

TO: OMS-2-2

FROM: OS-7-1



DATE SEPT. 11, 1981

Supplemental Plan of ~~Exploration~~ Development/Production, Lease, OCS-~~4~~ 0548 10297

Control No. <sup>U</sup>2-024.

14-03-0241-12321

VR 35126

UNION OIL CO. of CALIF.

NOTED - PATZ



VERMILION BLOCK 14 FIELD UNIT  
PLAN OF DEVELOPMENT AND PRODUCTION  
SUPPLEMENT TO SUPPLEMENTAL PLAN DATED 7/10/81  
8/17/81



GENERAL

In accordance with amended oil and gas operating regulations 30 CFR 250.34 and with the Outer Continental Shelf Lands Act Amendment of 1978 Publication Law 95-372 and Federal Register Notice (44 FR 53695), Union Oil Company of California respectfully submits the following revisions to the submitted Supplement dated 7/10/81.

SECTION (2) (a) (1) (i)

New drilling activity planned in the Vermilion Block 14 Field Unit for the last quarter of 1981 and the first half of 1982 includes 4 wells planned for the Cib. op. 11 reservoir (approximately 12,000' TVD). The wells are intended to maximize production from this reservoir. OCS-G 0548 No. 9 is to be drilled in the northwestern portion of Vermilion Block No. 35. OCS 0297 Nos. 45, 46 and 47 are to be drilled in Vermilion Block 26. These wells will be completed in the unitized portion of the Cib. op. 11 Sand.

SECTION (2) (a) (1) (ii)

The wells are to be drilled with either the submersible barge rig Movable 3 or submersible barge rig Bluewater 2. The rigs are presently in use at Vermilion Block 14 Field and the progress of the current drilling program will determine which rig will be used.

The proposed wells will be drilled from locations adjacent to existent remote platforms. After completion of the wells, 4-pile well protector platforms will be set over the wells. Attachment 1 provides general design features of the platforms. The two structures will be connected by 100' bridges and plans are to utilize the existing flow lines to transport the production to various process facilities in the field. These locations and flow lines can be seen on Attachment 2.

Safety and pollution precaution and control features consistent with applicable federal regulations and, in particular, OCS Orders No. 2, No. 5, No. 7 and No. 8 will be complied with. All other safety and pollution prevention and control features, including oil spill containment and cleanup plans, are as stated in the 1981 Approved Plan of Development and the Supplemental Plan of Development dated 7/10/81.

SECTION (2) (a) (1) (iii)

Attachment 2 is a base map showing the surface/bottom-hole locations of the proposed wells. The existing wells and production system layout are also shown.

VERMILION BLOCK 14 FIELD UNIT  
PLAN OF DEVELOPMENT AND PRODUCTION  
SUPPLEMENT TO SUPPLEMENTAL PLAN  
DATED 7/10/81

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Projected locations of the proposed wells are as follows:

OCS 0546 Well No. 9

Surface Location: 1,100' FWL, Vermilion Block 35  
1,000' FNL, Vermilion Block 35

Bottom-hole Location: 1,550' FWL, Vermilion Block 35  
350' FNL, Vermilion Block 35

OCS 0297 Well No. 45

Surface Location: 6,300' FWL, Vermilion Block 26  
1,900' FSL, Vermilion Block 26

Bottom-hole Location: 6,580' FWL, Vermilion Block 26  
1,100' FSL, Vermilion Block 26

OCS 0297 Well No. 46

Surface Location: 5,700' FEL, Vermilion Block 26  
1,650' FSL, Vermilion Block 26

Bottom-hole Location: 6,610' FEL, Vermilion Block 26  
200' FSL, Vermilion Block 26

OCS 0297 Well No. 47

Surface Location: 1,000' FEL, Vermilion Block 26  
3,500' FSL, Vermilion Block 26

Bottom-hole Location: 1,550' FEL, Vermilion Block 26  
4,500' FSL, Vermilion Block 26

SECTION (2) (a) (1) (iv)

See Attachment 11 for the structure map of the Cib. op. 11 Sand showing the locations of the proposed wells.

SECTION (2) (a) (1) (v and vi)

There are no changes from the 1981 approved Development Plan.

SECTION (2) (a) (1) (vii)

See Attachment 12 for a schedule of the activities to commencement of production.

SECTION (2) (a) (1) (viii)

The location of the lease blocks relative to the shoreline is as shown on Attachment V of the original approved 1981 submittal. The mud components and additives will follow the detailed list provided in Attachment VII of the 1981 approved Plan. Air Quality Statements (Attachments 13 through 16) are included as are Shallow Drilling Hazard Statements (Attachments 17 through 20).

SECTION (2) (a) (3)

Consistency Certification is included as Attachment 6.

SECTION (2) (a) (5)

Under the Freedom of Information Act (5 U.S.C. 552) and the implementing regulations (43 CFR, Part 2), the following attachment(s) will not be disclosed for public information:

Attachment 11

VERMILION BLOCK 14 FIELD  
NON-UNITIZED ZONES  
PLAN OF DEVELOPMENT AND PRODUCTION  
SUPPLEMENT TO SUPPLEMENTAL PLAN DATED 7/10/81  
8/17/81

SECTION (2) (a) (1) (i)

This submittal serves to update the production schedule and drilling schedule presented in the Supplemental Plan of Development dated 7/10/81. It also proposes to drill two new wells to develop deeper horizons on the upthrown and downthrown sides of the major "B" fault in VE Block 35, Vermilion Block 14 Field.

