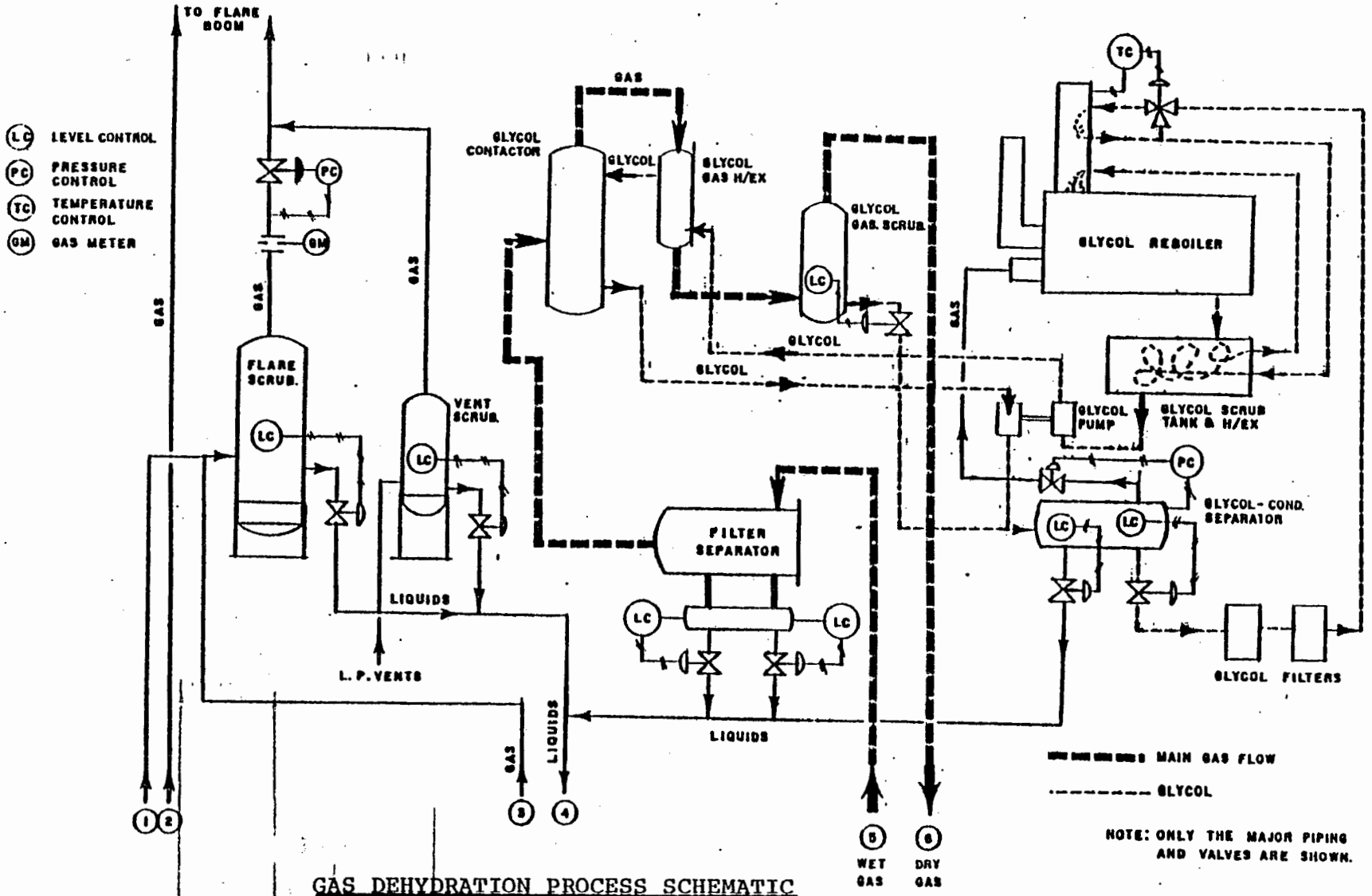
The platform will be equipped with an alarm system, telephone communications and radio communication systems.

