In Reply Refer To: MS 5231

August 10, 1995

Union Oil Company of California
Attention: Mr. A. F. Turney
Post Office Box 39200
Lafayette, Louisiana 70593-9200

Gentlemen:

Reference is made to the following plan received July 27, 1995:

Type Plan - Supplemental Development Operations Coordination Document
Lease - OCS-G 7201
Block - 618
Area - Matagorda Island
Activities Proposed - Well A-2

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-3736 and should be referenced in your communication and correspondence concerning this plan.

Sincerely,

(Orig. Sgd.) Kent E. Stauffer

Donald C. Howard
Regional Supervisor
Field Operations

bcc: Lease OCS-G 7201 POD File (MS 5032)
MS 5034 w/public info. copy of the plan
and accomp. info.

MTolbert:cic:08/07/95:DOCDCOM

S-3736

Unocal Energy Resources Division
Unocal Corporation
4021-4023 Ambassador Caffery Pkwy.
Lafayette, Louisiana 70503
P. O. Box 39200
Lafayette, Louisiana 70593-9200
Telephone (318) 295-6000

UNOCAL 76

Western Gulf
Louisiana/Gulf Business Unit

July 25, 1995

U. S. Department of the Interior
Minerals Management Service
1201 Elmwood Park Boulevard
New Orleans, Louisiana 70123

Re: Supplemental Development Operations Coordination Document, Mataforda Island Area Block 618, OCS-G-7201, Matagorda Island Block 605 Field

Dear Sir,

Attached are five proprietary and four public information copies of a Supplemental Development Operations Coordinations Document addressing our proposed activity in Matagorda Island Area Block 618. Should additional information be required, please contact Joe Morton, Tim Morton & Associates, Inc., 500 Dover Boulevard, Lafayette, LA 70503, 318/981-2428.

Sincerely,

UNION OIL COMPANY OF CALIFORNIA

A. F. Turney

A. F. Turney

jm
Attachments

PUBLIC
INFORMATION

SUPPLEMENTAL

DEVELOPMENT OPERATIONS COORDINATION DOCUMENT

UNION OIL COMPANY OF CALIFORNIA

MATAGORDA ISLAND BLOCK 605 FIELD

MATAGORDA ISLAND AREA BLOCK 618, OCS-G-7201

OFFSHORE TEXAS

JULY 24, 1995

LIST OF ATTACHMENTS

A. Vicinity Plat, Location Plat

B. Rig BOP and Diverter Schematics

C. Geologic Structure Map

D. Drilling Fluids List

E. Air Quality Report

SUPPLEMENTAL DEVELOPMENT OPERATIONS COORDINATION DOCUMENT

MATAGORDA ISLAND AREA BLOCK 618

OFFSHORE TEXAS

Pursuant to the requirements of 30 CFR 250.34, Union Oil Company of California submits the following Supplemental Development Operations Coordination Document for Matagorda Island Area Block 618.

I. DESCRIPTION OF ACTIVITIES

Union Oil Company of California proposes to use a jack-up drilling rig to drill OCS-G-7201 Well No. A-2 from the Matagorda Island Area Block 618 "A" platform, Matagorda Island Block 605 Field. The information regarding the well location is as follows:

Well Name	Surface Location	Bottomhole Location	TVD	WD	Lambert X-Y Coordinates
A-2	2610' FNL 2144' FEL Block 618	PROP. INFO.	PROP. INFO.	98'	X = 2,919,251' Y = 116,189'

Attachment A contains a vicinity map that depicts the relationship of Matagorda Island Area Block 618 to the Texas Coast and a location plat that depicts the proposed well location in relation to the lease lines. The estimated time to complete the proposed development and production activity for Well A-2 is approximately 10 years.

II. SCHEDULE OF ACTIVITIES

The proposed schedule for the development and production of this well is:

September 1, 1995 - October 30, 1995	Drill and complete Well A-2
November 1, 1995 - January 1, 2006	Produce well

Reserves from Well A-2 are expected to be depleted in 10 years with average production anticipated at a daily rate of 4 MMCF of natural gas and 5 barrels of condensate.

III. DRILLING RIG AND PRODUCTION PLATFORM

Union Oil Company of California plans to use a jack-up drilling rig to drill this well. Schematics for a typical BOP and diverter are included in

Attachment B. The actual rig specifications for the rig to be used will be submitted with the Permit to Drill for the well.

Safety and pollution prevention will be accomplished during drilling operations through the use of adequately designed casing programs; blowout preventers, diverters, and other associated well equipment of adequate pressure rating to control anticipated pressures; mud monitoring equipment and sufficient mud volumes to insure well control; and properly trained supervisory personnel. Pursuant to Coast Guard regulations, fire drills and abandon ship drills will be conducted, and navigational aids, lifesaving equipment, and all other shipboard safety equipment will be installed and maintained.

Well A-2 will be drilled from the existing Matagorda Island Area Block 618 "A" platform. Existing process equipment located on the "A" platform is capable of handling anticipated production from this well.

IV. GEOLOGICAL AND GEOPHYSICAL DATA

A structure map of the productive formations for Well A-2 is provided with the confidential copies of this document in Attachment C. No additional development wells are planned at this time. The proposed well will be drilled from the existing "A" Platform. Two wells have previously been drilled from this platform without encountering shallow drilling hazards. Therefore, no shallow drilling hazards are expected in this well.

V. OIL SPILL INFORMATION

Union Oil Company of California is a member of Clean Gulf Associates (CGA), and would utilize CGA equipment in the event of an oil spill in Matagorda Island Area Block 618. CGA is an oil spill cooperative which owns and maintains a large inventory of oil spill clean-up equipment. Union Oil Company of California's Regional Oil Spill Contingency Plan was submitted in accordance with 30 CFR 250.42(a-i) and has been approved. CGA spill recovery equipment suitable for spills in the Gulf of Mexico is identified in the plan.

In the event of a spill, the primary location for the procurement of clean-up equipment would be the CGA stockpile at Port Aransas, Texas. Additional cleanup equipment could be mobilized from the Galveston, Texas and Cameron, Louisiana CGA stockpile areas. The Port Aransas stockpile area is located approximately 56 miles from the block.

In accordance with LTL dated October 12, 1988, clarified by LTL dated September 5, 1989, the following estimation of times for procurement, mobilization, transportation, and deployment of oil spill response equipment is provided:

Procurement Time - It is estimated that 3 hours will be required to secure a support vessel for mobilization of the oil spill response equipment from the Port Aransas, Texas CGA stockpile area.

Equipment Load Out Time - The time required to transfer the equipment to the transportation vessel will be approximately 2 hours.

Travel Time - Based on a transit speed of approximately 10 knots, it is estimated that 5 hours would be required to move the equipment from Port Aransas, Texas to the deployment site.

Equipment Deployment - The time required to initiate clean up operations once the transportation vessel arrives at the spill site is estimated to be 1 hour.

The Minerals Management Service published Oil-Spill Risk Estimates for Proposed Lease Sales 142 & 143 (USDOI, MMS, 1992). The results of that analysis as it related to Matagorda Island Area Block 618 and a brief description of the Oil Spill Risk Analysis Model are summarized in the following paragraphs.

