DATE Dec. 30, 1981

TO: OMS-2-2

FROM: OS-7-1

Supplemental Plan of Exploration ~~Development/Production~~, Lease OCS-G 043 AND 046
EI 88 & 95
Control No. S-0779.
ODECO Oil & Gas Co.

NOTED - PATZ

ODECO OIL & GAS COMPANY

Supplemental Plan of Exploration

OCS 043 Well #7 Eugene Island Block 88

OCS 046 Well #15 Eugene Island Block 95

Eugene Island Block 89 Field

Submitted by: E.S. Breda

E.S. Breda
Oil & Gas Supervisor

DATE: DEC 23 1981

NOTED - PAIZ

INDEX

ODECO OIL & GAS COMPANY
Supplemental Plan of Exploration

Eugene Island Blocks 88 and 95
Eugene Island Block 89 Field

1. General

The OCS 043 lease in block 88 has six existing wells. We now propose to drill an additional well - namely OCS 043 #7.

The OCS 046 lease in block 95 has six existing wells. We now propose to drill an additional well - namely OCS 046 #15.

In accordance with 30 CFR 250.34, revised December 13, 1979 this Supplemental Plan of Exploration is being submitted. Should the proposed wells have no commercial production they will be plugged and abandoned with casings removed 15' below mud line.

11. Tenative starting and completion dates, surface and bottom hole locations, total depth, and objective of proposed wells:

Well Number: OCS-043 #7, Eugene Island Block 88
Estimated Commencement date: April 1, 1982
Estimated Completion date: July 1, 1982
Surface Location: 6750' FNL and 6700' FWL of Eugene Island Block 88
Bottom Hole Location: 2900' FNL and 9250' FWL of Eugene Island Block 88
Total Depth: 20,000'
Objective: See Geological Program

Well Number: OCS-046 #15, Eugene Island Block 95
Estimated Commencement date: July 1, 1982
Estimated Completion date: August 15, 1982
Surface Location: 6300' FNL and 7200' FWL of Eugene Island Block 95
Bottom Hole Location: 3000' FNL and 9300' FWL of Eugene Island Block 95
Total Depth: 10,800'
Objective: See Geological Program

111. Facility

A. Drill Barge - ODECO's "John Hayward"
See attachment for rig specifications, pollution control and diverter system.

B. No additional facilities will be added offshore or onshore as a result of these exploration activities.

IV. Oil Spill Contingency Plan

Odeco Oil and Gas Company fulfills its oil spill contingency plan by being a member of Clean Gulf Associates, P.O. Box 51239, New Orleans, Louisiana, 70151, an agency which handles clean up operations in the event of an oil spill. Fast Response Service can be obtained by calling Halliburton Services in Harvey, Louisiana (504) 366-1735.

A. Estimated deployment time of the equipment to this area is 12 hours.

B. Description of clean up equipment. See Supplemental Plan of Development dated October 14, 1981 - OCS 0228, Eugene Island Block 93.

V. Fuel Consumption - Drilling Operations

Drilling rig uses an average of 50 bbls. of diesel fuel per day during drilling operations. Each supply boat uses approximately 25 bbls. (42 gal/bbl.) of diesel per day. Two boats service drilling rig daily.

	Boats	Rig
Approx. Rig Days	135	135
	X50	X50
Total Fuel Consumption	6750 bbls.	6750 bbls.

VI. Safety Standards and Programs - Drilling Operations - See Supplemental Plan of Development dated October 14, 1981 for OCS 0228, Eugene Island Block 93.

VII. Base of Operation

A. Marine service to service drilling operations is provided from LAMCO Dock in Dulac, Louisiana.

B. Air Service (helicopter) is provided from Houma, Louisiana.

VII. Type Drill Mud Used and Chemical Components

A. Bariod

B. Chemical Components

Aktaflo-s	Mixed oxyethylated phenols
Aluminum Stearate	$(CH_3(CH_2)_{16}COO)_3$ AL
Aquagel	Sodium montmorillonite
Bariod	Barium Sulfate
Bicarbonate of Soda	$Na\ NCO_3$
Carbonox	Lignitic Humic Acid Powder
Caustic Soda	Sodium Hydroxide
CC-16	Caustized Carbonox
Cellex	Sodium Carboxymethylcellulose
Destrid	Dextrinized Polysaccharide Powder
HME	Selective, nonionic surfactant - Chemco product
Impermex	Starch
Lime	Calcium Hydroxide
Micatex	Mica Flakes
Q-Broxin	Ferrochrome Lignosulfonate