(See Fig. VI-B)

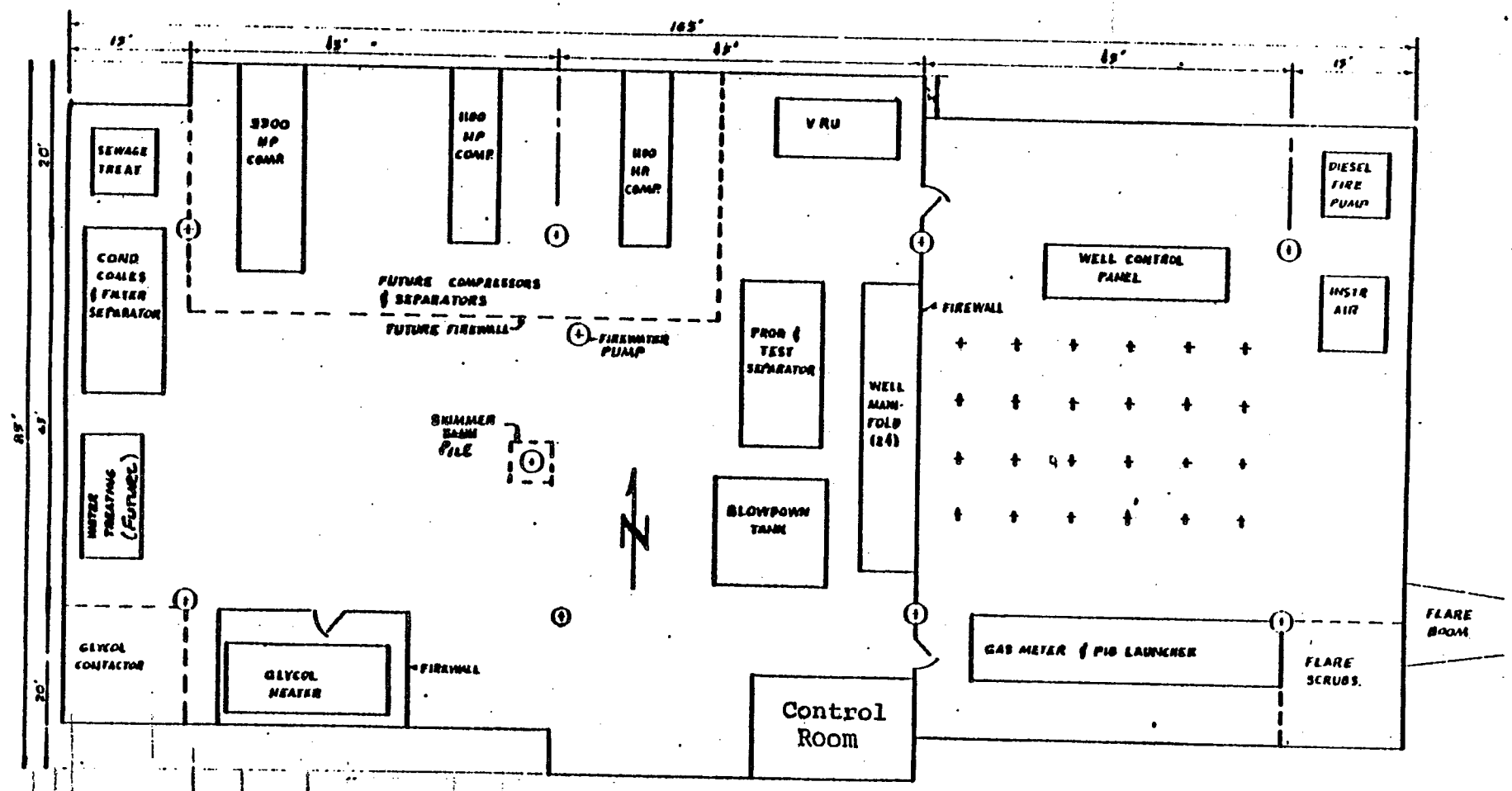


NOTE: ONLY THE MAJOR PIPING AND VALVES ARE SHOWN.

GAS PROCESS FLOW SCHEMATIC
FIGURE VI-A



GAS DEHYDRATION PROCESS SCHEMATIC
FIGURE VI-B



CELLAR DECK LAYOUT

FIG. VI-C

PITAS POINT – SANTA BARBARA
PLOT PLAN – CELLAR DECK

SECTION VII - SUBSEA PIPELINE

7.1 Introduction

Natural gas produced from the Pitas Point Unit will be transported to onshore markets via a subsea pipeline. Of the several possible pipeline routes, the preferred route is shown below as Alternate #1. Gas will be treated to marketable quality on the platform and follow the most direct route to an existing onshore distribution system.