The OCS 0297 No. 40 is completed in the Rob. (L)-16 RA and was turned on production on July 29, 1981. The OCS-G 1357 No. 2, completed in the Rot. (E)-1 RA, was turned on production on July 22, 1981. The OCS 0297 No. 43 was spudded on July 15, 1981. Drilling and completion of the No. 43 should end in mid September. Installation of a well protector platform, production facilities, and a flow line should take  $\pm$  30 days, with initial production start-up in mid to late October.

The OCS 0548 No. 7 in the northwestern portion of Vermilion Block 35 is now being proposed to a TD of 20,000'. This well is to evaluate the Rot. (E) series in the upthrown portion of the "B" fault. The OCS 0548 No. 8 in the central portion of Vermilion Block 35 is proposed to a depth of 20,000' to evaluate the Rot. (E) series and deeper on the downthrown portion of the "B" fault.

The remainder of the development well program will be as stated in the 1981 approved Plan of Development and the Supplemental Plan of Development dated 7/10/81.

SECTION (2) (a) (1) (ii)

The proposed wells will be drilled from remote locations. After completion of the wells, 4-pile well protector platforms will be set over the wells. Attachment 1 shows the general design features of these platforms. The wells will be tied to existing production facilities by 6" buried line pipe flow lines. The well and pipe line locations can be noted on Attachment 2.

The two wells will probably be drilled with either the submersible barge rig Movable 3 or submersible barge rig Bluewater 2. These rigs are presently in use at Vermilion Block 14 Field and the progress of the current drilling program will determine which rig will be used.

Safety and pollution precaution and control features consistent with applicable federal regulations and, in particular, OCS Orders No. 2, No. 5, No. 7 and No. 8 will be complied with. All other safety and pollution prevention and control features including oil spill containment and cleanup plans are as stated in the 1981 approved Plan of Development and the Supplemental Plan of Development dated 7/10/81.

SECTION (2) (a) (1) (iii)

Attachment 2 is a base map showing the surface/bottom-hole locations of the proposed wells. The existing wells and production system layout are also shown.

Projected locations of the proposed wells are as follows:

OCS 0548 Well No. 7

Surface Location: 1,100' FNL and 3,500' FWL of Vermilion Block 35  
Bottom-hole Location: Same as surface.  
Proposed TVD: 20,000'

OCS 0548 Well No. 8

Surface Location: 5,750' FNL and 7,300' FWL of Vermilion Block 35  
Bottom-hole Location: Same as surface  
Proposed TVD: 20,000'

SECTION (2) (a) (1) (iv)

See Attachment 3 for structure map of the Rot. (E)-5 Sand with proposed wells.

SECTION (2) (a) (1) (v and vi)

There are no changes from the 1981 approved Development Plan.

SECTION (2) (a) (1) (vii)

See Attachment 5 for a schedule of the activities to commencement of production.

SECTION (2) (a) (1) (viii)

The location of the lease blocks relative to the shoreline is as shown on Attachment VI of the original approved 1981 submittal. The mud components and additions will follow the detailed list provided in Attachment VII of the 1981 approved Plan. Air Quality Statements (Attachments 7 and 8) are included, as are Shallow Drilling Hazard Statements (Attachments 9 and 10).

VERMILION BLOCK 14 FIELD  
NON-UNITIZED ZONES  
PLAN OF DEVELOPMENT AND PRODUCTION  
SUPPLEMENT TO SUPPLEMENTAL PLAN DATED 7/10/81

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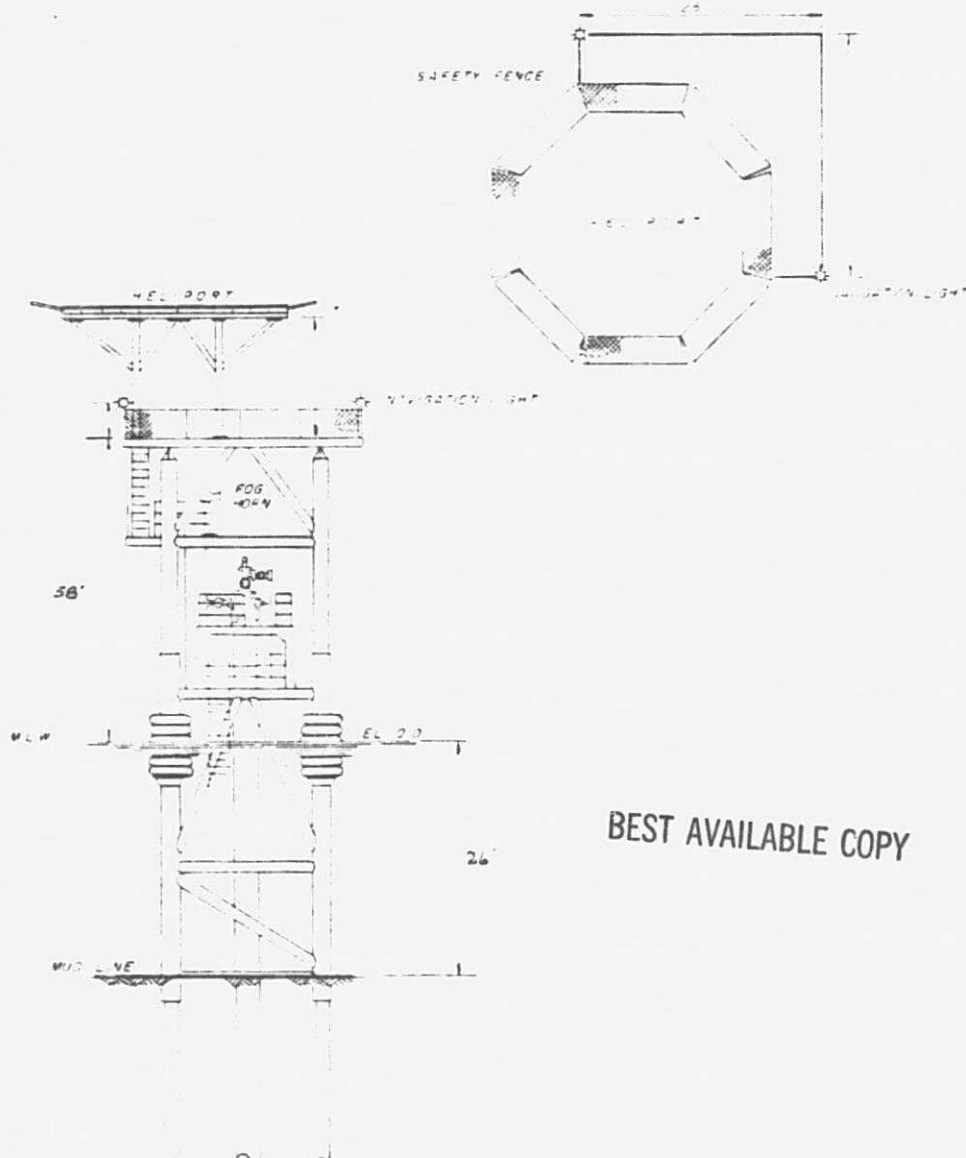
SECTION (2) (a) (3)