Five hundred hypothetical oil spill trajectories, that collectively represented both the general trend and the variability of winds and currents in the area of analysis, were developed for each of the four seasons of the year. These trajectories were simulated for each of the potential launch sites. Movement of the oil slick for each spill was simulated as a series of displacements resulting from the influence of winds and currents at three hour increments. The simulations continued until the hypothetical spill hit land, moved out of the study area, or thirty days elapsed. Potential landfall sites were established by dividing the coastline into 43 land segments corresponding to county and/or parish boundaries.

The oil slick trajectories simulated by the referenced oil spill model represent hypothetical pathways and do not consider any containment, cleanup, dispersion, or weathering processes that might affect the quantity or properties of a slick that would contact an environmental resource. Weathering and decay of the slick can be inferred by noting the time elapsed before the slick encounters the target resource. Three time periods are presented by the model (3, 10, and 30 days) to indicate oil weathering and to facilitate oil spill response planning. The probability that an oil spill will contact various environmental targets and land segments if it occurs within a specific launch site is provided by the model.

Matagorda Island Area Block 618 falls in Launch Site W04. The probabilities (expressed as percent chance) that a spill occurring in this block will contact land segments at 10 days are listed below:

10 Days

Land Segment Affected	Probability
Land Segment 5 - Nueces and San Patricio Counties, Texas	1%
Land Segment 6 - Aransas County, Texas	4%
Land Segment 7 - Calhoun County, Texas	41%
Land Segment 8 - Matagorda County, Texas	23%

The environmental resources that are located within this land segment are depicted on Texas Maps 2 and 3 of Section V, Volume II of the CGA Operations Manual. The biologically sensitive areas depicted on these maps are identified and protection response modes are suggested on pages V-31.0a through V-68.0a. The recommended response strategies to protect these resources are presented on pages VI-1.0b through VI-23.0 of Section VI, Volume II of the CGA Operations Manual.

VI. LEASE STIPULATIONS

There are no operational lease stipulations.

VII. SOLID AND LIQUID WASTES AND POLLUTANTS

The discharges generated at this proposed well location by the drilling and production activities associated with this supplemental DOCD will be discharged upon successful bioassay test as per NPDES discharge guidelines. Discharge rates will not exceed permit specifications.

All drill cuttings will be brought to the surface by the mud system and will be separated from the drilling fluid by shaker screens and centrifugal separators prior to discharging overboard. This discharge is composed of the cuttings, shaker washwater, and adhered drilling fluids. The projected amounts of this discharge are based on the size of the hole at each drilling interval, and are computed at 25 percent over the gauge hole at that interval. Drill cuttings are assumed to comprise 50 percent of the discharge, washwater is assumed to comprise 42.5 percent, and adhered drilling fluids are assumed to comprise 7.5 percent. A list of drilling fluids to be utilized during the drilling operation is included as Attachment D.

Drilled solids and liquids discharge volumes for a typical well are listed below:

		Volumes/Well		
Drilling Interval	Hole Size	Drilled Solids	Shaker Washwater	Adhered Drilling Fluids
0- 400'	26.00"	263 bbls	223 bbls	N/A
400- 1300'	20.00"	437 bbls	372 bbls	66 bbls
1300- 5769'	14.75"	1181 bbls	1003 bbls	177 bbls
5769- 8373'	9.875"	308 bbls	262 bbls	46 bbls

Batch discharges of drilling fluids will be limited to 500 barrels per hour. This limitation should only need to be imposed upon the completion of drilling operations.

Solids wastes; typically paper, plastic, cloth, and metal, will be collected and transported to shore for disposal at an approved disposal facility. Solid wastes generated from the transportation vessels, normally just garbage, will

be collected and returned to shore for disposal with the drilling rig refuse. Scrap metal and other metal wastes will be recycled or sold as scrap and will not be shipped to a disposal facility with the other refuse.

Sanitary wastes will be treated in approved marine sanitation devices as required by the Clean Water Act. All biodegradable wastes, such as kitchen food scraps, will be comminuted or ground and discharged in accordance with Annex V of MARPOL 73/78.

Hazardous wastes from the drilling rig, such as paint, or paint thinner, will be collected in sealed metal containers and transported to an approved disposal site in accordance with RCRA guidelines.

VIII. H_2S AREA CLASSIFICATION

Two wells have been drilled from the "A" platform. None of these wells contain H_2S. Unocal, therefore, requests that Matagorda Island Area Block 618 be classified as "Zones where the absence of H_2S has been confirmed".

IX. CALCULATION OF AIR EMISSIONS

Projected air emissions resulting from activities described in this document have been calculated and are included as Attachment E. Facility schematics that depict the height of emissions above sea level are also included in Attachment E.

X. SUPPORT BASE

Matagorda Island Area Block 618 is located approximately 20 miles from the coast of Calhoun County, Texas. An existing facility in Surfside, Texas will serve as the onshore support base for the Matagorda Island Area Block 618 development activities. This shore base is located approximately 77 miles from the block. The shore base will serve the following functions: loading point for tools, equipment and machinery to be delivered to the well site, transportation base, and temporary storage area for materials and equipment. The base is equipped with cranes and loading docks necessary for safe operations. During the drilling phase of this project, twenty-four hour a day contact with offshore personnel is maintained by full time dispatchers at the shore base. The existing onshore facilities and support personnel are sufficient to support the proposed operations without modification or expansion.

XI. SURETY BOND REQUIREMENTS

In accordance with the amendment of 30 CFR Part 256 surety bond requirements applicable to OCS lessees and operators, Union Oil Company of California

submitted an area-wide bond in the amount of $3,000,000.00 to the Minerals Management Service, New Orleans, Louisiana.

XII. COMPANY CONTACT

Any inquiries regarding this plan may be addressed to Mr. Chris Whitney, Union Oil Company of California, P. O. Box 39200, Lafayette, Louisiana 70593-9200, telephone number 318/295-6926.