VIII. Type Drill Mud Used and Chemical Components - Continued

Sapp	Sodium Acid Pyrophosphate
Soda Ash	Sodium Chromate
Soltex	Hydrocarbon Powder
Superdril	Gilsonte
Torq-Trim	Biodegradable, non toxic lubricant
Wall-Nut	Nut Hulls

IX. Archeological & Shallow Hazards Survey

This lease being a mature producing area, Archeological and Shallow hazards surveys are not required. See Shallow Hazard letter.

X. Gaseous Emission Data

Drill Barge "John Hayward" will be used. Estimated rig days for drilling these wells will be 135 days.

A. Rig: Emission calculated for 135 days - stated in (lbs/day) Ton/135 days. See attachment for emission summary by rig and basif for calculation of Summary.

Drill Barge John Hayward
(1 lbs./day) Tons/135 days

1. CO (548.71) 37.03
2. Hydrocarbon (118.03) 7.97
3. NO_x (3485.33) 235.26
4. SO_2^x (37.92) 2.56
5. Particules (283.45) 19.13

B. Helicopters: Estimate 21 Round Trips in 135 days, two and one half hours per Round Trip = 52.5 hours operating time. Stated in (lbs./day) Tons per 135 days, averaged to 135 days. See attached for emissions per hour of use.

1. CO (.19) .06
2. Hydrocargon (.04) .00
3. NO_x (.86) .06
4. SO_2^x (5.52) .37
5. Particules (.07) .00

C. Boats (crew): Ninety six (96) trips in 135 days at 5 hours per round trip= 480 hours. (Supply) Sixty (60) trips in 135 days at 11 hours round trip = 660 hours. 480 + 660 = 1140 operating hours. Stated in (lbs/days) Tons per 135 days, averaged to 135 days. See attached for emission per hour of use.

1. CO (57.42) 3.88
2. Hydrocarbon (21.10) 1.42
3. NO_x (265.16) 17.90
4. SO_2^x (17.73) 1.20

D. Supply Base - 30 ton crane. Estimated use in 135 days - 465 hours. Stated in (lbs./day) Tons 135 days. Averaged for 135 days. See attached for emission per hour.

1. CO (12.98) .88
2. Hydrocarbon (1.21) .08
3. NO_x (31.62) 2.13
4. SO_2 (1.62) .11
5. Particules (1.72) .12

XI. Attachments

A. Vicinity Map

B. Geological Program OCS 043 #7 with structure map

C. Geological Program OCS 046 #15 with structure and top of salt maps

D. Shallow Drilling Hazards statement with seismic map showing location of well

E. Drill Barge Data - "John Hayward" including schematic of diverter and statement of pollution control.

F. Emission Summary with basis of calculations for drill barge.

G. Emission hourly rates for boats, helicopter, and crane.

H. Abnormal pressure maps for Wells #7 and #15.

VICINITY MAP

EUGENE ISLAND AREA

89

088 - 044

88

088 - 048

GULF OF MEXICO

94

85

088 - 046

110

0

Scale

ODECO OIL & GAS CO.

ODECO OIL AND GAS COMPANY

NOVEMBER 10, 1981

GEOLOGICAL PROGRAM AND WELL RECOMMENDATION
OCS-043 WELL NO. 7 EUGENE ISLAND BLOCK 88

LOCATION:

Surface: 6750' FNL & 6700' FWL of Blk. 88

Target #1: Same as surface location.
Tolerance: (Circle with a radius of 100')

B.H.L.: 2900' FNL & 9250' FWL at 20,000'
Tolerance: A circle with a radius of 100'

TOTAL DEPTH: 20,000'.

WELL CLASSIFICATION: Field Wildcat - Exploratory

LOGGING SERVICES:

1.) [illegible] Induction Spherically Focused

Base of conductor to surface casing depth.

#2 - BSC to 10500' to 10700'.

Run #3 - 10,600'± to 13,600'

Run #4 - 13,600 to 16,600

Run #5 - 16,600 to TD

2.) FDC/CNL-Formation Density Compensated/ Compensated Neutron Log

Over resistive and porous zones indicated to be possibly productive by the ISF Log.

