

INSTRUCTIONS

General: Any necessary special instructions concerning the use of this form and the number of copies to be submitted may be obtained from the local District Office.

Item 4: Locations should be described in accordance with the instructions of the local District Office. In the Gulf of Mexico Region, indicate the distance in feet to the nearest block

line.

to District Office

NO. 100-100000

48

Water Depth 60'

No. 1 Bottom Hole Location
800' FEL
3345' FNL

No. 1 Surface Location
1100' FEL
4900' FNL

THE ABOVE PLAT SHOWS THE CORPUS CHRISTI OIL AND GAS COMPANY NO. 1 LOCATION, SOUTH TIMBALIER, BLOCK 48, AS WILL BE SURVEYED AND STAKED. THE ABOVE PLAT IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF THIS 25TH DAY OF JULY, 1988.

J. C. Herring
J. C. HERRING, REG. PROFESSIONAL ENGINEER

CORPUS CHRISTI OIL AND GAS COMPANY

BLOCK 48

WELL NO. 1

SOUTH TIMBALIER AREA

SCALE 1" = 2000'

BEST AVAILABLE COPY

CORPUS CHRISTI OIL AND GAS COMPANY

217 EAST KALISTE SALOOM ROAD

SUITE 118

LAFAYETTE, LOUISIANA 70508

DRILLING PROGRAM

SOUTH TIMBALIER 48, WELL NO. 1

OCSG 8179, GULF OF MEXICO

LOCATION AND DEPTH

This well is to be a directional hole drilled to a TVD of 11,000' and a measured depth of 11,299' from a surface location of 1100' FEL and 4900' FNL of Block 48. Water depth is 60' and derrick floor elevation will be 78'± above the mean water line.

GENERAL DRILLING PLAN

This well is to be drilled in compliance with OCS Order No. 2. All zones which contain fresh water or hydrocarbons will be protected by cemented casing or cement plugs. This well is to be drilled by J Storm XVI, a jack-up rig from Marine Drilling Company or a similar rig.

MUD PROGRAM

See attached data.

GENERAL

1. Control solids near minimum values with desander, desilter, and fine shaker screens.
2. Check the circulating pump pressure at minimum rates once each tour or as mud properties change significantly. Record this information on IADC drilling report.
3. Keep the following materials on the rig at all times: 2000 sxs of Barite plus enough SFT and Pipe Lax to cover the entire BHA.
4. Suggested mud weights are only a guide and actual mud weights will be dictated by well conditions.

GEOLOGICAL PROGRAM

See attached data.

POLLUTION CONTROL

See attached data.

BEST AVAILABLE COPY

PAGE TWO
DRILLING PROGRAM
SOUTH TIMBALIER 48 WELL NO. 1
OCSG 8719, GULF OF MEXICO

CASING DESIGN DATA SHEET

See attached data.

This program is intended as a guide to be closely followed as long as actual conditions agree reasonably well with pre-drilling predictions. When substantially different actual conditions are encountered. The CCOG representative will take appropriate action to safely and economically control the new conditions and will advise his supervisor of such action as soon as the job conditions permit.

The CCOG office in Lafayette, LA will have the engineering responsibility for this well and can be reached Monday through Friday from 8:00 am to 5:00 pm at 318-234-8357. After hours on weekends please call Walter Toups at 318-234-2259, or George Taylor at 512-991-8984.

MUD LOGGING

A mud logging unit is to be used from under surface pipe at 3000'. Mud loggers are to assist in estimation of formation pressure and will supply shale densities, delta chloride log, mud temperature in and out and mud gas data. Logger is to promptly alert driller and CCOG drilling representative of any indication that increase mud weight is required.

WJT/js

BEST AVAILABLE COPY

CORPUS CHRISTI OIL AND GAS COMPANY

217 EAST KALISTE SALOOM ROAD
SUITE 118
LAFAYETTE, LOUISIANA 70508

RECOMMENDED MUD PROGRAM

OPERATOR : CORPUS CHRISTI OIL AND GAS COMPANY
 WELL NAME & NO. : SOUTH TIMBALIER 48 #1 , OCSG 8719
 LOCATION : FEDERAL BLOCK - SOUTH TIMBALIER 48, OFFSHORE, LOUISIANA
 CASING : DRIVE 36" @ 260' RKB
 CONDUCTOR 16" @ 700' TVD
 SURFACE 10 3/4" @ 3,000' TVD
 PRODUCTION 7 5/8" @ 11,000' TVD ; 11,299' MD
 PROPOSED DEPTH : 11,000' TVD ; 11,299' MD
 DATE : JULY 18, 1988

-----*

DEPTH	MUD WT. PPG	FUNNEL	VISC. PV	YP	FLUID LOSS API HTHP	% SOLIDS
0'-3,000'	8.8-9.2	34-38	4-7	10-18	- -	4-7
SET 10 3/4" CASING						
3,000'-8,000'	9.0-9.2	36-40	5-7	10-18	20-15 -	5-7
8,000'-9,000'	9.2-9.5	38-42	5-11	10-12	15-12 -	5-9
9,000'-10,000'	9.5	38-42	7-11	8-10	12-10 -	7-9
10,000'-10,500'	9.5-10.0	38-42	7-13	8-10	10-8 -	7-11
10,500'-11,000'	10.0-10.5	40-45	9-14	8-10	10-8 -	9-12

WJT/jjs

BEST AVAILABLE COPY

CORPUS CHRISTI OIL AND GAS COMPANY
SOUTH TIMBALIER 48 #1
OFFSHORE LOUISIANA

Location: Surface: 1100' FEL and 4900' FNL of Federal Block 48,
South Timbalier Area
Target #1: @ 8100', 800' FEL and 4400' FNL
KOP: 5671' MD
BHL: @ 11000', 800 FEL & 3345' FNL

Total Depth: Proposed total depth 11000'

Water Depth: 60'

Closest

Similar Well: Chevron ST 47 #1
Aminoil ST 48 #1

Known Drilling
Hazards in
the Area:

Pressure not anticipated of total depth. Use information from
above wells.

Estimated

<u>Formation Tops:</u>	<u>Formation</u>	<u>TVD</u>	<u>Remarks</u>
	4200' Sand	4200'	Possible Gas
	7800' Sand	8000'	Possible Gas/Oil
	Pliocene Sands	8000'-10500'	Possible Gas

Samples: Catch two sets of samples, 30's (4000'-TD).

Mud Logging: Log from base of surface casing to total depth.

Electric Logging: Run 1: Log from base of surface casing to total depth.
Run Induction Acoustilog, Neutron Density, Dipmeter and SWS.

Geologist:

R. H. Baillio, Jr.

RHB/so

BEST AVAILABLE COPY



United States Department of the Interior

MINERALS MANAGEMENT SERVICE
GULF OF MEXICO OCS REGION

1201 ELMWOOD PARK BOULEVARD
NEW ORLEANS, LOUISIANA 70123-2394



In Reply Refer To: 70-1

June 15, 1988

Corpus Christi Oil and Gas Company
Attention: Mr. Joe E. Eskew, Jr.
Post Office Box 2928
Corpus Christi, Texas 78403

Gentlemen:

Your letters dated December 28, 1987, and May 17, 1988, transmitted a complete, revised Oil Spill Contingency Plan (OSCP) for our review. The plan is hereby approved in compliance with paragraph 3.2 of OCS Order No. 7. Any future revisions of this plan shall comply with 30 CFR 250.42.

In the future your letters and submittals to fulfill the requirements of 30 CFR 250.42 (OSCP) and 30 CFR 250.43 (Training and Drills) could be combined resulting in a reduction of paperwork. Advance notification of a drill pursuant to 30 CFR 250.43 should be a separate submittal. Minerals Management Service approval would be required to slide the date of your annual drill, annual OSCP review, or both, so they would coincide. Also, to comply with 30 CFR 250.43 drills shall simulate conditions in the area of operations and shall include deployment and operation of equipment.