LITERATURE CITED

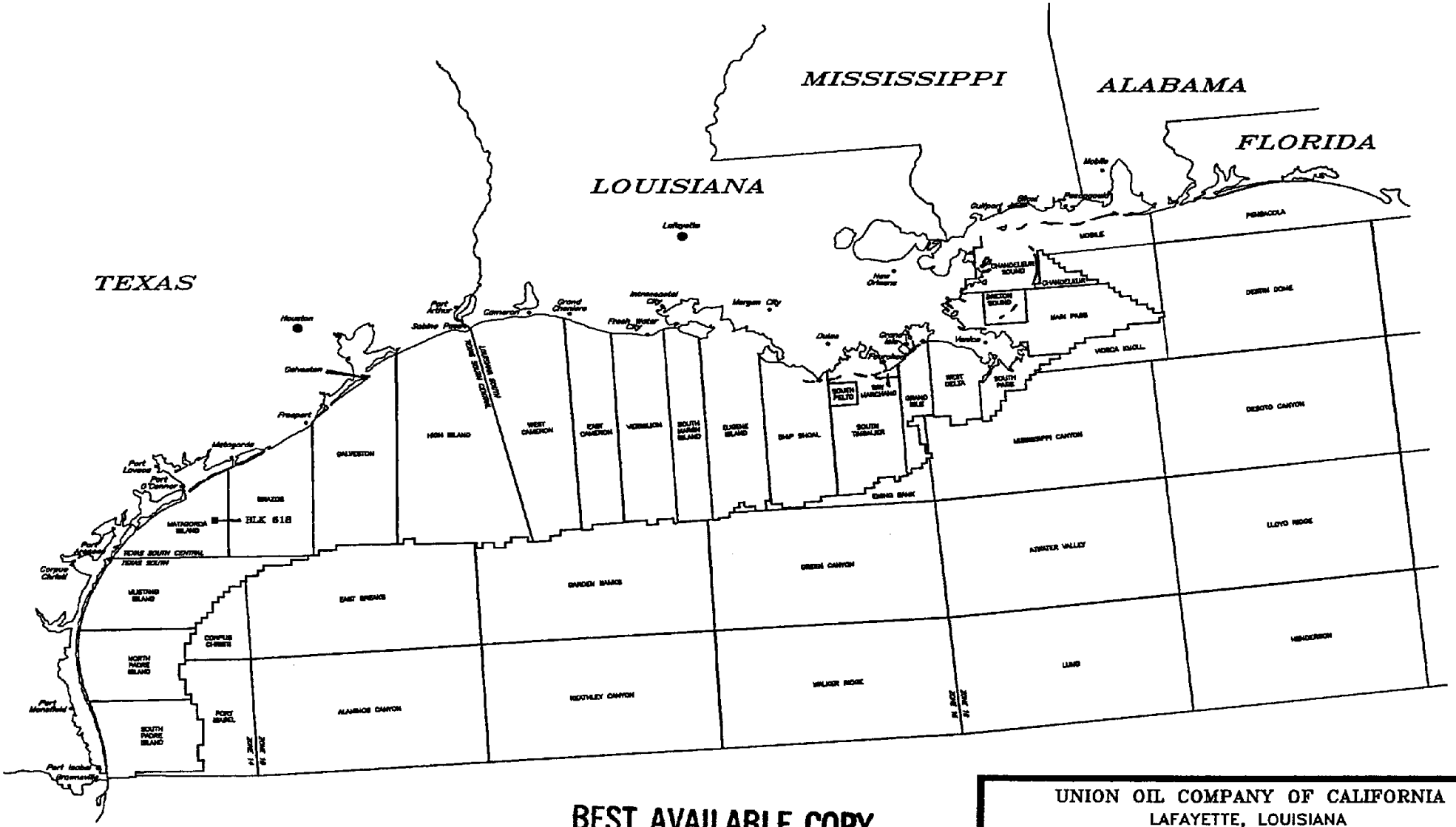
U. S. Department of Interior, Minerals Management Service
1992 Final Environmental Impact Statement, Gulf of Mexico, Sales 142 and 143, Central and Western Planning Areas, Volume I: Sections 1 through IV.C. Prepared by Minerals Management Service, Gulf of Mexico OCS Region, New Orleans, Louisiana.

ATTACHMENT A

VICINITY PLAT

LOCATION PLAT

VICINITY MAP



BEST AVAILABLE COPY

GULF OF MEXICO

UNION OIL COMPANY OF CALIFORNIA
LAFAYETTE, LOUISIANA

VICINITY MAP
BLOCK 618
MATAGORDA ISLAND AREA

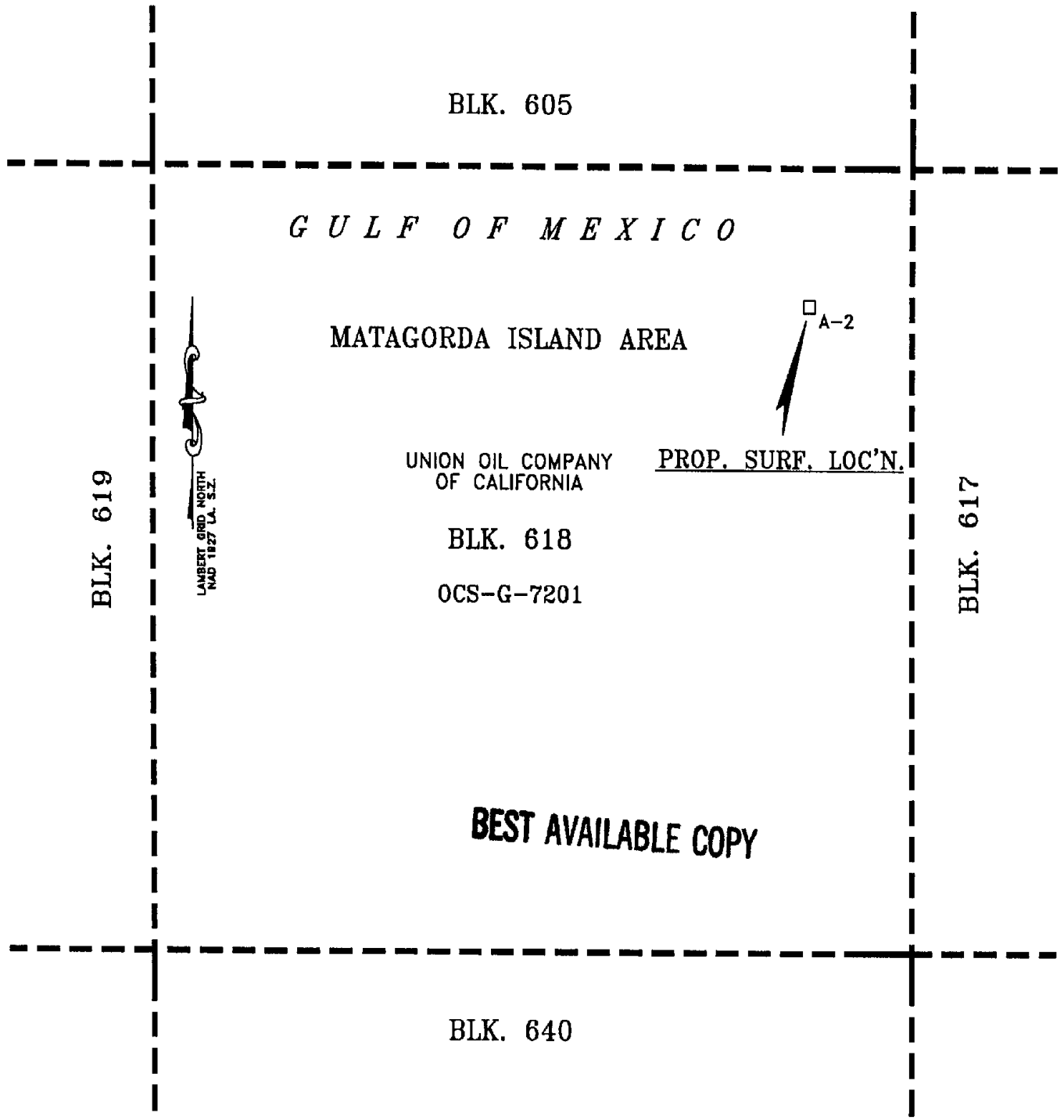
80 0 80 160

SCALE : 1" = 80 MILES

TIM MORTON & ASSOCIATES, INC.
500 DOVER BLVD. LAFAYETTE, LA
PREPARED BY: 318/981-2428

JOB NO. 95196 | DATE: 07/25/95

MAP NO. 95196



PROPOSED SURFACE LOCATION

BLK.	WELL NO.	CALLS		X	Y	LATITUDE	LONGITUDE
618	A-2	2144' FEL	2610' FNL	2,919,251'	116,189'	28°07'19.37"	96°08'53.69"