3.) HRD-High Resolution Dipmeter

Run #1 - Base of surface casing to depth of intermediate string.

Run #2 - Base of intermediate casing to TD.

4.) SWS-Sidewall Samples

Over zones indicated to have possible hydrocarbons.

5.) Mud Logger

From 8000 to T.D.

GEOLOGICAL PROGNOSIS:

0 - 3500'	Pleistocene
3500 - 9000'	Pliocene
9000 - TD	Miocene

WELL OBJECTIVE: This well is projected to test the field pay sands ("Q" through "U") in a straight hole and then test the deeper sands in a deviated hole on the down thrown side of seismic fault to a depth of 20,000'.

Deeper sands are prolific producers at Chevrons Eugene Island Block 74 (5 miles to the northeast) and Placids South Marish Island Blocks 268 and 269 located 8 to 10 miles to the west. It appears that there is satisfactory sand development below the field pays drilled at Eugene Island Blk. 89. Chevron found good sand development down to 16,950' at Eugene Island Block 74 and Placid is developing their Blocks to depths of 18,000'.

Moderately high pressure (13 ppg equivalent) is expected at approximate depth of 10600'. No salt is anticipated to the total depth of the hole.

Submitted By: R J Butler
R. J. Butler
Sr. Development
Geologist

Approved By: H. A. Vallas
H. A. Vallas
Manager Development
Geology

Approved By: L. B. Carpenter
L. B. Carpenter
Vice President
Exploration

HAV/RJB/cs

APPROVALS

Continental Oil Company

By: _____ Date: _____

Newmount

By: _____ Date: _____

ATTACHMENT TO GEOLOGICAL PROGRAM & WELL RECOMMENDATION

WELL SAMPLES:

Collect 2 sacks per joint from BSC to total depth. The ODECO Engineer or Toolpusher at the well site will arrange for the most expeditious transportation to the appropriate shore base, from thence by "Hot Shot" to New Orleans and addressed to the attention of Crosbie-Macomber, 2705 Division Street, Metairie, Louisiana 70002. All samples should be clearly marked with the lease, well number and depth taken.

IMPORTANT NOTE:

If it should become necessary to by-pass the shale shaker, a bucket should be placed on the discharge line with a piece of junk, i.e., a broken shovel, steel plate or mesh standing erect to break the flow of mud. Even though this will contain lost circulation and other extraneous materials, sufficient sample can be caught to aid paleontological evaluation. Samples thus caught should be sacked in the usual manner and at the specified interval.

ODECO OIL & GAS COMPANY

NOVEMBER 11, 1981

GEOLOGICAL PROGRAM AND WELL RECOMMENDATION
OCS-046 WELL NO. 15 EUGENE ISLAND BLK. 95

LOCATION: Surface: 6300' FNL & 7200' FWL.

Target #1: Same as surface location begin deviation at 8400'.

B.H.L.: 3000 FNL & 9300 FWL at 10,800'
Tolerance: (Circle with a radius of 100 (200')

TOTAL DEPTH: 10,800'

WELL CLASSIFICATION: Field Wildcat - Exploratory

LOGGING SERVICE:

1.) ISF-Induction Shericallv Focused

Run #1 - Base of the conductor to the total depth of the surface hole.

Run #2 - Base of surface pipe to 10,000'.

Run #3 - 10,000' to 10,800'.

2.) FDC/CNL - Formation Density Compensated/ Compensated Neutron Log

Over resistive and porous zones indicated on the ISF log.

3.) HRD-High Resolution Dipmeter

Run #1: Base of surface pipe to 10,000'.

Run #2: 10,000' to TD

4.) SWS-Sidewall Samples

Over zones which appear to contain hydrocarbons.

5.) Mud Logger

8000' to TD

GEOLOGIC PROGNOSIS:

0 - 3500'	Pleistocene
3500 - 9000'	Pliocene
9000 - TD	Miocene

WELL OBJECTIVE: This well is planned to test field pays in a down flank position. The trap is defined by seismic data as a horst block with either a shale out or a peripheral fault as the up dip limit of the reservoir. The well is scheduled as 10800' "U" Sand test but, because of the uncertain structural attitude and the pressure point below the "U" Sand it is recommended that ISF Log be run at approximately 10,000 feet. Care should be taken while drilling from 10,000' to 10,800' in regard to this pressure point, salt however, is not anticipated to the total depth of the well bore.