Consistency Certification is included as Attachment 6.

SECTION (2) (a) (5)

Under the Freedom of Information Act (5 U.S.C. 552) and the implementing regulations (43 CFR, Part 2), the following attachment will not be disclosed for public information:

Attachment 3



BEST AVAILABLE COPY

UNION OIL CO. OF CALIFORNIA  
WELL PROTECTOR PLATFORM  
 OCS LEASE \_\_\_\_\_ WELL NO. \_\_\_\_\_  
 BLOCK \_\_\_\_\_ IN VERMILION BLOCK \_\_\_\_\_ FIELD \_\_\_\_\_  
LOUISIANA OFFSHORE

ATTACHMENT 1

REV.	DATE



McMORAN OFFSHORE EXPLORATION CO  
OCS - C - 3390

UNION OIL CO OF CALIFORNIA  
OCS - 0297

UNION OIL CO OF CALIFORNIA  
OCS - G - 1357

UNION OIL CO OF CALIFORNIA  
OCS - 0548

BEST AVAILABLE COPY

UNION OIL CO OF CALIFORNIA

1. This map is furnished to UNION OIL CO OF CALIFORNIA for its use in the preparation of maps and charts. It is not to be used for any other purpose without the written consent of the Union Oil Co. of California.
2. This map has been prepared on the basis of information derived from a variety of sources, including aerial photography, and is not intended to be used for navigation. It is not to be used for any other purpose without the written consent of the Union Oil Co. of California.
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5. This map has been prepared on the basis of information derived from a variety of sources, including aerial photography, and is not intended to be used for navigation. It is not to be used for any other purpose without the written consent of the Union Oil Co. of California.

ATTACHMENT 2

REVISED		UNION OIL CO. OF CALIFORNIA	
DATE	BY	UNION OIL & GAS DIVISION	LAFAYETTE, LOUISIANA
2-1-60	A.B.S.	BASE MAP	
5-15-60	A.B.S.		
7-1-60	A.B.S.		
9-1-60	A.B.S.		
11-1-60	A.B.S.		
2-1-61	A.B.S.	BLOCK 26 - VERMILION AREA	
4-1-61	A.B.S.		
6-1-61	A.B.S.	DRAWN FOR	DRAWN BY
8-1-61	A.B.S.	J.E.C.	9-12-79
10-1-61	A.B.S.	DATE	FILE NUMBER



THIS SUPPLEMENTAL PLAN OF DEVELOPMENT HAS NO ATTACHMENT NO. 4.

SCHEDULE OF ACTIVITIES  
NON-UNITIZED ZONES  
VERMILION BLOCK 14 FIELD

<u>WELL</u>	<u>DRILLING</u>		<u>COMPLETION</u>	
	<u>START</u>	<u>FINISH</u>	<u>START</u>	<u>FINISH</u>
0548 #7	10/1/81	4/1/82	4/1/82	5/1/82
0548 #8	5/1/82	11/1/82	11/1/82	12/1/82

The above wells should commence production approximately one month after completion. This allows sufficient time to lay flow lines, install risers, and make tie-ins to existing facilities.

ATTACHMENT 5

COASTAL ZONE MANAGEMENT

CONSISTENCY CERTIFICATION

SUPPLEMENTAL PLAN OF DEVELOPMENT 3/17/81

Type of Plan

VERMILION BLOCKS 26 & 35, VERMILION BLOCK 14 FIELD

Area and Block

OCS 0297 AND OCS 0548

Lease Numbers

The proposed activities described in detail in this plan  
comply with Louisiana's \_\_\_\_\_ approved Coastal Management  
Program(s) and will be conducted in a manner consistent with  
such program(s).