UNION OIL COMPANY OF CALIFORNIA

P. O. BOX 39200

LAFAYETTE, LOUISIANA 70593-9200

SUPPLEMENTAL DOCD

MATAGORDA ISLAND AREA- BLOCK 618

3000' 0' 3000' 6000'

SCALE IN FEET

PREPARED BY TIM MORTON & ASSOCIATES, INC.
500 DOVER BLVD. LAFAYETTE, LA
318 / 981-2428

JOB # 95-196

MAP NO. 95196A

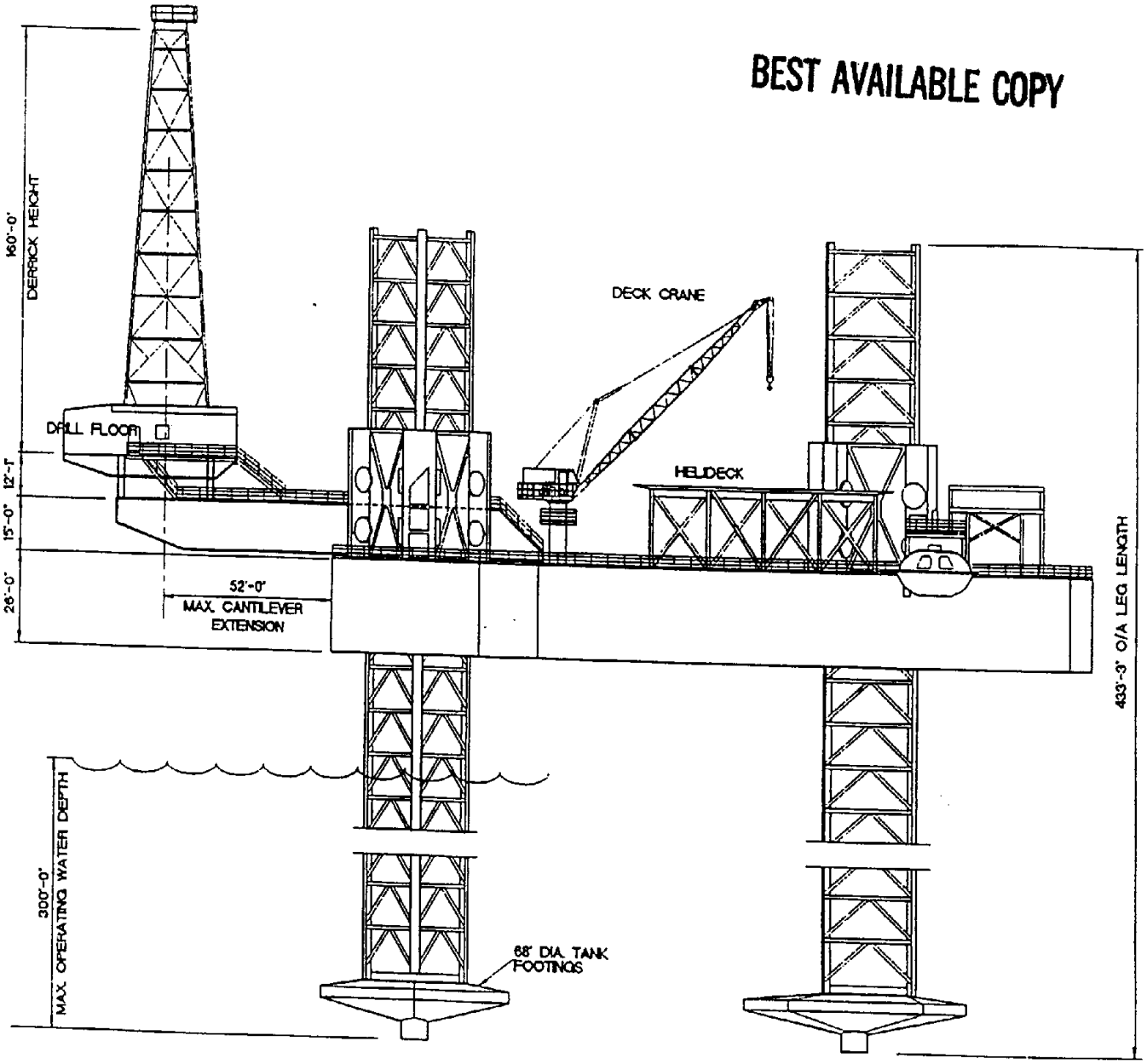
REVISED

DATE 07/24/95

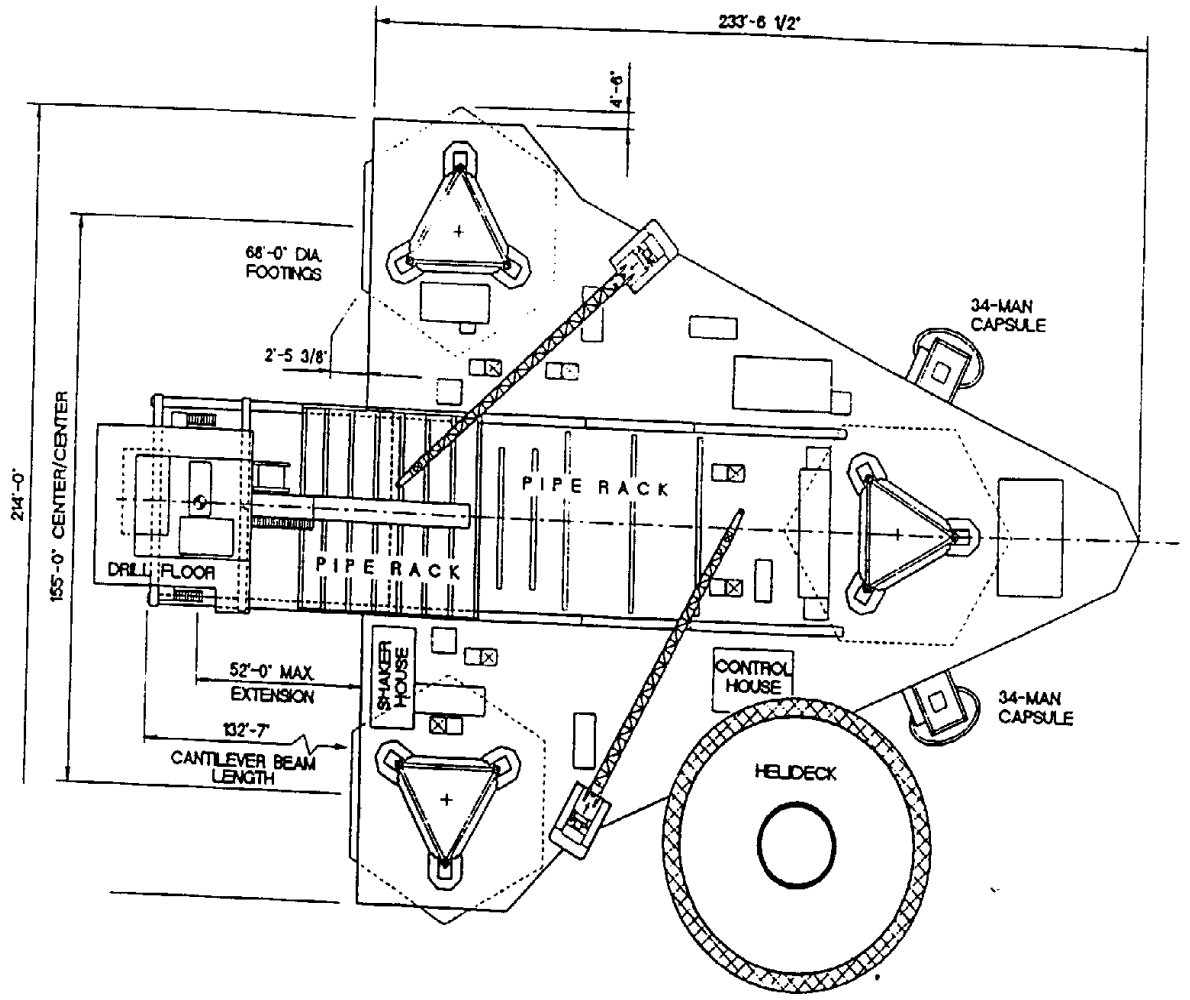
SHEET 1 OF 1

ATTACHMENT B

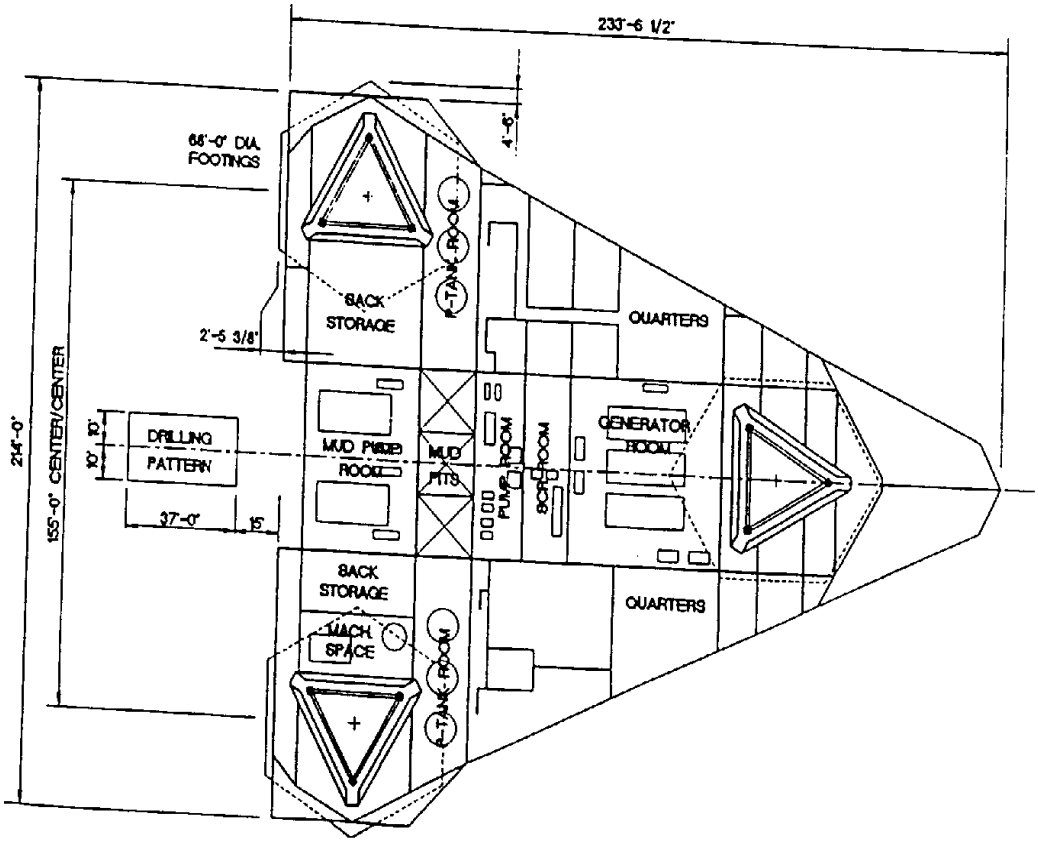
RIG BOP AND DIVERTER SCHEMATICS



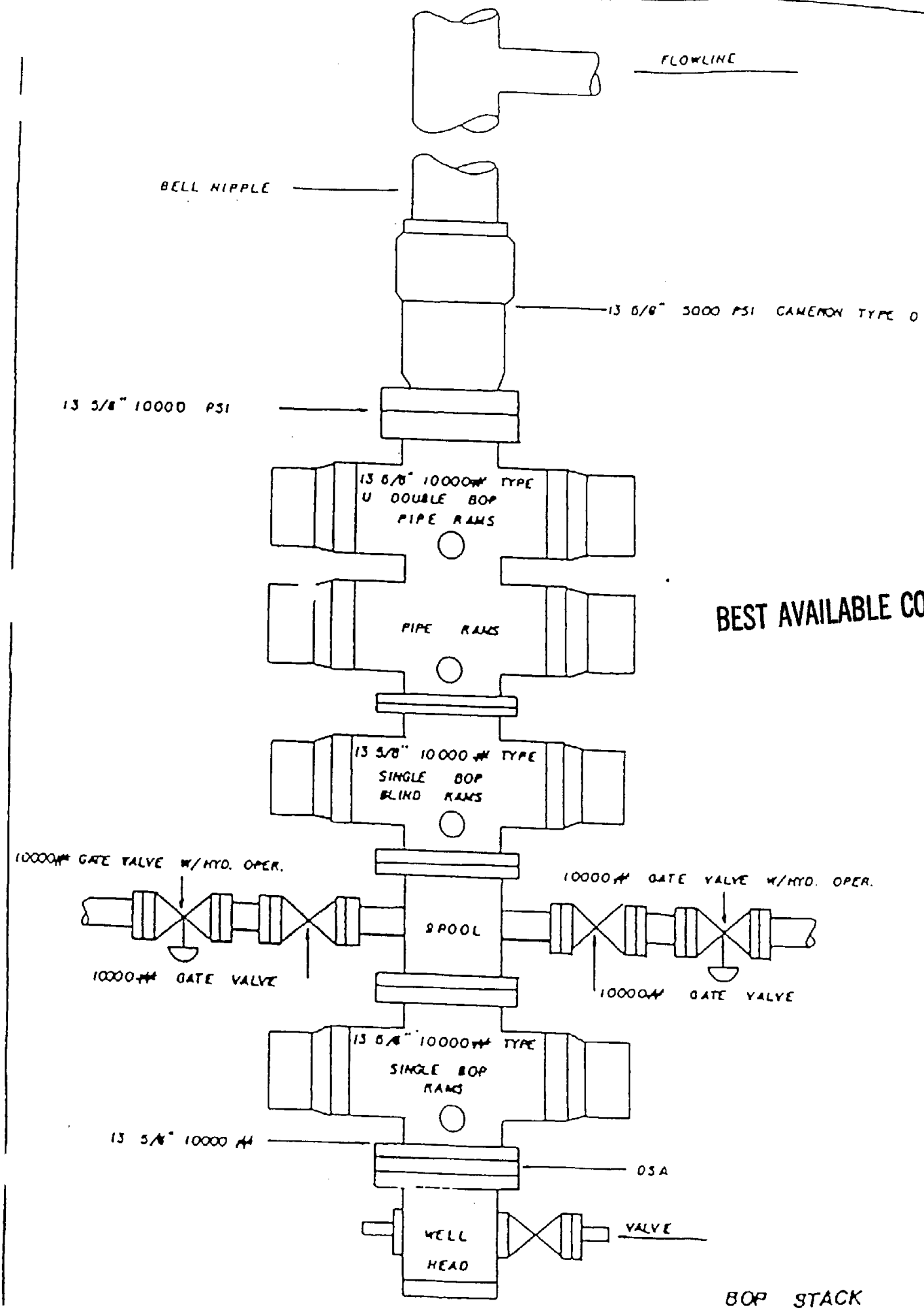
OUTBOARD PROFILE



GENERAL ARRANGEMENT - PLAN VIEW



GENERAL ARRANGEMENT - MACHINERY DECK

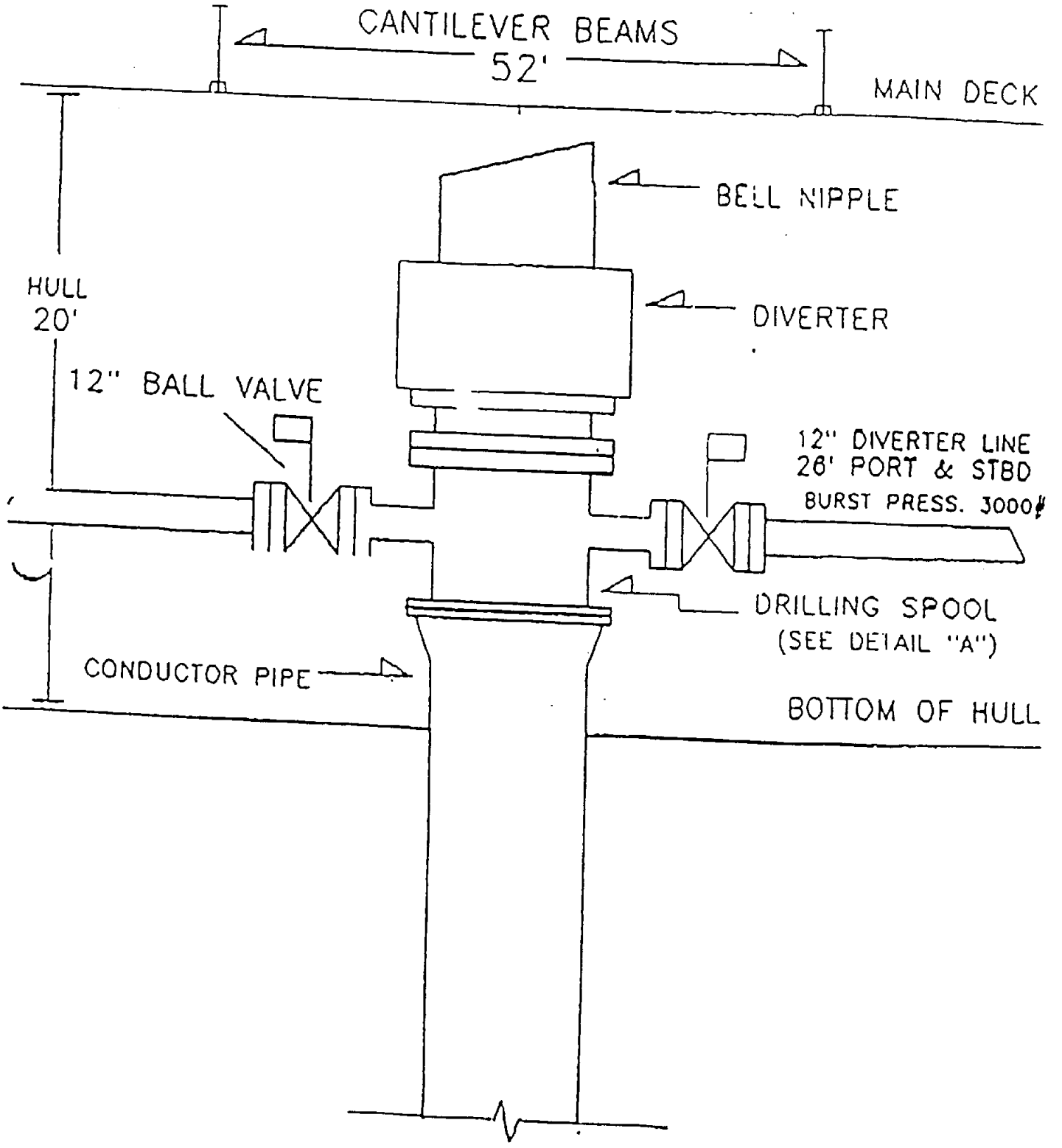


BEST AVAILABLE COPY

BOP STACK

PENROD 90 | DL-090-02

DIVERTER SYSTEM | ELEVATION VIEW | SHEET 2 OF 2



ATTACHMENT C

GEOLOGIC STRUCTURE MAP

GEOLOGIC STRUCTURES MAP

PROPRIETARY INFORMATION

ATTACHMENT D