Submitted By: R. J. Butler
R. J. Butler
Sr. Development
Geologist

Approved By: H. A. Vallas
H. A. Vallas
Manager Development
Geology

Approved By:
L. B. Carpenter
Vice President
Exploration

HAV/RJB/cs

Approvals:

Consolidated Natural Gas Co.

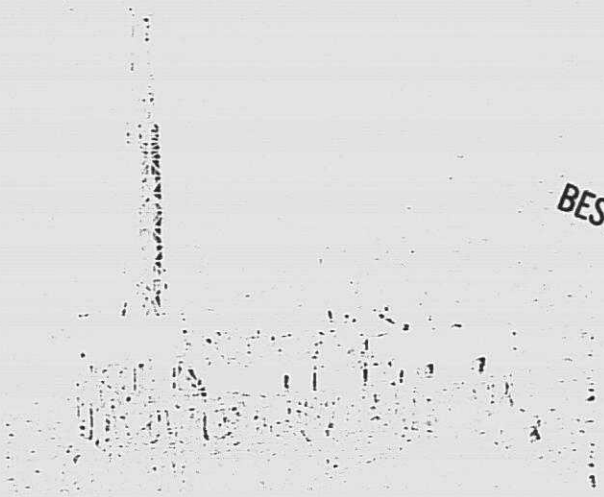
By:_____ Date:_____

Petro Lewis

By:_____ Date:_____

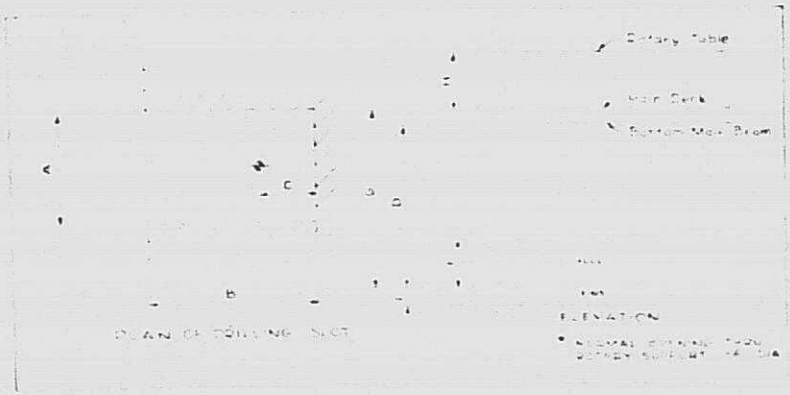
W. P. Properties

By:_____ Date:_____



BARGE DATA

HULL ..... Length 160', Beam (with pontoons) 120', Depth 10' plus 4' fins
SLOT ..... 20' Wide, 37' Deep, Center of Rotary 13' from back of slot
WORKING DECK ..... 160' Long, 60' Wide, Lowest platform structurals above bottom - 45'-6"
Platform deck above bottom - 49'-0"
QUARTERS ..... For 42 men
HELIPORT ..... Length 85', Width 60'