Please submit six copies of further revisions or modifications to your OSCP. The next annual review of your OSCP, as required by 30 CFR 250.42, will be due in December of 1988.

Sincerely yours,

D. J. Bourgeois
D. J. Bourgeois
Regional Supervisor
Field Operations

BEST AVAILABLE COPY

CORPUS CHRISTI OIL AND GAS COMPANY
217 EAST KALISTE SALOOM ROAD
SUITE 118
LAFAYETTE, LOUISIANA 70508

OIL SPILL CONTROL

BLOCK 48

SOUTH TIMBALIER

Corpus Christi Oil and Gas Company is a member of Clean Gulf Associates and therefore has access to their oil spill and containment equipment. Corpus Christi Oil and Gas Company has an agreement with Peterson Maritime Services, Inc. to furnish men and materials as needed to handle any minor or major oil spill. A response to any need for the type equipment will come from Fourchon, Louisiana and response time to Block 48, South Timbalier Area is estimated to be within 4 to 6 hours.

WJT/js

BEST AVAILABLE COPY

CORPUS CHRISTI OIL AND GAS COMPANY
SURFACE BLOWOUT PREVENTER PROGRAM

A 20" Fydril will be utilized on the 36" drive pipe and the 16" conductor casing with two remotely controlled 6" valves. The valves connect to the diverter lines which can accomplish downward diversion as necessary.

The 13 5/8" 10,000# WP BOP's stack shall be comprised of one (1) 5,000# WP annular and three (3) 10,000# WP rams with two side outlets connected to a 10,000# WP choke manifold. This BOP stack shall be connected to the casing head after cementing the 10 3/4" casing and will be used throughout the drilling operations to approximately 11,000' TVD.

BLOWOUT PREVENTER PROGRAM

<u>TYPE</u>	<u>CASING SIZE</u>	<u>DEPTH</u>	<u>BOP'S MSP</u>	<u>ARRANGEMENT</u>	<u>CHOKE MAN. MSP</u>
Drive	36"	±120' BML	2M	SA	Diverter
Conductor	16"	±550' BML	2M	SA	Diverter
Surface	10 3/4"	±3000' TVD	10M	RSRRA	10M
Production	7 5/8"	±11,000' TVD	10M	RSRRA	10M

FRACTURE AND PORE PRESSURE

<u>DEPTH TVD</u>	<u>CASING SIZE</u>	<u>MAX. MUD WT.</u>	<u>MAX. EST. PORE PRESSURE</u>	<u>EST FRACTURE PRESSURE, PPG</u>
±120' BML	36"	9.0	8.8	10.2
±550' BML	16"	9.0	8.8	12.1
±3000' TVD	10 3/4"	9.0	8.8	13.7
±11,000' TVD	7 5/8"	10.5	10.0	16.9

MUD VOLUME

<u>DEPTH TVD</u>	<u>HOLE SIZE</u>	<u>HOLE CAPACITY</u>	<u>TOTAL CAP. ON RIG</u>
±550' BML	20"	315 bbls	1527 bbls
±3000' TVD	14 3/4"	634 bbls	1527 bbls
±11,000' TVD	9 7/8"	1042 bbls	1527 bbls

THERE WILL BE AT LEAST 2000 SX OF BARITE IN RESERVE AT ALL TIMES
 ALL DEPTHS ARE TVD

BEST AVAILABLE COPY

ANTICIPATED SURFACE PRESSURE
SOUTH TIMBERLIER 48 WELL #1
OCSG 8719, GULF OF MEXICG

Conductor - Size 16" Depth - 550' BML

Drilling Phase - This casing will be utilized while drilling the 3000' TVD of surface hole. Anticipated mud weights at 3000' TVD are 9.0#/gallon.

<p>3000' <u>X .052</u> 156 X 9.0# / gallon maximum estimated pore pressure 1404 psi</p>	<p>1404 psi <u>X .949</u> factor 1332 psi maximum anticipated surface pressure</p>
---	--

If casing is evacuated and is filled with gas the maximum anticipated surface pressure is 1332 psi.

Completion Phase - This casing string will have cement in the annulus between the 16" and 10 3/4" surface casing. Maximum anticipated casing pressure on 16" in completion phase is zero.

Surface Casing - Size 10 3/4" Depth - 3000' TVD

Drilling Phase - This casing will be utilized to drill to 11,000' TVD. Anticipated mud weights could reach 10.5#/gallon.

<p>11,000' <u>X .052</u> 572 X 10.5#/gallon estimated mud weight @ 11,000' TVD 6006 psi</p>	<p>6006 psi <u>X .826</u> factor 4961 psi maximum anticipated surface pressure</p>
---	--

13.7 #/gallon - Fracture equivalent mud weight at casing shoe at 3000' which equals 2137 psi.

During the drilling phase if 4961 psi is exerted on the 10 3/4" casing it would break down the formation at the casing seat at 3000'. So it would be expected not to exceed 2137 psi during the drilling phase.

Completion Phase - This casing will be left with mud in the annular space between the 10 3/4" and the 7 5/8". This mud will be the equivalent weights of mud used when TD for production casing is reached, approximately 10.5#/gallon. Anticipated surface pressure during completion phase is zero.

Production Casing - Size 7 5/8" Depth - 11,000' TVD

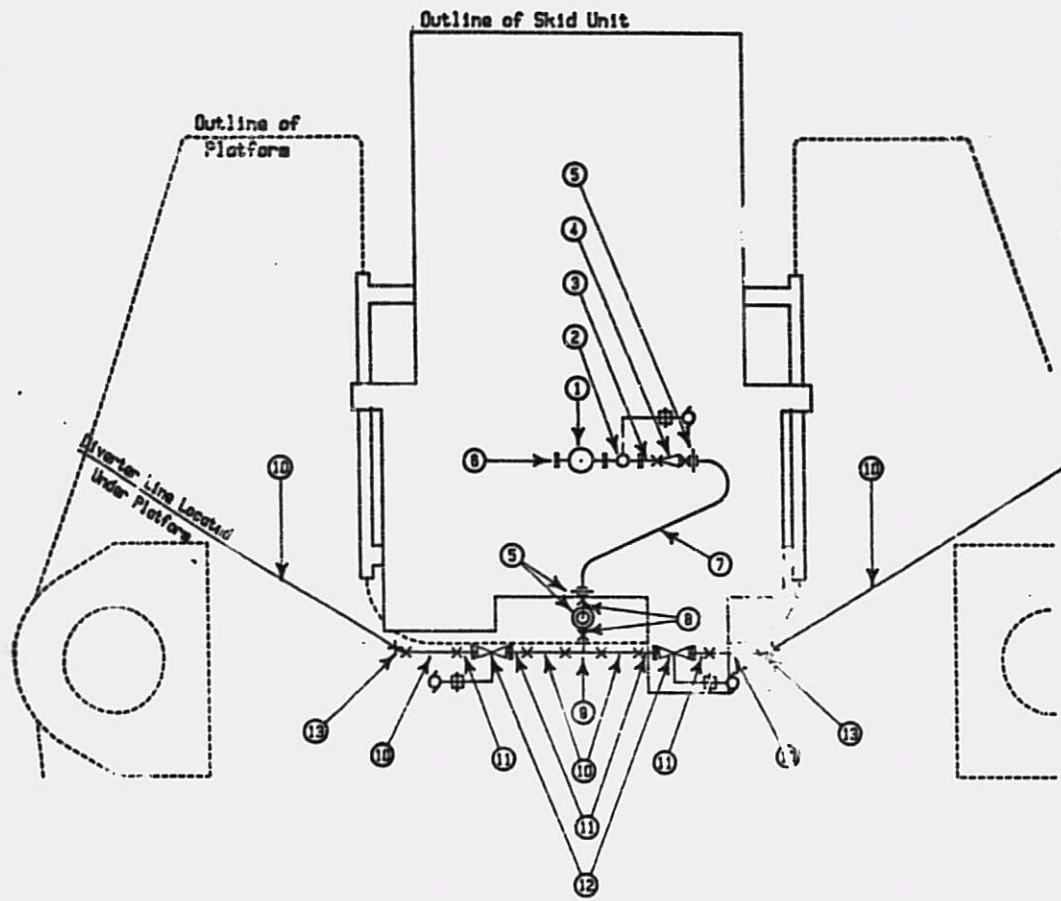
If casing is evacuated to 11,000' and is filled with gas the maximum anticipated surface pressure = 4961 psi.