DRILLING FLUIDS LIST

MUD SYSTEM COMPONENT LISTING

PRODUCT NAME	APPLICATION	DESCRIPTION
Aluminum Stearate	Defoamer	Aluminum Stearate $Al(C_{18}H_{35}O_2)_3$
Bac Ban	Preservative	Isothiazolin mixture
Calcium Chloride	Weighting Agent	Calcium Chloride $CaCl_2$
Cane Fiber	Loss Circulation	Sugar cane fiber (bagasse)
Caustic Potash	PH control	Potassium hydroxide (KOH)
Caustic Soda	PH control	Sodium hydroxide (NaOH)
Caustilig	Thinner	Causticized lignite
Cedar Fiber	Loss Circulation	Shredded cedar, cellulose
Congor 101	Corrosion Inhibitor	Blend of tall oil and alcohol
Congor 202	Corrosion Inhibitor	Blend of amines and alcohol
Congor 303	Corrosion Inhibitor	Blend of alkyl diamines
Congor 404	Corrosion Inhibitor	Salt of phosphate ester
Cottonseed Hulls	Loss Circulation	Cotton seed hulls
Defoam X	Defoamer	Blend of glycols and stearate
Desco	Thinner	Sulfomethylated tannin/dichromate
Diaseal M	Loss Circulation	Diatomaceous earth
Drillaid Selec Floc	Flocculant	Anionic polymer
Drispac	Fluid Loss Control	Cellulose Gum
Durogel	Viscosifier	Sepiolite clay
Fer-Ox	Weighting Agent	Iron oxide; hematite (Fe_2O_3)
Flakes	Loss Circulation	Cellophane $(C_6H_{10}O_5)_n$
Floxit	Flocculant	Polyacrylamide $(C_3H_5NO)_x$
Gelex	Viscosifier	Sodium polyacrylate
Gelite	Viscosifier	Saponite $(Al_2MgO_8Si_2)$
Gypsum	Shale Control	Calcium sulfate $(CaSO_4.2H_2O)$
Ironite Sponge	Corrosion Inhibitor	Iron oxide (Fe_2O_4)
K-17	Thinner	Metal salt of lignite with potassium hydroxide
Kleen Up	Surfactant	Blend of surfactants

ATTACHMENT E

AIR QUALITY REPORT

AIR QUALITY REVIEW

FOR

MATAGORDA ISLAND AREA BLOCK 605 FIELD

MATAGORDA ISLAND AREA BLOCK 618

OCS-G-7201

UNION OIL COMPANY OF CALIFORNIA

P. O. BOX 39200

LAFAYETTE, LOUISIANA 70593-9200

PREPARED BY:

TIM MORTON & ASSOCIATES, INC.