UNION OIL COMPANY OF CALIFORNIA

Lessee or Operator

A. E. Fisher

Certifying Official

AUGUST 17, 1981

Date

## AIR QUALITY STATEMENT

The Plan of Operations for the drilling and production of OCS 0548 Well No. 1 at Vermilion Block 35 is as follows:

It is expected to take 210 days to drill and complete the well. The rig being used to drill this well will be Bluewater 2 or a comparable rig. The normal fuel consumption per day for this rig is approximately 2,300 gallons of diesel. The onshore support base for this activity will be the Union Oil Shore Base located at Intracoastal City, Louisiana. All transportation, boats and helicopters will be handled from this Base.

This location will consist of one single completion well which will be provided with minimum surface equipment. A 5-ton crane will be installed to be used for routine wireline work. Production from this gas-condensate well will be transported about 4,100' by pipe line to Vermilion Block 36 "A" facilities for separation, dehydration, and metering.

The installation of the platform will require a 500-ton derrick barge. The normal fuel consumption per day for this barge is approximately 5,700 gallons of diesel. The transportation for this phase of the operation will also be handled out of the Union Oil Company Shore Base located in Intracoastal City, Louisiana. It is expected to take 2 days to complete the setting of the platform.

Air emission calculations are based on the aforementioned drilling and installation time frame. Any additional service work required during this well's productive life will be minimal and will result in air emissions which will be well below the exemption level.

The projected emissions are based on data from "Compilation of Air Pollutant Emission Factors," third edition AP-42, EPA, 1977, Table 3.3.3-1 and Table 3.2.1-3.

**BEST AVAILABLE COPY**

PROJECTED AIR EMISSION FOR VERMILION BLOCK 35, CCS 0548 No. 7

BEST AVAILABLE

EMISSION SOURCE	BURNING TIME/DAY	TAKEOFF & LANDINGS/DAY	FUEL CONSUMPTION GALLONS/DAY	EMISSION FACTORS POUND/1,000 GALS.					EMISSION FACTORS AIRCRAFT TAKEOFF & LANDINGS					PROJECTED EMISSION, 212-DAY PROJECTION IN GCS 0548 No. 7				
				SO <sub>2</sub>	NOx	CO	TSP	VOC	SO <sub>2</sub>	NOx	CO	TSP	VOC	SO <sub>2</sub>	NOx	CO	TSP	VOC
CALCULATION FOR 210-DAY DRILLING PHASE:																		
Drilling Rig	24 Hrs.			31.2	469	162	33.5	37.5						14,986	224,596	48,877	16,052	17,969
Cargo Boat (In Berth)	2 Hrs.		4	31.2	469	102	33.5	37.5						26	389	84	27	31
Crew Boat (In Berth)	2 Hrs.		4	31.2	469	102	33.5	37.5						26	389	84	27	31
Helicopter Takeoff & Landings		4							.18	.57	.57	.25	.52	12.0	473	42.1	208	433
CALCULATION FOR 2-DAYS PLATFORM INSTALLATION PHASE:																		
Derrick Barge	24 Hrs.		5,700	31.2	469	102	33.5	37.5						356	5,347	1,163	392	428
Cargo Boat (In Berth)	12 Hrs.		24	31.2	469	102	33.5	37.5						2	23	5	2	2
Crew Boat (In Berth)	12 Hrs.		24	31.2	469	102	33.5	37.5						2	23	5	2	2
														SO <sub>2</sub>	NOx	CO	TSP	VOC
Projected emissions are based on data from "Compilation of Air Pollutant Emission Factors," 3rd Edition AP-42, EPA, 1977, Table 3.3.3.1 and Table 3.2.1-3.														15,512	231,240	50,691	15,700	18,896
(TOTALS IN POUNDS)																		

## AIR QUALITY STATEMENT

The Plan of Operations for the drilling and production of OCS 0548 Well No. 2 at Vermilion Block 35 is as follows:

It is expected to take 210 days to drill and complete the well. The rig being used to drill this well will be Blawie 2 or a comparable rig. The normal fuel consumption per day for this rig is approximately 2,300 gallons of diesel. The onshore support base for this activity will be the Union Oil Shore Base located at Intracoastal City, Louisiana. All transportation, boats and helicopters will be handled from this Base.

This location will consist of one single completion well which will be provided with minimum surface equipment. A five-ton crane will be installed to be used for routine wireline work. Production from this gas-condensate well will be transported about 9,000' by pipe line to Vermilion Block 36 "A" facilities for separation, dehydration, and metering.

The installation of the platform will require a 500-ton derrick barge. The normal fuel consumption per day for this barge is approximately 5,700 gallons of diesel. The transportation for this phase of the operation will also be handled out of the Union Oil Company Shore Base located in Intracoastal City, Louisiana. It is expected to take two days to complete the setting of the platform.

Air emission calculations are based on the aforementioned drilling and installation time frame. Any additional service work required during this well's productive life will be minimal and will result in air emissions which will be well below the exemption level.

The projected emissions are based on data from "Compilation of Air Pollutant Emission Factors," third edition AP-42, EPA, 1977, Table 3.3.3-1 and Table 3.2.1-3.