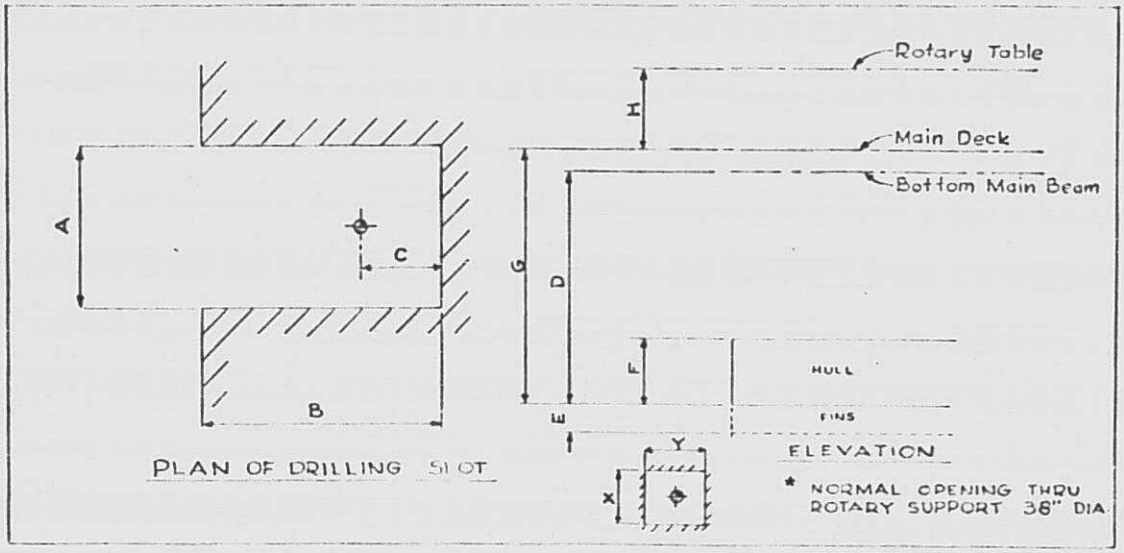
CLEARANCES & DIMENSIONS

Drilling Barge John Hayward	DIMENSIONS A	B	C	D	E	F	G	H	Operating Depth Maximum Normal	Hurricane Season	Minimum
	20'-0"	37'-0"	33'-0"	45'-0"	4'-0"	10'-0"	46'-6"	17'-3"	30'-0"	25'-0"	11'-0"

"John Hayward"

BARGE DATA

HULL	Length 160', Beam (with pontoons) 120', Depth 10' plus 4' fins
SLOT	20' Wide, 37' Deep; Center of Rotary 13' from back of slot
WORKING DECK	180' Long, 60' Wide; Lowest platform structurals above bottom – 45'-6"
	Platform deck above bottom – 49'-0"
OPERATING DEPTH	Maximum 30', Hurricane season 25', Minimum 10'
QUARTERS	For 42 men
RADIO	Radio Marine phone – ODECO FM radio & Single Sideband
HELIPORT	Length 85', Width 60'



CLEARANCES & DIMENSIONS

	DIMENSIONS										Operating Depth		
Drilling Barge	A	B	C	D	E	F	G	H	X	Y	Maximum Normal	Hurricane Season	Minimum
John Hayward	20'-0"	37'-0"	13'-0"	45'-0"	4'-0"	10'-0"	48'-6"	1'-3"	3'-3"	7'-0"	30'-0"	25'-0"	10'-0"

BLOWOUT PREVENTER ACTIVATION

The Blowout Preventers on the drilling rig JOHN HAYWARD are HYDRAULICALLY activated from controls located on the rig floor, and the living quarters.

DIVERTER SYSTEM OPERATIONAL PROCEDURE

The Diverter System as shown in Attachment I is installed so that the HCR valve (s) will open automatically when the hydril is closed. The diverting valves will remain open and be used to divert wellbore fluids downwind when necessary.

Prior to drilling the hydril shall be closed and seawater pumped through the system. The diverting valves shall be function tested at this time.