<p>11,000' <u>X .052</u> 572 X 10.5 mud weight 6006 psi</p>	<p>6006 psi <u>X .826</u> factor 4961 psi maximum anticipated surface pressure</p>
---	--

NOTE: ALL DEPTHS ARE TVD

BEST AVAILABLE COPY

BEST AVAILABLE COPY



13	3" - 45 deg Elbow, Ex. Str.
12	1" Pneum. Oper. Butterfly Valve
11	6" Weld Neck Flange, Ex. Str.
10	8" Pipe, Schd. 80
9	8" Tee, Ex. Str.
8	8" - 90 deg Elbow, Ex. Str.
7	8" Hose, 200 psi, 20' long
6	8" Blind Flange, Ex. Str.
5	8" YECO Union, Fig. 100, 1000 psi
4	6" x 8" Reducer, Ex. Str.
3	6" Weld Neck Flange, Ex. Str.
2	6" Hydr. Oper. Ball Valve
1	Diverter Spool
Item	Description

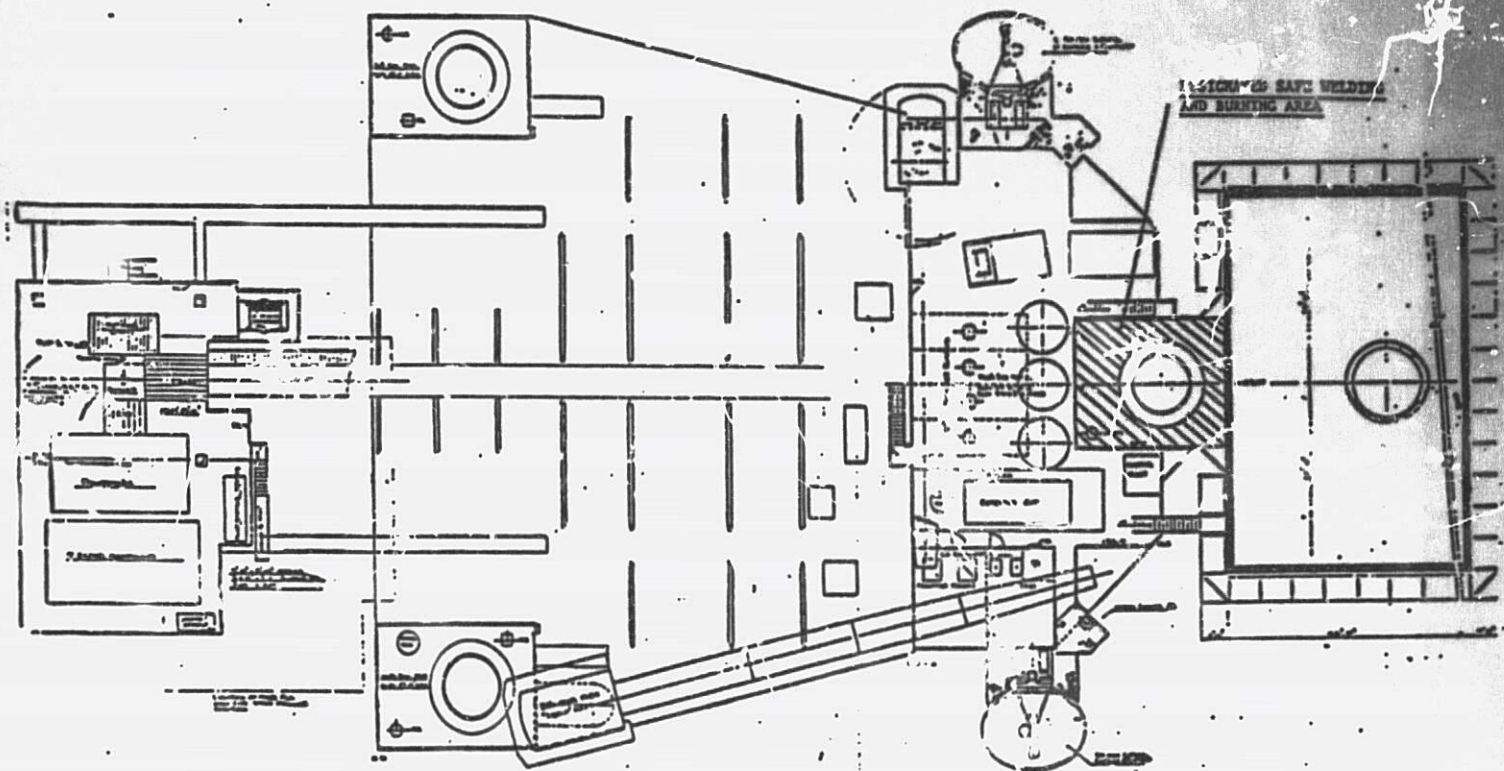
Marina Drilling Company
 J Storm XVI
 Diverter System

Date: 23 Jan 1964

PAC

J Storm XVI

BEST AVAILABLE COPY



UNITED STATES GOVERNMENT
MEMORANDUM



By

July 27, 1988

To: Regional Supervisor, Field Operations, Gulf of Mexico OCS Region (FO)
(Attention: *Floyd Byars*)

From: District Supervisor, Houma District, Gulf of Mexico OCS Region (FO-4)

Subject: Geological and Geophysical Review for APD

Transmitted herewith is *Corpus Christi Oil and Gas Company's* application for
Permit to Drill (APD) for Lease OCS-*3 8719* Well *110,1*
South Timberline Block 48
(Area/Block)

We recommend your geological and geophysical review as soon as possible.

James D. Borne
for John D. Borne

Attachments

cc: Lease OCS-*3 8719* Well *110,1* (FO-4)

MJSaucier:lfl

*Done on
advance copy*

BEST AVAILABLE COPY

CORPUS CHRISTI OIL AND GAS COMPANY

THE 600 BUILDING
P.O. BOX 2928
CORPUS CHRISTI, TEXAS 78401

August 15, 1988



Minerals Management Service
P. O. Box 37
Bourg, Louisiana 70343

Attn: Mr. Mike Saucier

RE: OCS-G-8719
Block 48 Well No. 1
South Timberline Area

Enclosed please find the following information which you requested:

1. Pore Pressure Plot
2. Directional Plot
3. BOP Schematic
4. Diverter Operating Procedure
5. Mud Program showing the Mud Additives to be used.
6. Hull Inspection and Certification

The casing strings will be tested as follows:

	<u>Casing</u>	<u>Casing Seat</u>
16" conductor	500 PSI	9.5 PPG
10 3/4" surface	2200 PSI	11.0 PPG
7 5/8" production	4100 PSI	n/a

The BOP's will be tested to 250/3000 PSI initially then increased to 250/5000 PSI below 7000 feet. The BOP's will be actuated hydraulically.

A drilling mud containing oil will be discharged on location and a minimum of 200 sacks of gel will be kept on hand.

A minimum design factor of 1.0 for collapse and burst was used on the basis that the casing string would never be completely evacuated. A minimum design factor of 1.25 for tension was deemed adequate for running or removing the casing string. The actual design factors exceed the minimum in all instances.

I trust this will complete your files for the application.

Very truly yours,

George E. Taylor
Vice President, Operations

JCH/bh
encl.