REGULATORY & ENVIRONMENTAL CONSULTANTS

JOB NO. 95-196

JULY 24, 1995

Comments: Union Oil Company of California proposes to drill Well A-2 from the existing Matagorda Island Area Block 618 "A" platform. Existing production equipment located at this platform is capable of handling anticipated production from this well.

GULF OF MEXICO AIR EMISSION CALCULATIONS

General

This document (MMS.WK3) was prepared through the cooperative efforts of those professionals in the oil industry including the API/OOC Gulf of Mexico Air Quality Task Force, who deal with air emission issues. This document is intended to standardize the way we estimate an air emission inventory for Plans of Exploration (POE) and Development, Operations, Coordination Documents (DOCD) approved by the Minerals Management Service (MMS). It is intended to be thorough but flexible to meet the needs of different operators. This first sheet gives the basis for the emission factors used in the emission spreadsheet as well as some general instructions. This file contains 8 sheets: A,B,C,D,E,F,G,& H. A is the Instruction Sheet, B is the Title Sheet, C is the Factors Sheet, D,E,F, & G are the Emission Spreadsheets and H is the Summary Sheet. These sheets will describe and calculate emissions from an activity.

Title Sheet

The Title Sheet requires input of the company's name, area, block, OCS-G number, platform and/or well(s) in the necessary lines. This data will automatically be transferred to the spreadsheet and summary sheet.

Factor Sheet

The emission factors were compiled from the latest AP-42 references or from industry studies if no AP-42 reference was available. Factors can be revised as more data becomes available. A change to this Factor Sheet will be automatically changed in Emission Spreadsheet.

The basis for the factors is as follows:

1. NG Turbines — Fuel usage scf/hr = HP X 9.524 (10,000 btu/HP-hr / 1050 btu/scf)
2. NG Engines — Fuel usage scf/hr = HP X 7.143 (7,500 btu/HP-hr / 1050 btu/scf)
3. Diesel — Fuel usage gals/hr = HP X 0.0483 (7,000 btu/HP-hr / 145,000 btu/gal)

Emission Factors

Natural Gas Prime Movers

1. TNMOC refers to total non-methane organic carbon emissions and these can be assumed equivalent to VOC emissions.
2. The sulfur content assumed is 2000 grains/mmscf (3.33 ppm). If your concentration is different then ratio your emission factor up or down.

Diesel-Fired Prime Movers

1. Diesel sulfur level 0.4% by wt
2. For boats use > 600 HP factors based on AP-42 Vol. II, Table II-3-3. Those figures closely match the above values. Include only the emissions from the boats within 25 mile radius of the well/platform.
3. For diesel engines <600 HP VOC emissions equal total HC emissions; for diesel engines>600 HP VOC emissions equal non-methane HC emissions.

Heaters/Boilers/Firetubes/NG-Fired

1. NG Sulfur content is 2000 grains per million cu ft
2. VOCs emissions based on total non-methane HCs

Gas Flares

1. Flare is non-smoking
2. 1050 btu/cu. ft. for NG heating value
3. The sulfur content assumed is 2000 grains/mmscf (3.33 ppm). If your concentration is different then ratio your emission factor up or down or you may use the following formula

   H2S flared (lbs/hr) = Gas flared (cu ft/hr) X ppm H2S X 10E-06 X 34/379

   SOx emis (lbs/hr) = H2S flared (lbs/hr) X 64/34

Liquid Flares

1. Assume 1% by wt Sulfur maximum in the crude oil.
2. VOC equals non-methane HCs
3. Particulate emissions assumes Grade 5 oil.

Tanks

1. Tank emissions assumes uncontrolled fixed roof tank.

Fugitives

1. Fugitives are based on the 1993 Star Environmental Report. It requires that you count or estimate your components.

Glycol Dehydrator Vent

1. The dehydrated gas rate in SCF/HR must be entered in the spreadsheet. The emission factor is from the compilation of the Louisiana Survey and an average emissions per gas rate.

Gas Venting

1. The emission factor is based on venting unburned natural gas of average weight.

Emissions Spreadsheet

The emissions from an operation should be presented for a calendar year (1994, 1995, etc.). The operation may include drilling only or drilling in conjunction with other activities such as pipeline installation or production operations. For the first year use sheet D, for the second year use sheet E, third use F, fourth use G and if you need more you will have to insert a sheet and copy the spreadsheet to the

new sheet. The year (CELL D:A38) should be changed and the different operating parameters entered to calculate revised emissions for that subsequent year. The spreadsheet will calculate maximum fuel usage (UNIT/HR) using the known horsepower. It will assume maximum fuel usage is equal to actual fuel (UNIT/DAY) usage unless the actual fuel usage is known. If so, insert actual fuel usage in appropriate column. The emissions will be calculated as follows:

Emission rate (lb/hr) = (HP or fuel rate) X Emission Factor (Potential to emit)

Emissions (tpy)=Emission rate (lb/hr) X load factor(Act Fuel/Max Fuel) X hrsX daysX ton/2000 lbs (Actual emissions)

To customize the spreadsheet for your application you may want to delete lines for non-applicable equipment/activities or you can input "0" for the HP of equipment that does not apply. You may also need to copy/insert an entire line if more than one similiar type of equipment is present.

Also, the production equipment can be customized further by adding the use of the equipment behind each type of engine, i.e.,

Turbine
Turbine - Gas Compressor

Burner
Burner - Line Heater

Summary Sheet

The Summary Sheet is designed to show a proposed estimate of emissions from an activity over a future period of time. In this example ten years was chosen. Each row links to the corresponding emission calculation spreadsheet for that year. For example, Row 7 of the summary corresponds to the annual totals from Sheet D. Row 8 links to the second emission calculation spreadsheet, Row 9 to the third and Row 10 to the fourth. Row 11 - 16 will carry down the emissions from the last spreadsheet with an emission rate greater than zero. The Summary Sheet will always carry down the last non-zero emission total. For example, if emission calculations are done for the years 1994 and 1995, then the the 1995 total will be carried down through the year 2003. Row 17 of the summary sheet reflects the allowable for the air quality review exemption determination. If more or less years are needed you will will have to modify the spreadsheet.

Print Instructions

The table below lists macros that were written to print sheets A, C, D, E, F, G, & H.