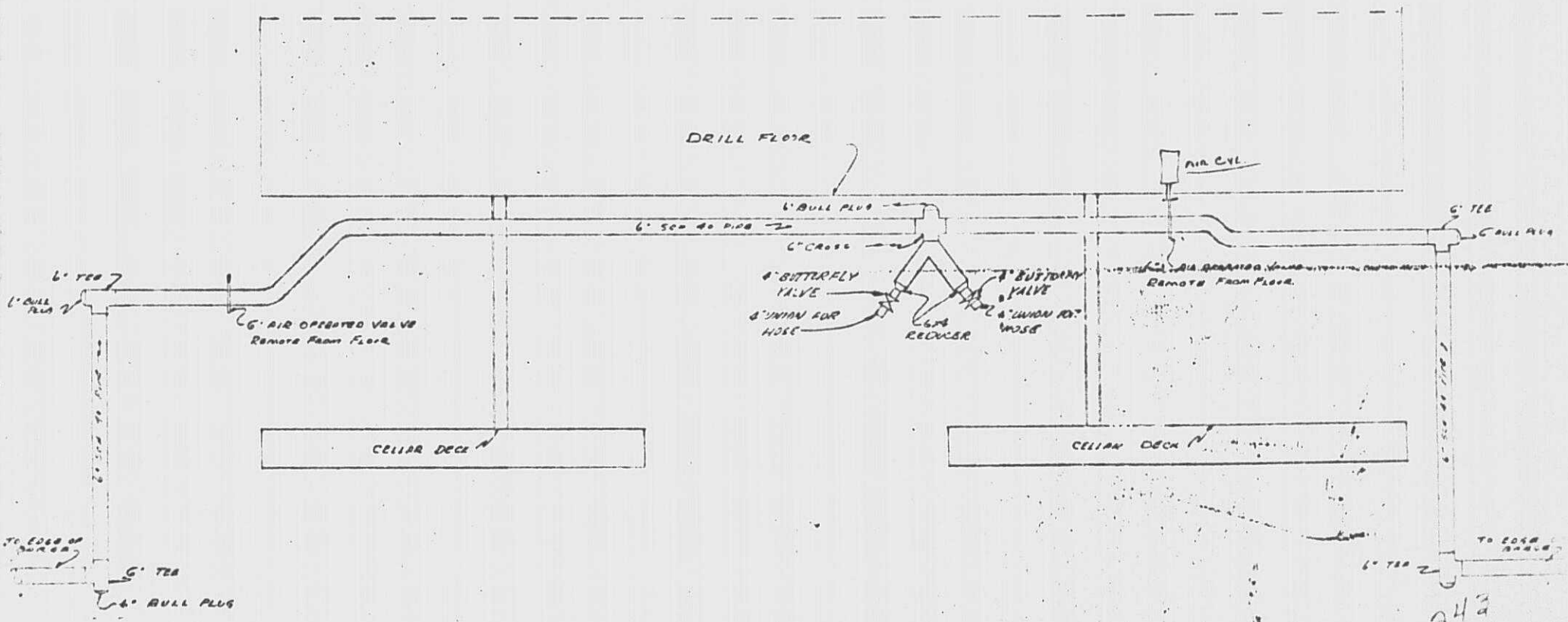
In the event it is necessary to use the diverter system for well control, the following sequence is recommended:

A) Clear Kelly from hydril

B) Close hydril

C) Use diverting valves to direct well fluids downwind

D) Pump mud in hole as fast as possible. Pump seawater if mud is expended



ODECO

INTER-OFFICE CORRESPONDENCE

TO: R. S. Gloger LOC: N. O. DATE:

CARBONS TO

FROM: W. J. Wilkinson LOC: N. O.

SUBJECT: Pollution and Waste Disposal from D/B John Hayward

The D/B John Hayward was constructed with certain features which were incorporated specifically to stop any pollutant likely to be found during normal drilling operations. It is equipped with drip pans and/or drians under floor and other machinery to retain all oil spills.

Provisions have been made for the collection, storage, and later transfer to shore base of all used oil from machinery on the drilling platform.

Containers have been provided to transfer solid waste, such as boxes, cartons, cans, etc., which cannot be incinerated to a shore base.

Copies of OCS Order Nos. 1 through 10 which are applicable to the contract drilling operations have been furnished the toolpushers. Rig supervisory personnel have been shown the seriousness of control of pollutants.

Should it come to your attention that any liquids or solids have escaped into the Gulf without our knowledge, I sincerely ask that you bring this to my attention.

W. J. Wilkinson

WJW/ggt

"JOHN HAYWARD"

EMISSIONS SUMMARY

SOURCE NO.	SOURCE	STACK HT. (Ft.)	STACK DIA. (Ft.)	EMISSIONS (TONS/YEAR) CO	HYDROCARBON	NO_x	PARTICULATE	SO_2
1	F.M. #38 D 8-1/8	27	1.33	32.9	7.08	209.0	2.28	17.0
2	F.M. #38 D 8-1/8	27	1.33	32.9	7.08	209.0	2.28	17.0
3	F.M. #38 D 8-1/8	27	1.33	32.9	7.08	209.0	2.28	17.0
4	American 1396 Stiffleg (3-71)	37	.42	0.22	0.05	1.39	0.01	0.11
5	ODECO Made Stiffleg (2-71)	37	.42	0.06	0.01	0.38	Neg	0.03
6	Emergency (Detroit #268A)	27	.83	0.07	0.01	0.14	Neg	0.04
7	Cold Start (L0-1)	27	.17	0.04	0.01	0.25	Neg	0.02
8	Bulk Air (Detroit #253)	27	.25	0.10	0.02	0.63	0.01	0.05
9	Schlumberger (4-71)	27	.13	0.05	0.01	0.32	Neg	0.02
10	Bulk Air (Detroit #253)	27	.25	0.10	0.02	0.63	0.01	0.05
11	Halliburton (Det 6V71)	27	.42	0.22	0.05	1.39	0.01	0.11
12	Halliburton (Det 8V71)	27	.5	0.29	0.06	1.84	0.02	0.15
13	Halliburton (Det 8V71)	27	.5	0.29	0.06	1.84	0.02	0.15
			TOTAL	100.14	21.54	636.11	6.92	51.73
	X 2000#. lbs/yr.			200280	43080	1,272,220	13840	103460
	÷ 365 = lbs./Day			548.71	118.03	3495.53	37.92	283.45