BEST AVAILABLE COPY

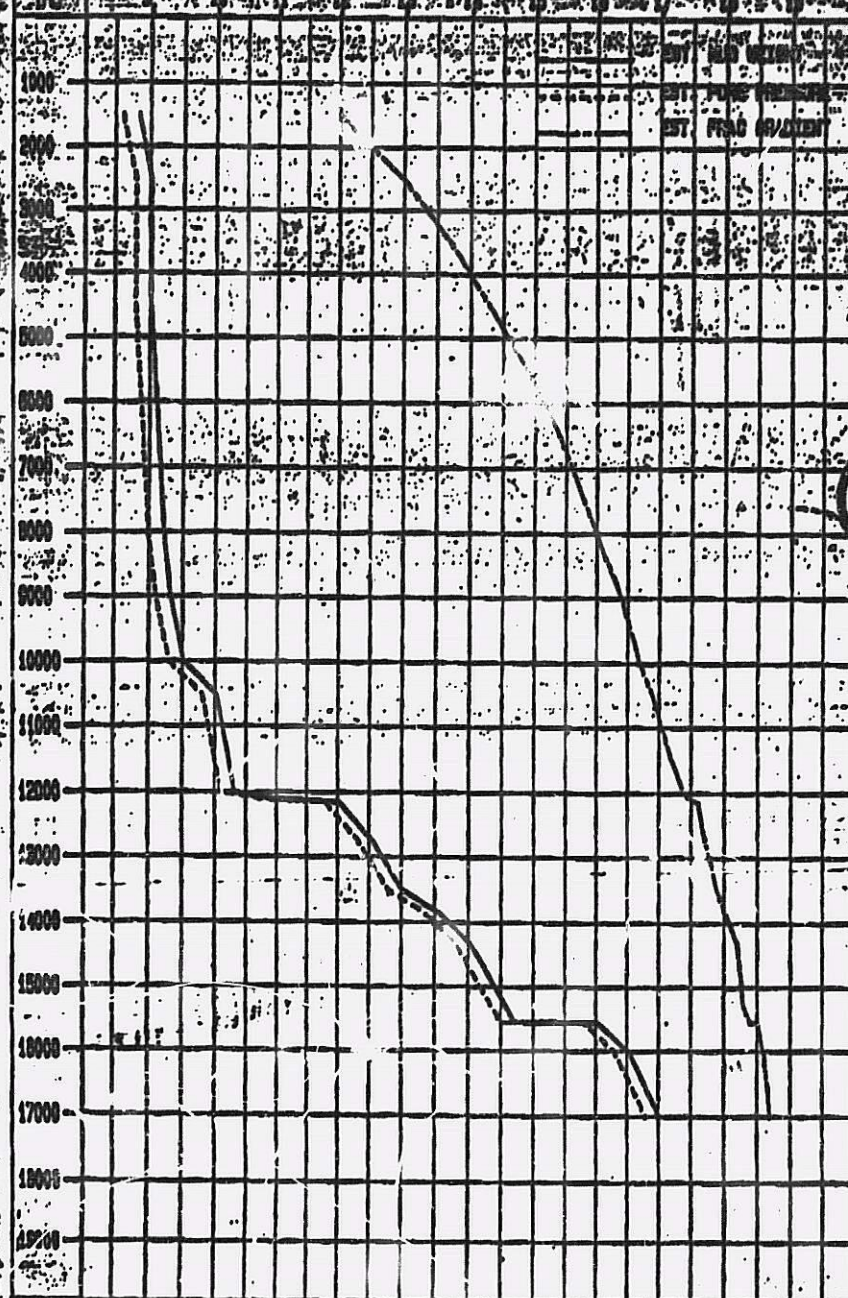


WELL NO. 215-200
WELL NAME: SOUTH T2MB. PROSPECT
FIELD: SOUTH T2MBALIER
LOCATION: BLOCK 48
COUNTY: OFFSHORE, LOUISIANA
STATE: LOUISIANA
DEPTH: 17000
TVD: 17000
DATE: 04/68
BY: A. SYEMAR
FILE: CCL

PRESSURE PROFILE

EQUIVALENT MUD WEIGHT (PPG)

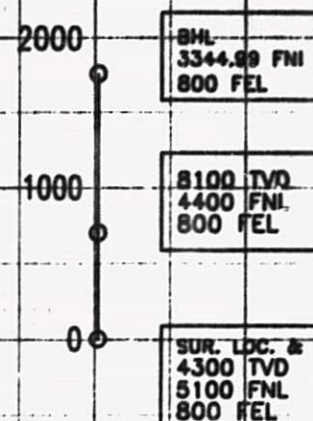
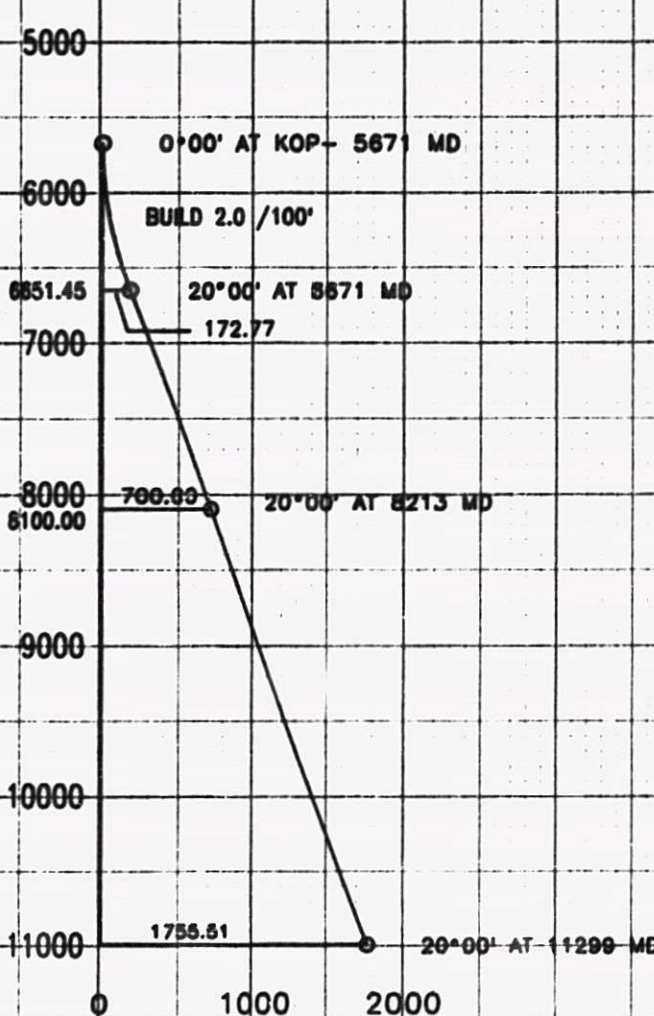
CASINO PROGRAM
PRESSURE



8.878° 18.890°
7.000° 8.890°
8.878°

CORPUS CHRISTI OIL & GAS
SOUTH TIMBALIER BLOCK 48 WELL No.1
OFFSHORE LOUISIANA

VERTICAL SECTION
 SCALE 1" = 1000'
 DUE NORTH



HORIZONTAL SECTION
 SCALE 1" = 1000'