PROJECTED AIR EMISSION FOR VERMILION BLOCK 35, OCS 0548 No. 8

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EMISSION SOURCE	DURATION	RUNNING TIME/DAY	TAKEOFF & LANDINGS/DAY	FUEL CONSUMPTION GALLONS/DAY	EMISSION FACTORS POUND/1,000 GALS.					EMISSION FACTORS AIRCRAFT TAKEOFF & LANDINGS					PROJECTED EMISSION, 212-DAY PROJECTION IN OCS 0548 No. 8				
					SO <sub>2</sub>	NO <sub>x</sub>	CO	TSP	VOC	SO <sub>2</sub>	NO <sub>x</sub>	CO	TSP	VOC	SO <sub>2</sub>	NO <sub>x</sub>	CO	TSP	VOC
CALCULATION FOR 210-DAY DRILLING PHASE:																			
Drilling Rig		24 Hrs.			31.2	469	102	33.5	37.5						14,950	224,596	48,877	16,052	17,969
Cargo Boat (In Berth)		7 Hrs.		4	31.2	469	102	33.5	37.5						26	389	84	27	31
Crew Boat (In Berth)		2 Hrs.		4	31.2	469	102	33.5	37.5						26	389	84	27	31
Helicopter Takeoff & Landings			4							.18	.57	.57	.25	.52	150	473	473	208	433
CALCULATION FOR 2-DAYS PLATFORM INSTALLATION PHASE:																			
Derrick Barge		24 Hrs.		5,700	31.2	469	102	33.5	37.5						356	5,347	1,163	382	428
Cargo Boat (In Berth)		12 Hrs.		24	31.2	469	102	33.5	37.5						2	23	5	2	2
Crew Boat (In Berth)		12 Hrs.		24	31.2	469	102	33.5	37.5						2	23	5	2	2
Projected emissions are based on data from "Compilation of Air Pollutant Emission Factors," 3rd Edition AP-42, EPA, 1977, Table 3.3.3-1 and Table 3.2.1-3.																			
SO <sub>2</sub> NO <sub>x</sub> CO TSP VOC																			
15,512 231,240 50,691 16,700 18,896																			
(TOTALS IN POUNDS)																			



Union Oil Company of California  
P. O. Box 51388, O.C.S., Lafayette, Louisiana 70505  
Telephone (318) 232-9724

August 17, 1981



UNION OIL COMPANY OF CALIFORNIA  
OCS-G-0548 WELL NO. 7  
VERMILION BLOCK 35  
OFFSHORE, LOUISIANA

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SHALLOW HAZARD REPORT

LOCATION: 3,500' FWL and 1,100' FNL.

The proposed drilling location is 250' east of a north-south trending, 1200% 1972-vintage Union proprietary line, 400' north-west of a northeast-southwest trending 2400% 1979 vintage Superior Oil Company proprietary line and 500' south of a east-west trending 4800% 1979 vintage Union proprietary line. All of the above data have Relative Amplitude displays. None of the lines indicate any shallow drilling hazards.

For the above reason we do not anticipate any shallow drilling hazard with well No. 7.

BY:

  
Michael Cornyn  
Area Geophysicist

MC/cw

Union Oil Company of California  
P.O. Box 51388, O.C.S., Lafayette, Louisiana 70505  
Telephone (318) 232 9724

August 17, 1981



UNION OIL COMPANY OF CALIFORNIA  
OCS-G-0548 WELL NO. 8  
VERMILION BLOCK 35  
OFFSHORE, LOUISIANA

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SHALLOW HAZARD REPORT

LOCATION: 5,750' FNL and 7,300' FWL.

The proposed drilling location is approximately 350' northeast of a northwest-southeast trending 4800% 1981 vintage Union proprietary line and 450' east of a north-south trending 4800% 1979 vintage Union proprietary line. Both lines have Relative Amplitude displays. There is an event with amplitudes a little higher than normal on the north-south line just south of the location, but we anticipate no drilling problems, although our drilling people have been notified of this possibility.

Because of the above-mentioned reasons, we do not expect to encounter any shallow drilling hazards.

BY:

A handwritten signature in cursive script, appearing to read "Michael Cornyn", written over a horizontal line.

Michael Cornyn  
Area Geophysicist

MC/cw

SCHEDULE OF ACTIVITIES  
VERMILION BLOCK 14 FIELD UNIT

<u>WELL</u>	<u>DRILLING</u>		<u>COMPLETION</u>	
	<u>START</u>	<u>FINISH</u>	<u>START</u>	<u>FINISH</u>
0548 #9	10/15/81	12/1/81	12/1/82	12/15/82
0297 #45	12/15/82	2/1/82	2/1/82	2/15/82
0207 #46	2/15/82	4/1/82	4/1/82	4/15/82
0297 #47	4/15/82	6/1/82	6/1/82	6/15/82

The above wells should commence production approximately one month after completion. This allows sufficient time to lay flow lines, install risers, and make tie-ins to existing flow lines.

## AIR QUALITY STATEMENT

The Plan of Operations for the drilling and production of OCS 0548 Well No. 9 at Vermilion Block 35 is as follows:

It is expected to take sixty (60) days to drill and complete the well. The rig being used to drill this well will be Movable III or a comparable rig. The normal fuel consumption per day for this rig is approximately 2,300 gallons of diesel. The onshore support base for this activity will be the Union Oil Shore Base located at Intracoastal City, Louisiana. All transportation, boats and helicopters will be handled from this Base.