Refer to Fig. VII-A for a schematic representation of the pipeline alternate routes.

7.2 Pipeline Routes

7.2.1 Alternate #1

This route, approximately 8.5 miles long, is in a northerly direction from the platform towards Carpenteria. A 12" line operating at 1025 psig pressure at the platform would deliver 50 MMCFPD with a pressure drop of 25 psi. The 12" line will be installed and operated by Pacific Offshore Pipeline Company and tie into an existing 16" gas transmission line which has a MAOP (maximum allowable operating pressure) of 1,000 psig. The proposed 12" line will have substantial excess capacity. For example, the capacity could be increased to 100 MMCFPD by increasing the platform operating pressure to 1140 psig. The maximum water depth is 303 feet and occurs at

the platform. Fig. VII-B represents the pipeline profile for this route.

7.2.2 Alternate #2

This route, approximately 3.8 miles long, is also in a primarily northerly direction from the proposed platform. The line could be tied into an existing 12" submarine pipeline presently serving Platforms A, B and C (operated by Union), and Platform Hillhouse (operated by Sun Oil). This route would require shutdown of Platforms Hillhouse, A, B and C to make the tie-in. Installation of LTS (Low Temperature Separation) facilities on the aforementioned platforms would be required, as well as additional compression facilities. No liquid extraction, CO_2 removal or gas compression would be necessary at the Mobil Rincon Onshore facility.

7.2.3 Alternate #3

This route, approximately 12 miles long, is in a primarily northeasterly direction from the platform toward the Rincon Onshore facility site near Sea Cliff. Currently, these onshore facilities serve Platforms A, B and C (operated by Union), in lease P-0241 and Platform Hillhouse, (operated by Sun) in lease P-0240. An onshore tie-in could be made at an existing manifold.

7.3 Design Criteria and Objectives

7.3.1 Applicable Regulations and Codes

The gas line will be designed in compliance with applicable USGS regulations, ANSI B31.8-1975, "Gas Trans-

mission and Distribution Piping Systems," and Department of Transportation Regulation 49, Part 192,"Transportation of Natural and Other Gas by Pipeline; Minimum Federal Safety Standards." Portions of the pipeline routes within the jurisdiction of the State of California will be designed in accordance with any additional State regulations in effect at that time. In addition to the above, the pipeline design and operating procedures will follow API Recommended Practice RP 1111, Design, Construction, Operation and Maintenance of Offshore Hydrocarbon Pipelines, March 1976.

7.3.2 Stability

The offshore portions of pipelines will be designed to resist movement under the action of on-bottom currents predicted to occur during the design 100-year storm. Stability will be achieved by proper design of submerged pipeline weight. Pipelines, appropriately protected, will be placed on the surface of the ocean bottom.

7.3.3 Maximum Operating Pressure

Maximum discharge pressure at the platform could be as high as 1440 psig. The line will be designed to withstand this maximum operating pressure under applicable codes and regulations.

7.3.4 External Pressure

The gas pipeline will be designed to withstand external loads, including hydrostatic pressures with the pipeline void and with its absolute internal pressure equal to one atmosphere.

7.3.5 Other Stresses

The pipeline will be designed under applicable codes and regulations to withstand stresses which result from installation, thermal and fluid expansion effects, earthquake and other dynamic effects, dead loads, and surges.

7.3.6 External Corrosion Protection

The pipeline will be protected against external corrosion by means of external coatings and cathodic protection. Choices of coating materials and cathodic protection systems, impressed current or sacrificial anodes, will be based on detailed studies of the selected pipeline route.

7.3.7 Internal Corrosion Protection

Corrosivity tests and monitoring of internal corrosion will dictate the extent of an inhibition control program.

7.3.8 Construction Method

The construction technique used for the offshore portion of the pipelines is influenced by relative economics and availability of equipment at the time of installation. The use of the stinger-laybarge method is planned at the present time, but is subject to review.