6-22-88

PONDER DIRECTIONAL DRILLING

BEST AVAILABLE COPY



**CORPUS CHRISTI OIL & GAS
PROPOSED
SOUTH TIMBALIER - BLOCK 48
OFFSHORE, LOUISIANA**

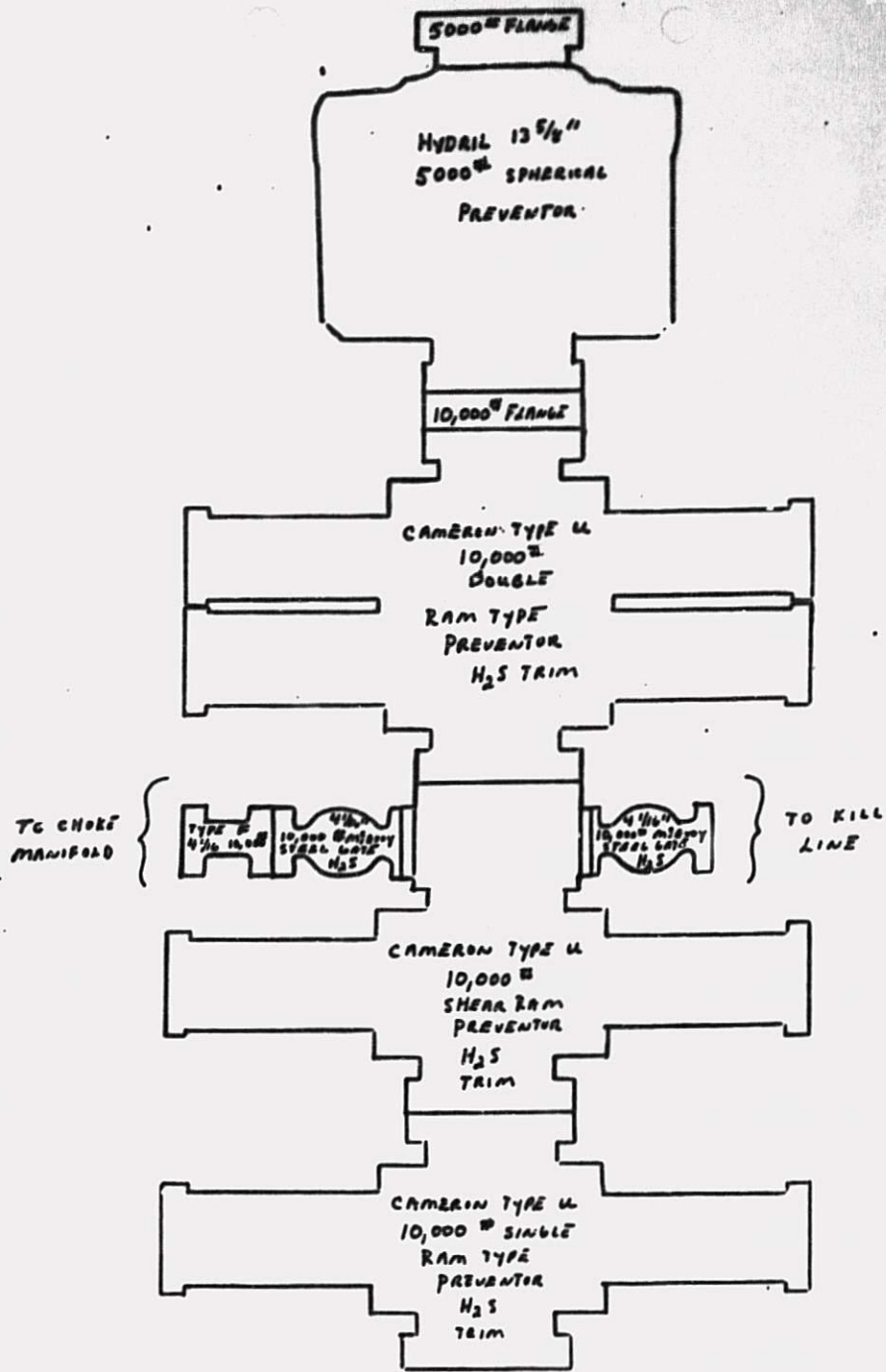
DEPTH INTERVAL: 0' - 3,500'
ANTICIPATED PROBLEMS: Gumbo type shale
MUD TYPE: Non-dispersed Low Solids/Seawater
MUD ADDITIVES: M-I Gel, Caustic Soda, Soda Ash
SOLIDS CONTROL: Rig Shaker, Desilter, Desander

TREATMENT PROCEDURES:

1. Add enough Soda Ash to keep any calcium in the initial make up water below 200 ppm. Mix initial spud muds with fresh water.
2. Add large additions of M-I Gel to keep the yield point in the desired ranges. Use seawater for dilution. Prior to running casing, a high viscosity gel pill should be pumped to assure that the hole is clean. Prehydrate all M-I Gel additions.
3. Run desander and desilter continuously while drilling.