This location will consist of one single completion well which will be provided with minimum surface equipment. A 4-pile well protector platform will be installed adjacent to the OCS 0548 Well No. 5 platform and connected by a 100' bridge. An existing flow line from the 0548 No. 5 platform to the OCS 0297 Well No. 29 platform ( $\pm$  5,300') will be used to transport the production. The well will be tested on the 0297 No. 29 platform then transported to the VE 26 "C" central production facilities for separation dehydration and metering. A 5-ton crane will be installed on 0548 #9 platform for utilization in routine wireline work.

The installation of the platform will require a 500-ton derrick barge. The normal fuel consumption per day for this barge is approximately 5,700 gallons of diesel. The transportation for this phase of the operation will also be handled out of the Union Oil Company Shore Base located in Intracoastal City, Louisiana. It is expected to take two (2) days to complete the setting of the platform.

Air emission calculations are based on the aforementioned drilling and installation time frame. Any additional service work required during this well's productive life will be minimal and will result in air emissions which will be well below the exemption level.

The projected emissions are based on data from "Compilation of Air Pollutant Emission Factors," third edition AP-42, EPA, 1977, Table 3.3.3-1 and Table 3.2.1-3.

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PROJECTED AIR EMISSION FOR VERMILION BLOCK 35 OCS 0548 NO. 9

EMISSION SOURCE	BURNING TIME/DAY	TAKEOFF & LANDINGS/DAY	FUEL CONSUMPTION GALLONS/DAY	EMISSION FACTORS POUNDS/1,000 GALS.					EMISSION FACTORS AIRCRAFT TAKEOFF & LANDINGS					PROJECTED EMISSION, 62-DAY PROJECTION IN OCS 0548 NO. 9				
				SO <sub>2</sub>	NOx	CO	TSP	VOC	SO <sub>2</sub>	NOx	CO	TSP	VOC	SO <sub>2</sub>	NOx	CO	TSP	VOC
CALCULATION FOR 60-DAY DRILLING PHASE:																		
Drilling Rig	24 Hrs.			31.2	469	102	33.5	37.5						4,372	65,684	14,294	4,694	5,255
Cargo Boat (In Berth)	2 Hrs.		4	31.2	469	102	33.5	37.5						7	114	25	8	9
Crew Boat (In Berth)	2 Hrs.		4	31.2	469	102	33.5	37.5						7	114	25	8	9
Helicopter Takeoff & Landings		4							.18	.57	.57	.25	.52	44	138	138	61	127
CALCULATION FOR 2-DAYS PLATFORM INSTALLATION PHASE:																		
Derrick Barge	24 Hrs.		5,700	31.2	469	102	33.5	37.5						356	5,347	1,163	382	429
Cargo Boat (In Berth)	12 Hrs.		24	31.2	469	102	33.5	37.5						2	23	5	2	2
Crew Boat (In Berth)	12 Hrs.		24	31.2	469	102	33.5	37.5						2	23	5	2	2
Projected emissions are based on data from "Compilation of Air Pollutant Emission Factors," 3rd Edition AP-42, EPA, 1977, Table 3.3.3-1 and Table 3.2.1-3.														SO <sub>2</sub>	NOx	CO	TSP	VOC
														4,790	71,443	15,655	5,157	5,832
(TOTALS IN POUNDS)																		

## AIR QUALITY STATEMENT

The Plan of Operations for the drilling and production of OCS 0297 Well No. 45 at Vermilion Block 26 is as follows:

It is expected to take sixty (60) days to drill and complete the well. The rig being used to drill this well will be Movable III or a comparable rig. The normal fuel consumption per day for this rig is approximately 2,300 gallons of diesel. The onshore support base for this activity will be the Union Oil Shore Base located at Intracoastal City, Louisiana. All transportation, boats and helicopters will be handled from this Base.

This location will consist of one single completion well which will be provided with minimum surface equipment. A 4-pile well protector platform will be installed adjacent to the 0297 No. 16 platform and connected by a 100' bridge. An existing flow line from the 0297 No. 16 platform to the VE 26 "C" central production facilities ( $\pm$  3,200') will be used to transport the gas stream. The gas will be separated, dehydrated, and metered on the VE 26 "C" platform. A 5-ton crane will be installed on the No. 45 platform for utilization in routine wireline work.

The installation of the platform will require a 500-ton derrick barge. The normal fuel consumption per day for this barge is approximately 5,700 gallons of diesel. The transportation for this phase of the operation will also be handled out of the Union Oil Company Shore Base located in Intracoastal City, Louisiana. It is expected to take two (2) days to complete the setting of the platform.

Air emission calculations are based on the aforementioned drilling and installation time frame. Any additional service work required during this well's productive life will be minimal and will result in air emissions which will be well below the exemption level.

The projected emissions are based on data from "Compilation of Air Pollutant Emission Factors," third edition AP-42, EPA, 1977, Table 3.3.3-1 and Table 3.2.1-3.