Pollutant from diesel engines on drilling rigs were calculated using the following:

$$\frac{TONS}{YR} = .0096563 \times C \times P \times (BHP)$$

where

- .0096563 = conversion from Grams/hr. to Tons/yr.
- C = Grams/BHP-Hr of pollutant - see (1)
- P = Average % useage in a yr. - see (2)
- BHP = Rated HP of engine

(1) Available data from manufacturers of diesel engines and theoretical combustion data was surveyed, and the following values chosen:

Pullutant	Grams/BHP-HR
NO_x	18.3
SO_2	1.49
Hydrocarbon	0.62
CO	2.88
Particulate	0.20

(2) Operation of equipment data from several rigs was reviewed to obtain % useage. Based on this review, the following data was utilized in preparing emissions estimates. This data is probably conservative, because it was assumed that engines were operating at all times at rated horsepower:

Engine Application	Average Yearly % Use
Main Engine	74
Emerg. Engine	0.5
Primary Crane	7
Back Up Crane	3
Fork Lift	3
Cement Unit	3
Logging Unit	1
Welding Unit	2
Desander/Desilter	10
Cold Start Air Comp.	2
Rig Air Comp.	10
Main Mud Pump	50
Mud Mix Unit	10
Draw works	60
Bulk Air Comp.	3

Basis For Calculations of Gaseous emissions of
Boats - Helicopters and Crane at Supply Base
For Rig Related Operations

I. Boats: Equiped with two V 12 marine engines and two generators

Lbs/Hour

CO	Hydrocarbon	No_x	SO_2	Particules
6.8	2.5	31.4	2.1	2.3

II. Helicopter: For transportation of men. Size 206

Lbs/Hour

CO	Hydrocarbon	No_x	SO_2	Particules
.5	.1	2.2	.2	.2

III. Suppl. Base - Crane - with GM 6-71 diesel engine with 228 BHP driving a 0 ton crane

Lbs/Hour

CO	Hydrocarbon	No_x	SO_2	Particules
3.77	.35	9.18	.47	.5

TELEX 58-4124
PHONE 504-561-2811

ODECO OIL & GAS COMPANY

ODECO BUILDING • 1600 CANAL STREET
MAIL TO P.O. BOX 61780 NEW ORLEANS LA 70161

December 29, 1981

Mr. E. G. Hubble
District Supervisor
U.S. Department of the Interior
Geological Survey
Post Office Box 52289
Lafayette, Louisiana 70501

Dear Mr. Hubble:

Geophysical data in the vicinity of the proposed location of the ODECO Oil & GAS, No. 7 OCS-043 well in Eugene Island Block 88 has been reviewed and there appears to be no evidence of shallow drilling hazards.

As indicated on the attached plat, the seismic line reviewed was OS-058.

Respectfully submitted,

M. L. James
Sr. Staff Geophysicist

MLJ/aah

Encl.

TELEX: 58-4124
PHONE: 504-561-2811

ODECO OIL & GAS COMPANY
ODECO BUILDING • 1600 CANAL STREET
MAIL TO: P O BOX 61780, NEW ORLEANS, LA 70161

December 29, 1981

Mr. E. G. Hubble
District Supervisor
U.S. Department of the Interior
Geological Survey
Post Office Box 52289
Lafayette, Louisiana 70501

Dear Mr. Hubble:

Geophysical data in the vicinity of the proposed location of the ODECO OIL & GAS, No. 15, OCS-046 well in Eugene Island Block 95 has been reviewed and there appears to be no evidence of shallow drilling hazards.

As indicated on the attached plat the seismic lines reviewed were LO-49A and OS-965.

Respectfully submitted,

M. L. James
Staff Geophysicist

MLJ/aah

Encl.