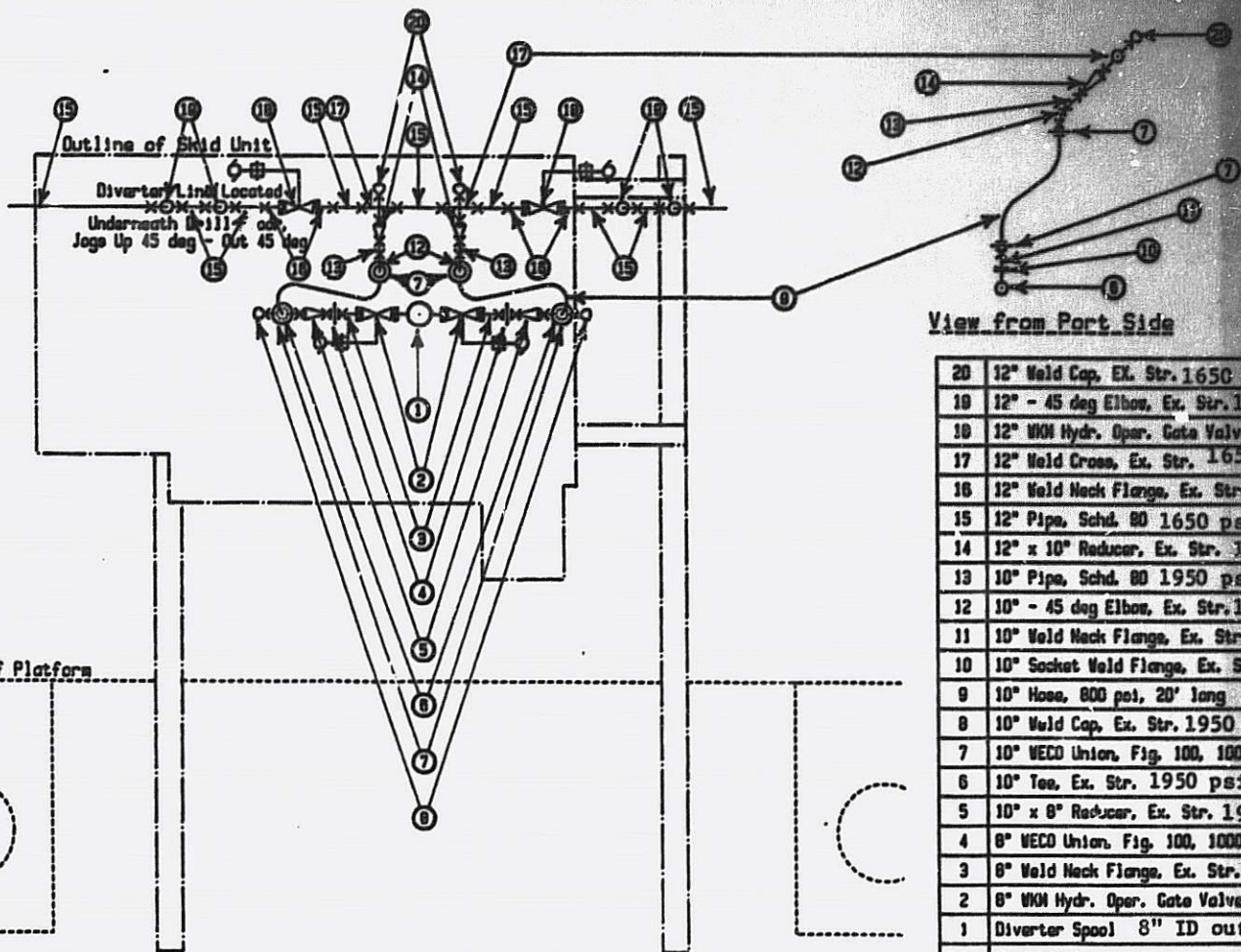
BEST AVAILABLE COPY

L. Storm XIV



BEST AVAILABLE COPY

BEST AVAILABLE COPY



View from Port Side

20	12" Weld Cap, Ex. Str. 1650 psi wp
19	12" - 45 deg Elbow, Ex. Str. 1650 psi wp
18	12" W/M Hydr. Oper. Gate Valve 460 psi
17	12" Weld Cross, Ex. Str. 1650 psi wp
16	12" Weld Neck Flange, Ex. Str. 1650 psi wp
15	12" Pipe, Schd. 80 1650 psi wp
14	12" x 10" Reducer, Ex. Str. 1950 psi wp
13	10" Pipe, Schd. 80 1950 psi wp
12	10" - 45 deg Elbow, Ex. Str. 1950 psi wp
11	10" Weld Neck Flange, Ex. Str. 1950 psi wp
10	10" Socket Weld Flange, Ex. Str. 1950 psi wp
9	10" Hose, 800 psi, 20' long
8	10" Weld Cap, Ex. Str. 1950 psi wp
7	10" WECD Union, Fig. 100, 1000 psi
6	10" Tee, Ex. Str. 1950 psi wp
5	10" x 8" Reducer, Ex. Str. 1950 psi wp
4	8" WECD Union, Fig. 100, 1000 psi
3	8" Weld Neck Flange, Ex. Str. 2430 psi
2	8" W/M Hydr. Oper. Gate Valve 460 psi
1	Diverter Spool 8" ID outlets
Item	Description

Marine Drilling Company
J Storm XIV
Diverter System

Date: 9 Nov 1984

By: PMS

TELEX - 778445
CABLE - "MARDRI"
PHONE - 512-884-8851
TELECOMER - 512-884-3257

MARINE DRILLING COMPANY

1000 South Tower - MBank Center
500 N. Water Street
Corpus Christi, Texas 78471-0399

DATE: AUGUST 11, 1988

TO: MR. JIM HERRING
CORPUS CHRISTI OIL AND GAS COMPANY

FROM: MARINE DRILLING COMPANY

SUBJECT: J STORM XIV DIVERTER SYSTEM OPERATION PROCEDURE

During drilling operations, the 21-1/4" annular preventer is in the open position with the 8" hydraulic valves being open. If a kick or blowout occurs, the 21-1/4" annular preventer is closed and both of the 8" hydraulic valves are open. At this time, both valves may be left open, or another option than can be utilized is to close either valve depending on the wind direction.

BEST AVAILABLE COPY



**CORPUS CHRISTI OIL & GAS
PROPOSED
SOUTH TIMBALIER - BLOCK 48
OFFSHORE, LOUISIANA**

DEPTH INTERVAL: 3,500' - 10,000'

ANTICIPATED PROBLEMS: None

MUD TYPE: Non-dispersed, Low Solids/Seawater

MUD ADDITIVES: M-I Gel, Tannathin, Caustic Soda, M-I Bar

SOLIDS CONTROL: High speed shaker, Desander and Mud Cleaner

TREATMENT PROCEDURES:

1. Add large additions of M-I Gel to keep yield point in desired range.
2. Add Caustic Soda to keep pH 9.0-9.5.
3. Add small additions of Tannathin to keep the mud "smoothed out".
4. Thermp. fluid loss control. Additions of 1/4 to 1/2 lb/bbl.
5. Run desilter and desander continuously while drilling.

BEST AVAILABLE COPY



**CORPUS CHRISTI OIL & GAS
PROPOSED
SOUTH TIMBALIER - BLOCK 48
OFFSHORE, LOUISIANA**

DEPTH INTERVAL: 10,000' - 12,000'

ANTICIPATED PROBLEMS: None

MUD TYPE: Lignosulfonate/Lignite/Seawater

MUD ADDITIVES: M-I Gel, Spersene, XP-20, M-I Bar, Lime, Caustic Soda, Resinex

SOLIDS CONTROL: High Speed Shakers, Mud Cleaner

TREATMENT PROCEDURES:

1. Increase Caustic additions to raise and maintain the pH in the 10.0-11.5 range.
2. Increase Spersene treatments as needed along with XP-20 to lower the fluid loss and disperse the mud. The XP-20 should replace the Tannathin treatments.
3. Additions of Lime should be made and the pH kept in the 3.0-4.0 cc range.
4. If balling should become a problem, 2-4 #/bbl of D-D should be added to the system.
5. Discontinue the use of the Desander as the mud weight is increased. The screens on the high speed shakers should be reduced to no larger than 40 mesh.

BEST AVAILABLE COPY



UNITED STATES OF AMERICA
DEPARTMENT OF TRANSPORTATION
UNITED STATES COAST GUARD

EXPIRATION DATE: 25SEP86

EXPIRATION DATE: 25SEP86

Certificate of Inspection

LAST HULL EXAM: 10NOV86 DRYDOCK

VESSEL NAME J STORM XIV	OFFICIAL NUMBER DN625968	CALL SIGN	SERVICE MODU
HOME PORT HOUSTON, TX	HULL MATERIAL STEEL	HORSEPOWER	PROPULSION
PLACE BUILT BEAUMONT, TEXAS	DATE BUILT 01JAN80	GROSS TONS 4109	NET TONS 4109
		DWT	LENGTH 220.00
OWNER MARINE DRILLING, LIMITED 1000 S. TOWER BANK CTR. 500 NORTH WATER STREET CORPUS CHRISTI, TX 784710399	OPERATOR MARINE DRILLING COMPANY 1000 S. TOWER BANK CTR. 500 NORTH WATER ST. CORPUS CHRISTI, TX 784710399		

THIS VESSEL MUST BE MANNED WITH THE FOLLOWING LICENSED AND UNLICENSED PERSONNEL, INCLUDED IN WHICH THERE MUST BE 2 CERTIFICATED LIFEBOATMEN AND 0 CERTIFICATED TANKERMAN.

MASTER MASTER & 1ST CLASS PILOT 2 ABLE SEAMEN CHIEF ENGINEER FIREMEN-WATERTENDERS
 CHIEFMATE CLASS PILOT 1 ORDINARY SEAMEN 1ST ASST. ENGINEER OILERS
 2ND MATE RADIO OFFICER(S) DECKHANDS 2ND ASST. ENGINEER
 MATES OPERATOR(S) ENG'RS

IN ADDITION, THIS VESSEL MAY CARRY 0 PASSENGERS, 0 OTHER PERSONS IN CREW, 0 PERSONS IN ADDITION TO CREW, AND 47 INDUSTRIAL PERSONNEL. TOTAL PERSONS ALLOWED: 50

ROUTE PERMITTED AND CONDITIONS OF OPERATION:

OCEANS, LIMITED TO THE GULF OF MEXICO.

SPECIAL STEELS HAVE BEEN USED IN THE CONSTRUCTION OF THIS VESSEL. THE CONSTRUCTION PORTFOLIO SHOULD BE CONSULTED PRIOR TO COMMENCING REPAIR.

A PERSON IN CHARGE SHALL BE DESIGNATED.

WHEN VESSEL IS NOT NAVIGATING AND IS IN THE BOTTOM BEARING MODE THE REQUIRED MANNING SHALL BE: FOUR (4) CERTIFICATED LIFEBOATMEN.

CONDUCTED A SPECIAL UNDERWATER SURVEY IN LIEU OF DRYDOCKING AT NEW ORLEANS, LOUISIANA ON 10 NOVEMBER, 1986.

*** SEE NEXT PAGE FOR ADDITIONAL CERTIFICATE INFORMATION ***

WITH THIS INSPECTION HAVING BEEN COMPLETED AT SABINE PASS, TEXAS ON 25SEP86, THIS VESSEL IS CERTIFIED BY THE OFFICER IN CHARGE, MARINE INSPECTION, PORT ARTHUR, TEXAS, TO BE IN ALL RESPECTS IN COMPLIANCE WITH THE APPLICABLE VESSEL INSPECTION LAWS AND THE RULES AND REGULATIONS PRESCRIBED THEREUNDER.