PROJECTED AIR EMISSION FOR VERMILION BLOCK 26 OCS 0297 NO. 45

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EMISSION SOURCE	RUNNING TIME/DAY	TAKEOFF & LANDING/DAY	FUEL CONSUMPTION GALLONS/DAY	EMISSION FACTORS POUND/1,000 GALS.					EMISSION FACTORS AIRCRAFT TAKEOFF, 6 LANDINGS					PROJECTED EMISSION, 6-DAY PROJECTION IN OCS 0297 NO. 45				
				SO <sub>2</sub>	NOx	CO	TSP	VOC	SO <sub>2</sub>	NOx	CO	TSP	VOC	SO <sub>2</sub>	NOx	CO	TSP	VOC
				CALCULATION FOR 60-DAY DRILLING PHASE:														
Drilling Rig	24 Hrs.			31.2	469	102	33.5	37.5						4,372	65,684	14,294	4,674	5,235
Cargo Boat (In Berth)	2 Hrs.		4	31.2	469	102	33.5	37.5							114	25	8	9
Crew Boat (In Berth)	2 Hrs.		4	31.2	469	102	33.5	37.5						7	114	25	8	9
Helicopter Takeoff & Landing		4							.18	.57	.57	.25	.52	44	138	138	61	127

CALCULATION FOR 2-DAYS PLATFORM INSTALLATION PHASE:

Derrick Barge	24 Hrs.		5,700	31.2	469	102	33.5	37.5						356	5,347	1,163	382	428
Cargo Boat (In Berth)	12 Hrs.		24	31.2	469	102	33.5	37.5						2	23	5	2	2
Crew Boat (In Berth)	12 Hrs.		24	31.2	469	102	33.5	37.5						2	23	5	2	2

Projected emissions are based on data from "Compilation of Air Pollutant Emission Factors," 3rd Edition AP-42, EPA, 1977, Table 3.3.3-1 and Table 3.2.1-3.

SO <sub>2</sub>	NOx	CO	TSP	VOC
4,790	71,443	15,655	5,157	5,832

(TOTALS IN POUNDS)

## AIR QUALITY STATEMENT

The Plan of Operations for the drilling and production on OCS 0297 Well No. 46 at Vermilion Block 26 is as follows:

It is expected to take sixty (60) days to drill and complete the well. The rig being used to drill this well will be Movable III or a comparable rig. The normal fuel consumption per day for this rig is approximately 2,300 gallons of diesel. The onshore support base for this activity will be the Union Oil Shore Base located at Intracoastal City, Louisiana. All transportation, boats and helicopters will be handled from this Base.

This location will consist of one single completion well which will be provided with minimum surface equipment. A 4-pile well protector platform will be installed adjacent to the VE 26 "G" platform and connected by a 100' bridge. An existing flow line from the "G" platform to the VE 26 "C" central production facilities ( $\pm 3,100'$ ) will be used to transport the gas stream. The gas will be separated, dehydrated, and metered on the VE 26 "C" platform. A 5-ton crane will be installed on the No. 46 platform for utilization in routine wireline work.

The installation of the platform will require a 500-ton derrick barge. The normal fuel consumption per day for this barge is approximately 5,700 gallons of diesel. The transportation for this phase of the operation will also be handled out of the Union Oil Company Shore Base located in Intracoastal City, Louisiana. It is expected to take two (2) days to complete the setting of the platform.

Air emission calculations are based on the aforementioned drilling and installation time frame. Any additional service work required during this well's productive life will be minimal and will result in air emissions which will be well below the exemption level.

The projected emissions are based on data from "Compilation of Air Pollutant Emission Factors," third edition AP-42, EPA, 1977, Table 3.3.3-1 and Table 3.2.1-3.



PROJECTED AIR EMISSION FOR VERMILION BLOCK 26 OCS 0297 NO. 46

EMISSION SOURCE	RUNNING TIME/DAY	TAKEOFF & LANDINGS/DAY	FUEL CONSUMPTION GALLONS/DAY	EMISSION FACTORS POUNDS/1,000 GALS.					EMISSION FACTORS AIRCRAFT TAKEOFF & LANDINGS					PROJECTED EMISSION, 62-DAY PROJECTION IN OCS 0297 NO. 46					
				SO <sub>2</sub>	NOx	CO	TSP	VOC	SO <sub>2</sub>	NOx	CO	TSP	VOC	SO <sub>2</sub>	NOx	CO	TSP	VOC	
CALCULATION FOR 60 DAY DRILLING PHASE:																			
Drilling Rig	24 Hrs.			31.2	469	102	33.5	37.5							4,372	65,684	14,294	4,694	5,255
Cargo Boat (In Berth)	2 Hrs.		4	31.2	469	102	33.5	37.5							7	114	25	8	9
Crew Boat (In Berth)	2 Hrs.		4	31.2	469	102	33.5	37.5							7	114	25	8	9
Helicopter Takeoff & Landings		4								.18	.57	.57	.25	.52	44	138	138	61	127
CALCULATION FOR 2-DAYS PLATFORM INSTALLATION PHASE:																			
Derrick Barge	24 Hrs.		5,700	31.2	469	102	33.5	37.5							356	5,347	1,163	382	428
Cargo Boat (In Berth)	12 Hrs.		24			102	33.5	37.5							2	23	5	2	2
Crew Boat (In Berth)	12 Hrs.		24			102	33.5	37.5							2	23	5	2	2

Projected emissions are based on data from "Compilation of Air Pollutant Emission Factors," 3rd Edition AP-42, EPA, 1977, Table 3.3.3.1 and Table 3.2.1.3.

SO<sub>2</sub> NOx CO TSP VOC  
4,790 71,443 15,655 5,157 5,832  
(TOTALS IN POUNDS)

## AIR QUALITY STATEMENT

The Plan of Operations for the drilling and production of OCS 0297 Well No. 47 at Vermilion Block 26 is as follows:

It is expected to take sixty (60) days to drill and complete the well. The rig being used to drill this well will be Mobile III or a comparable rig. The normal fuel consumption per day for this rig is approximately 2,300 gallons of diesel. The onshore support base for this activity will be the Union Oil Shore Base located at Intracoastal City, Louisiana. All transportation, boats and helicopters will be handled from this Base.