\A - This macro prints 3 pages of instructions (sheet A).
\C - This macro prints the emissions factors sheet (sheet C).
\D - This macro prints the emissions calculations sheet (sheet D).
\E - This macro prints the emissions calculations sheet (sheet E).
\F - This macro prints the emissions calculations sheet (sheet F).
\G - This macro prints the emissions calculations sheet (sheet G).
\H - This macro prints the emissions calculations sheet (sheet H).
\X - This macro prints all sheets - A, C, D, E, F, G, & H.

To run one of these macros, hold down ALT and press the letter in the macro range name. For example, to run the macro \A, press ALT-a.

AIR EMISSION CALCULATIONS

Fuel Usage Conversion Factors	Natural Gas Turbines		Natural Gas Engines		Diesel Recip. Engine		REF.	DATE
	SCF/hp-hr	9.524	SCF/hp-hr	7.143	GAL/hp-hr	0.0483	AP42 3.2-1	4/76 & 8/84

Equipment/Emission Factors	units	TSP	SOx	NOx	VOC	CO	REF.	DATE
NG Turbines	gms/hp-hr		0.00247	1.3	0.01	0.83	AP42 3.2-2	4/93
NG 2-cycle lean	gms/hp-hr		0.00185	11	0.43	1.5	AP42 3.2-2	4/93
NG 4-cycle lean	gms/hp-hr		0.00185	12	0.72	1.6	AP42 3.2-2	4/93
NG 4-cycle rich	gms/hp-hr		0.00185	10	0.14	8.6	AP42 3.2-2	4/93
Diesel Recip. < 600 hp.	gms/hp-hr	1	0.931	14	1.12	3.03	AP42 3.3-1	4/93
Diesel Recip. > 600 hp.	gms/hp-hr	0.24	1.49	11	0.33	2.4	AP42 3.4-1	4/93
NG Heaters/Boilers/Burners	lbs/mmscf	5	0.6	140	2.8	35	AP42 1.4-1	4/93
NG Flares	lbs/mmscf		0.57	71.4	60.3	388.5	AP42 11.5-1	9/91
Liquid Flaring	lbs/bbls	0.42	6.6	2.3	0.01	0.21	AP421.3-1	4/93
Tank Vapors	lbs/bbl				0.03		E&P Forum	1/93
Fugitives	lbs/hr/comp.				0.000025		API Study	12/93
Glycol Dehydrator Vent	lbs/mmscf				6.6		La. DEQ	1991
Gas Venting	lbs/scf				0.0034			

AIR EMISSION CALCULATIONS

COMPANY	AREA	BLOCK	LEASE	PLATFORM	WELL	LATITUDE	LONGITUDE	CONTACT	PHONE	REMARKS
Union Oil Company of California	Matagorda Island	618	7201	"A"	A-2	0	0	Bob Duffy	318/295-6898	Drill & complete Well A-2

OPERATIONS	EQUIPMENT		MAX. FUEL	ACT. FUEL	RUN TIME		POUNDS PER HOUR					TONS PER YEAR				
	Diesel Engines	HP	GAL/HR	GAL/D												
	Nat. Gas Engines	HP	SCF/HR	SCF/D												
	Boilers	MMBTU/HR	SCF/HR	SCF/D	HR/D	DAYS	TSP	SOx	NOx	VOC	CO	TSP	SOx	NOx	VOC	CO
DRILLING	PRIME MOVER>600hp diesel	1650	79.70	1912.68	24	60	0.87	5.42	39.98	1.20	8.72	0.63	3.90	28.78	0.86	6.28
	PRIME MOVER>600hp diesel	1650	79.70	1912.68	24	60	0.87	5.42	39.98	1.20	8.72	0.63	3.90	28.78	0.86	6.28
	PRIME MOVER>600hp diesel	1650	79.70	1912.68	24	60	0.87	5.42	39.98	1.20	8.72	0.63	3.90	28.78	0.86	6.28
	CREWBOAT >600hp diesel	2000	96.60	2318.40	3	34	1.06	6.56	48.46	1.45	10.57	0.05	0.33	2.47	0.07	0.54
	SUPPLYBOAT >600hp diesel	2500	120.75	2898.00	6	26	1.32	8.20	60.57	1.82	13.22	0.10	0.64	4.72	0.14	1.03
	CRANE <600hp diesel	110	5.31	127.51	4	60	0.24	0.23	3.39	0.27	0.73	0.03	0.03	0.41	0.03	0.09
	WELDING MACHINE <600hp diese	50	2.42	57.96	4	60	0.11	0.10	1.54	0.12	0.33	0.01	0.01	0.19	0.01	0.04
	CEMENT SKID >600hp diesel	600	28.98	695.52	24	1	0.32	1.97	14.54	0.44	3.17	0.00	0.02	0.17	0.01	0.04
PRODUCTION				COUNT												
	FUGITIVES-			100.0		60				0.00					0.00	
1995	YEAR TOTAL						5.67	33.31	248.44	7.70	54.20	2.09	12.73	94.31	2.86	20.58
EXEMPTION CALCULATION	DISTANCE FROM LAND IN MILES											666.00	666.00	666.00	666.00	25302.83
	20.0															

BEST AVAILABLE COPY

Tim Morton & Associates, Inc.

AIR EMISSION CALCULATIONS

COMPANY	AREA	BLOCK	LEASE	PLATFORM	WELL	LATITUDE	LONGITUDE	CONTACT	PHONE	REMARKS
Union Oil Company of California	Matagorda Island	616	7201	"A"	A-2	0	0	Bob Duffy	318/295-6898	

OPERATIONS	EQUIPMENT		MAX. FUEL	ACT. FUEL	RUN TIME		POUNDS PER HOUR					TONS PER YEAR				
	Diesel Engines	HP	GAL/HR	GAL/D												
	Nat. Gas Engines	HP	SCF/HR	SCF/D												
	Burners	MMBTU/HR	SCF/HR	SCF/D	HR/D	DAYS	TSP	SOx	NOx	VOC	CO	TSP	SOx	NOx	VOC	CO
PRODUCTION				COUNT												
	FUGITIVES-			100.0		365				0.00					0.01	
1996	YEAR TOTAL						0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00
EXEMPTION CALCULATION	DISTANCE FROM LAND IN MILES															
	20.0											666.00	666.00	666.00	666.00	25302.63

AIR EMISSION CALCULATIONS

COMPANY	AREA	BLOCK	LEASE	PLATFORM	WELLS
Union Oil Company of California	Matagorda Island	618	7201	"A"	A-2

Year	Emitted Substance				
	TSP	SOx	NOx	HC	CO
1995	2.09	12.73	94.31	2.86	20.58
1996	0.00	0.00	0.00	0.01	0.00
1997	0.00	0.00	0.00	0.01	0.00
1998	0.00	0.00	0.00	0.01	0.00
1999	0.00	0.00	0.00	0.01	0.00
2000	0.00	0.00	0.00	0.01	0.00
2001	0.00	0.00	0.00	0.01	0.00
2002	0.00	0.00	0.00	0.01	0.00
2003	0.00	0.00	0.00	0.01	0.00
2004	0.00	0.00	0.00	0.01	0.00
2005	0.00	0.00	0.00	0.01	0.00
Allowable	666.00	666.00	666.00	666.00	25302.83