PERIODIC REINSPECTIONS			THIS CERTIFICATE ISSUED BY:
DATE	ZONE	SIGNATURE	
			J. W. KLOTZ, CAPTAIN, USCG OFFICER IN CHARGE, MARINE INSPECTION NEW ORLEANS, LOUISIANA INSPECTION ZONE



Certificate of Inspection

STORY XIV

PAGE 2

CERTIFICATION DATE: 25SEP86

LETTER BOOK --- STABILITY --- APPROVAL DATE / 22JUL81 OFFICE/ PATMS

--- INSPECTION STATUS ---

PRESSURE VESSELS

TYPE	LOCATION	LAST	NEXT
AIR RECEIVER	S/S	25SEP86	25SEP88
AIR RECEIVER	S/S	25SEP86	25SEP88
AIR RECEIVER	S/S	25SEP86	25SEP88
OTHER	BULK	25SEP86	25SEP88
OTHER	"	25SEP86	25SEP88
OTHER	"	25SEP86	25SEP88

--- LIFESAVING EQUIPMENT ---

TOTAL EQUIPMENT FOR	NUMBER PERSONS	REQUIRED
LIFEBOATS (PORT).....	1 50	LIFE PRESERVERS (ADULT).... 62
LIFEBOATS (STBD).....	1 50	LIFE PRESERVERS (CHILD)....
MOTOR LIFEBOATS*.....	2 100	RING BUOYS (TOTAL)..... 1
RESCUE BOATS/PLATFORMS.		WITH LIGHTS*..... 4
LIFEBOATS W/RADIO*.....		WITH LINE ATTACHED*.... 2
INFLATABLE RAFTS.....		OTHER.....
LIFE FLOATS/BUOYANT APP		IMMERSION SUITS.....
(* INCLUDED IN TOTALS)		PORTABLE LIFEBOAT RADIOS.
		EQUIPPED WITH EP1RB*..... NO

--- FIRE FIGHTING EQUIPMENT ---

TOTAL HOSE LENGTH/ 850 NUMBER OF FIRE AXES/ 2 NUMBER OF FIRE PUMPS/ 2

FIXED EXTINGUISHING SYSTEMS

SPACE PROTECTED	AGENT	CAPACITY
PAINT LOCKER	CO2	50
GEN/MUD PUMP ROOMS	HALON	550

FIRE EXTINGUISHERS - HAND PORTABLE AND SEMI-PORTABLE

11 A-II	B-I	11 B-II	B-III
B-IV	2 B-V	4 C-I	2 C-II

--- CERTIFICATE AMENDMENTS ---

1. PORT AMENDING / NEWMI DATE AMENDED / 10NOV84
-AMENDMENT-
SPECIAL EXAM IN LIEU OF DRY DOCK COMPLETED

*** END ***

BEST AVAILABLE COPY

American Bureau of Shipping

45 EISENHOWER DRIVE, PARAMUS, NEW JERSEY 07652

REPORT NO. BT5532

BEAUMONT, TEXAS 7 OCTOBER 1987

M.C.D.U. "J. STORM XIV"

THIS IS TO CERTIFY that the undersigned Surveyor to this Bureau did, at the request of the Owner, Marine Drilling Company, attend the self elevating drilling unit, "J. STORM XIV" of Corpus Christi, Texas, I.D. No. 8010853, as the vessel lay jacked up on location at West Cameron Block 205A, Gulf of Mexico, on 7 October 1987, in order to examine and report on:

Annual Survey of Hull
Annual Load Line Inspection

For further particulars see report as follows:

ANNUAL SURVEY OF HULL

1. The vessel's hull was generally examined as far as could be seen and found or placed in satisfactory condition.

The following parts were particularly examined and found or placed in satisfactory condition as noted:

- a) Hatchways, manholes and scuttles in the deckhouses and freeboard deck following freeing up of dogs and renewal of door gaskets as necessary.
 - b) Deckhouses protecting openings in the freeboard deck.
 - c) Portlights together with deadcovers in way of deckhouses
 - d) Ventilators, air pipes together with flame screens, scuppers and discharges serving spaces below the freeboard deck and deckhouses.
 - e) Watertight bulkheads, bulkhead penetrations, end bulkheads of deckhouses and the operation of doors in same.
 - f) Closing appliances for all of the above: Hatchcovers including plating, stiffening, coamings, dogs, hinges, and seals as applicable; weathertight doors including stiffening, dogs, hinges and sealing arrangements.
2. Means of protection for crew, guard rails, lifelines, and deckhouses accommodating crew, as fitted, were examined and found in satisfactory condition.

Contd. page.....2/

NOTE: This Report signifies that the survey reported herein was carried out in compliance with one or more of the Rules, guides, standards or other criteria of American Bureau of Shipping and is issued solely for the use of the Bureau, its committees, its clients or other authorized entities. This Report is a representation only that the vessel, structure, item of material, equipment, machinery or any other item covered by this Report has been examined for compliance with or has met one or more of the Rules, guides, standards or other criteria of American Bureau of Shipping. The validity, applicability and interpretation of this Report is governed by the Rules and standards of American Bureau of Shipping who shall remain the sole judge thereof. Nothing contained in this Report or in any notation made in contemplation of this Report shall be deemed to relieve any designer, builder, owner, manufacturer, seller, supplier, repairer, operator or other entity of any warranty express or implied.

American Bureau of Shipping

REPORT No. BT5532

PAGE 2

DATE

7 OCTOBER 1987

MODU "J. STORM XIV"

3. No significant changes have been made to the arrangement of structural fire protection. Manual fire doors as fitted were operationally tested and considered satisfactory.
4. A general examination of the vessel's structure in way of the drilling slot, heliport and it's supporting substructure, cantilevered drawworks and skid beam, guide rails and hold downs was conducted, all found to be satisfactory.
5. Sideshell plating above and below the deep loadline of the upper barge hull was examined as far as practicable and considered to be satisfactory.
6. Accessible parts of the vessel particularly liable to rapid deterioration or damage were examined and found in satisfactory condition.
7. The vessel's three (3) cylindrical type supporting legs above the water and in the vicinity of the upper reaches of the platform and above, were examined along with pinholes and leg jacking systems and supporting foundations, all considered to be satisfactory.
8. A general examination was made of all accessible below deck spaces, including auxiliary machinery, pumps and piping systems including industrial piping, electrical systems, fire protection systems and extinguishing apparatus, all found in satisfactory condition.
9. Electrical machinery, lighting fixtures, instrumentation and wiring in hazardous areas was examined and found satisfactory.

ANNUAL LOAD LINE INSPECTION

10. No alterations were found to have been made to the hull or superstructures which would affect the calculations determining the position of the load lines.
11. Stability data was verified on board.
12. The freeboard marks were verified and found in accordance with the certificate. International Load Line Certificate No.8010853-2 was endorsed at West Cameron Block 205A, Gulf of Mexico on 7 October 1987.

For Load Line Inspection refer to Beaumont Report No.BT5531 dated 7 October 1987.

Contd. page.....3/

American Bureau of Shipping

REPORT No. BT5532

PAGE 3

DATE 7 OCTOBER 1987

MODU "U. STORM XIV"

SUMMARY

Annual Survey of Hull considered complete and recommend crediting same.

Annual Load Line Inspection carried out. Refer to Beaumont Report No. BT5531 dated 7 October 1987.

The undersigned recommends that this vessel be retained as classed with this Bureau.