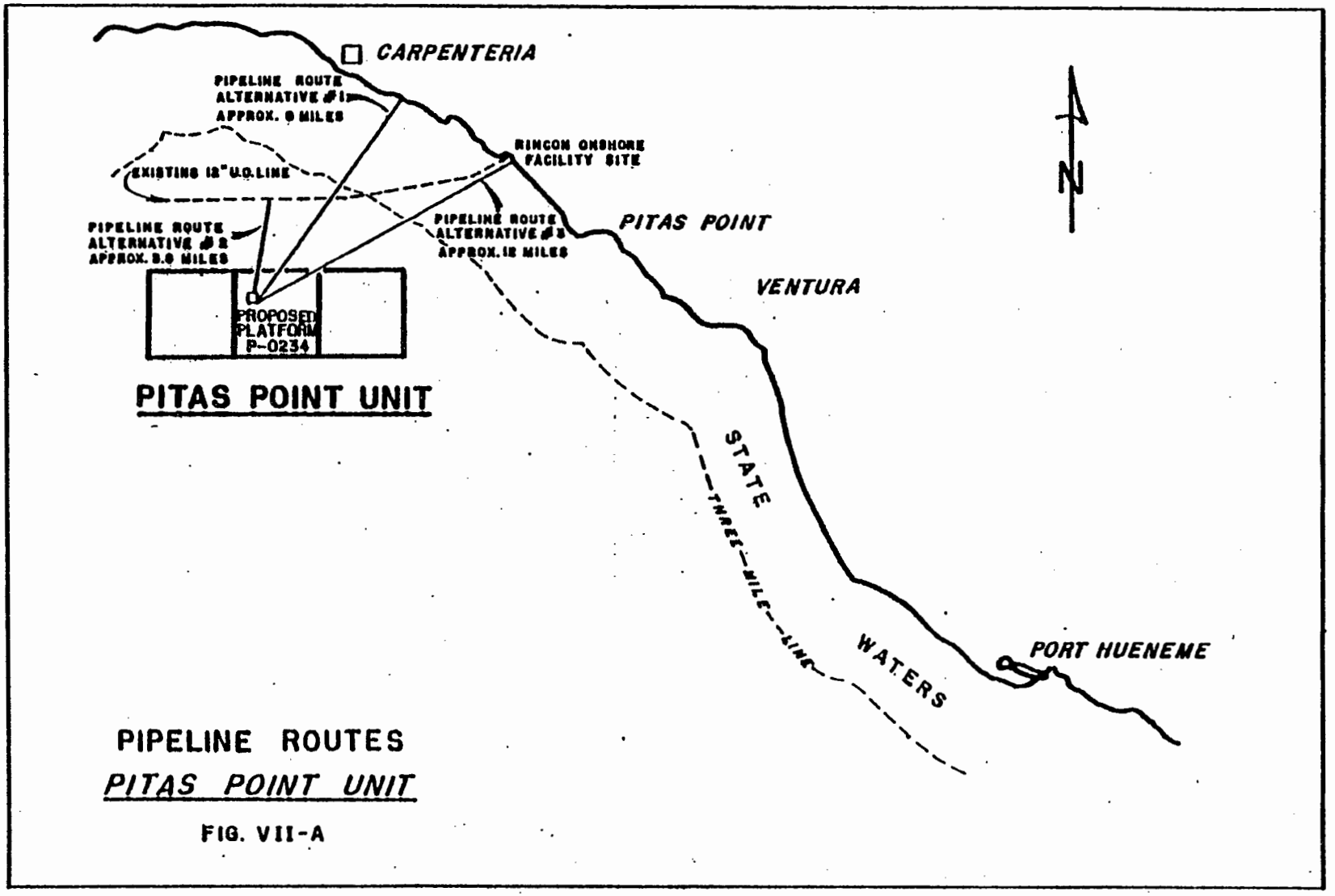
Pipelines terminating onshore will be buried in the section through the beach and surf zone out to a water depth of 20 feet.

The beach installation will be made by pulling the pipeline in a prepared trench.

Any onshore portions of the pipeline will be installed using conventional land-type pipeline construction methods and equipment. Testing and inspection of all sections of the pipeline will be in compliance with all applicable regulations.

7.3.9 Pipeline Operation

The pipeline will be operated and regularly inspected in compliance with USGS and DOT regulations. Safety and monitoring devices, such as leak detectors, shut-ins, etc., will be provided in accordance with OCS Order No. 9. Record keeping and reporting will be in accordance with all federal and state regulations.



PIPELINE ROUTES

PITAS POINT UNIT

FIG. VII-A