This location will consist of one single completion well which will be provided with minimum surface equipment. A 4-pile well protector platform will be installed adjacent to the OCS 0297 No. 15 platform and connected by a 100' bridge. An existing flow line from the No. 15 platform to the VE 26 "B" production facilities (+ 5,100') will be used to transport the gas stream. The gas will be separated, dehydrated, and metered on the VE 26 "B" platform. A 5-ton crane will be installed on the No. 47 platform for utilization in routine wireline work.

The installation of the platform will require a 500-ton derrick barge. The normal fuel consumption per day for this barge is approximately 5,700 gallons of diesel. The transportation for this phase of the operation will also be handled out of the Union Oil Company Shore Base located in Intracoastal City, Louisiana. It is expected to take two (2) days to complete the setting of the platform.

Air emission calculations are based on the aforementioned drilling and installation time frame. Any additional service work required during this well's productive life will be minimal and will result in air emissions which will be well below the exemption level.

The projected emissions are based on data from "Compilation of Air Pollutant Emission Factors," third edition AP-42, EPA, 1977, Table 3.3.3-1 and Table 3.2.1-3.

PROJECTED AIR EMISSION FOR VERMILION BLOCK 26 OCS 0297 NO. 47

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EMISSION SOURCE	BURNING TIME/DAY	TAKEOFF & LANDINGS/DAY	FUEL CONSUMPTION GALLONS/DAY	EMISSION FACTORS POUND/1,000 GALS.					EMISSION FACTORS AIRCRAFT TAKEOFF & LANDINGS					PROJECTED EMISSION, 62 DAY PROJECTION IN OCS					297 NO. 47
				SO <sub>2</sub>	NOx	CO	TSP	VOC	SO <sub>2</sub>	NOx	CO	TSP	VOC	SO <sub>2</sub>	NOx	CO	TSP	VOC	
CALCULATION FOR 60 DAY DRILLING PHASE:																			
Drilling Rig	24 Hrs.			31.2	469	102	33.5	37.5						4,372	65,684	14,294	1,674	5,255	
Cargo Boat (In Berth)	2 Hrs.		1	31.2	469	102	33.5	37.5						7	114	25	8	9	
Crew Boat (In Berth)	2 Hrs.		1	31.2	469	102	33.5	37.5						7	114	25	8	9	
Helicopter Takeoff & Landings		4							.12	.57	.57	.25	.52	44	138	138	61	127	

CALCULATION FOR 2 DAYS PLATFORM INSTALLATION PHASE:

Drilling Barge	24 Hrs.		5,700	31.2	469	102	33.5	37.5						356	5,347	1,163	382	428	
Cargo Boat (In Berth)	12 Hrs.		1	31.2	469	102	33.5	37.5						2	23	5	2	2	
Crew Boat (In Berth)	12 Hrs.		1	31.2	469	102	33.5	37.5						2	23	5	2	2	

Projected emissions are based on data from "Compilation of Air Pollutant Emission Factors," 3rd Edition AP-42, EPA, 1977, Table 3.1-1 and Table 3.2-1-3.

SO<sub>2</sub> NOx CO TSP VOC  
4,790 21,443 15,655 5,157 5,932

(TOTALS IN POUNDS)

August 17, 1981



UNION OIL COMPANY OF CALIFORNIA  
OCS-G-0548 WELL NO. 9  
VERMILION BLOCK 35  
OFFSHORE, LOUISIANA

SHALLOW HAZARD REPORT

LOCATION: 1,100' FWL and 1,000' FNL.

The Block 35 well No. 5 shares the same surface location with the proposed well. The No. 5 did not encounter any shallow hazards.

For the above reason we do not anticipate any shallow drilling hazards with the No. 9 well.

BY:

  
Michael Cornyn  
Area Geophysicist

MC/cw

August 17, 1981



UNION OIL COMPANY OF CALIFORNIA  
OCS-G-0297 WELL NO. 45  
VERMILION BLOCK 26  
OFFSHORE, LOUISIANA

SHALLOW HAZARD REPORT

LOCATION: 6,300' FWL and 1,900' FSL.

The Block 26 well No. 16 is 100' north of the proposed location. Well No. 16 did not encounter any shallow drilling hazards.

For the above reason we do not anticipate any shallow drilling hazards with well No. 45.

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August 17, 1981



UNION OIL COMPANY OF CALIFORNIA  
OCS-G-0297 WELL NO. 46  
VERMILION BLOCK 26  
OFFSHORE, LOUISIANA

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SHALLOW HAZARD REPORT

LOCATION: 5,700' FEL and 1,650' FSL.

The Block 26 well No. G-1 shares the same surface location with the proposed well. The G-1 well did not encounter any shallow drilling hazards.

For the above reason we do not anticipate any shallow drilling hazards with well No. 46.

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August 17, 1981



UNION OIL COMPANY OF CALIFORNIA  
OCS-G-0297 WELL NO. 47  
VERMILION BLOCK 26  
OFFSHORE, LOUISIANA

SHALLOW HAZARD REPORT

LOCATION: 1,000' FEL and 3,500' FSL.

The Block 26 well No. 15 is approximately 100' southeast of the proposed location of well No. 54. Well No. 15 did not encounter any shallow drilling hazards.

For the above reason we do not anticipate any shallow drilling hazard with well No. 47.

BY:

  
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