G. R. DUPRESNE - Surveyor

rig: rig
copy: file ✓

Safety
J. Edmondson
ist: E. P. McE. P. S. 2-12-85

American Bureau of Shipping

65 BROADWAY, NEW YORK, N.Y. 10006

Report No. NO79995

New Orleans, LA January 5, 1985

"J STORM XIV"

THIS IS TO CERTIFY THAT the undersigned Surveyor to this Bureau did, at the request of the Owner's Representative, attend the self-elevating drilling unit, "J STORM XIV", Official Number 625,968, ABS Identification Number 8010853 of Corpus Christi, Texas, while the vessel was under tow between job locations at Eugene Island Block 175, Gulf of Mexico on the 5th day of January, 1985 in order to Complete the Underwater Survey of the vessel in Lieu of Dry Docking, to Complete the Special Periodical Survey No. 1 of Hull and to Clear Outstanding Recommendation G37644 dated September 12, 1984-Galveston, Texas. For further particulars, see report as follows:

1) Outstanding Recommendation as stated in Galveston, Texas Report G37644 dated September 12, 1984:

- a) Underwater Examination in Lieu of Dry Docking-Commenced
To Complete this Survey. The lower mat side shell plating, end plating, bottom plating and scour skirt remain to be examined.
- b) Special Survey No. 1 of Hull-Commenced to Complete this Survey.
The Port and Starboard No. 4 fuel oil tanks remain to be hydrostatically tested and proven tight; and, pending satisfactory external examination of the lower mats' side shell and bottom plating. The internal examination and testing of lower mats' void spaces and ballast tanks may be waived.

COMPLETION OF UNDERWATER SURVEY IN LIEU OF DRY DOCKING

2) The lower mat section was raised to 10' clearance to upper hull section. The bottom of the mat, skirt section, side shell plating and end plating, all welding attachments and brackets were visually examined by divers as directed by the undersigned, using an underwater T.V. camera and T.V. monitor and watched on T.V. tape. No damage was noted.

COMPLETION OF SPECIAL PERIODICAL SURVEY NO. 1 OF HULL

- 3) The Port and Starboard No. 4 fuel oil tanks were hydrostatically tested and proven tight and examined internally and considered satisfactory.
- 4) Outstanding Recommendation in Galveston, Texas Office, Report No. G37644, dated September 12, 1984, have been complied with.

NOTE: This Report evidences that the survey reported herein was carried out in compliance with one or more of the Rules, guides, standards or other criteria of American Bureau of Shipping and is issued solely for the use of the Bureau, its committees, its clients or other authorized entities. This Report is a representation only that the vessel, structure, item of material, equipment, machinery or any other item covered by this Report has been examined for compliance with or has met one or more of the Rules, guides, standards or other criteria of American Bureau of Shipping. The validity, applicability and interpretation of this Report is governed by the Rules and standards of American Bureau of Shipping who shall remain the sole judge thereof. Nothing contained in this Report or in any notation made in contemplation of this Report shall be deemed to relieve any designer, builder, manufacturer, seller, supplier, repairer, operator or other entity of any warranty express or implied.

AB 101 Rev. 12/78

BEST AVAILABLE COPY

American Bureau of Shipping

REPORT No. NO79995
Page No. 2

DATE January 5, 1985

"J STORM XIV"

SUMMARY OF SURVEYS COMPLETED

Completed Underwater Survey in Lieu of Dry Docking
Completed Special Survey No. 1 of Hull
Cleared Outstanding Recommendation G37644 dated September 12, 1984

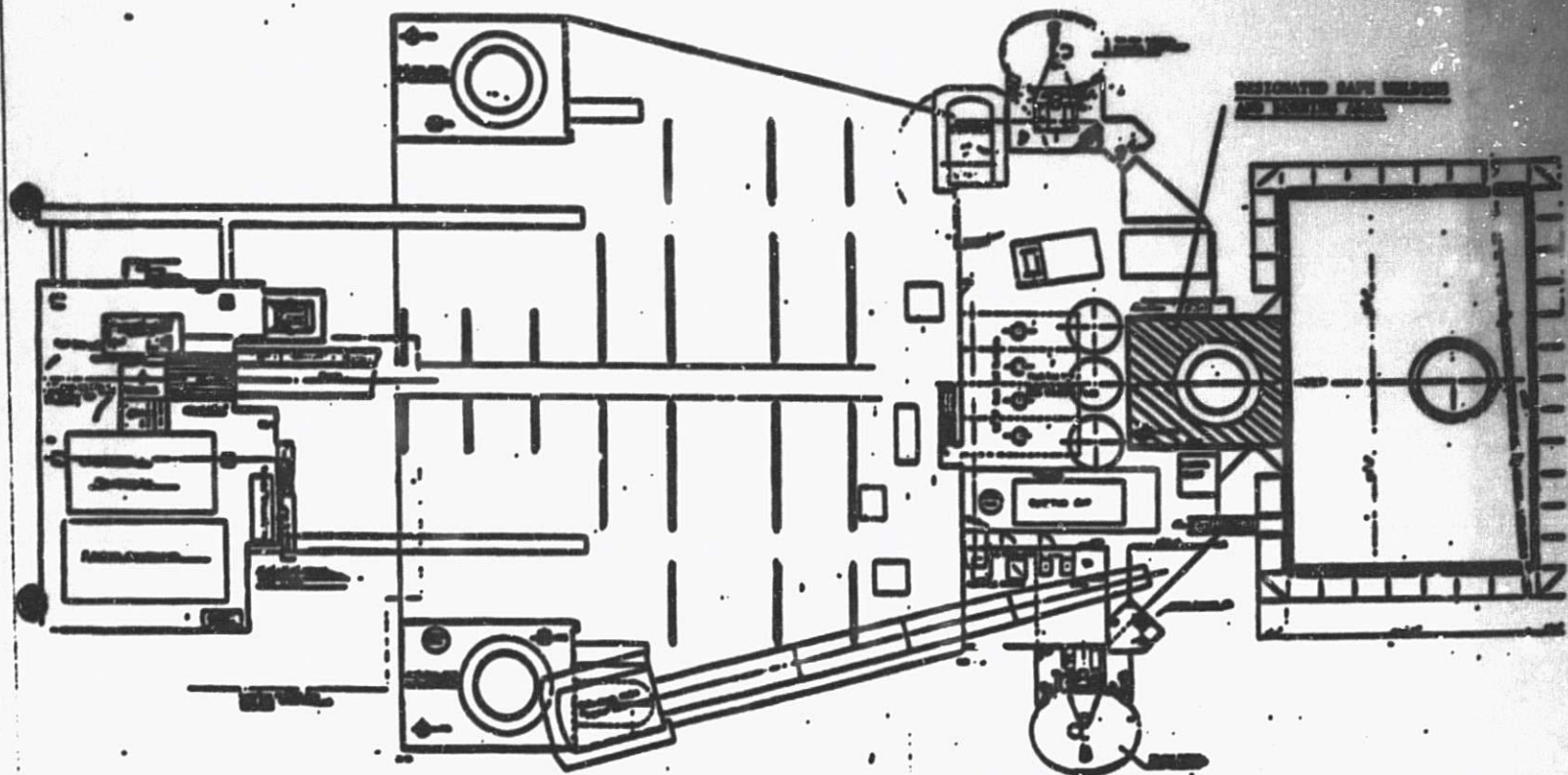
The undersigned recommends that this vessel be retained as classed with this Bureau.



M.V. Lovett

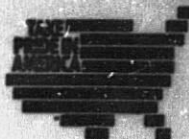
J Stern XIV

BEST AVAILABLE COPY





United States Department of the Interior



MINERALS MANAGEMENT SERVICE
GULF OF MEXICO OCS REGION
HOUMA DISTRICT
325 COUNTRY DRIVE
POST OFFICE BOX 37
BOURG, LOUISIANA 70343-0037

Approval for Lease OCS-G 8719 Well No. 1, South Timbalier

Block 48 is subject to the Conditions Of Approval To Drill For Oil Or Gas revised May 31, 1988, (copy attached) and the following requirements as indicated:

- Notify the Houma District Office, phone (504) 868-4033, prior to moving on location.
- After drilling a maximum of 49' below the surface and intermediate casing, a pressure test shall be obtained to aid in determining a formation fracture gradient either by testing to formation leakoff or by testing to a predetermined equivalent mud weight. The proposed setting depth for intermediate casing shall be based on the surface casing pressure test or on subsequent pressure tests. Intermediate casing shall be set when required by anticipated abnormal pressure, mud weight, sediment, and other well conditions.
- Notify the District Supervisor to obtain verbal approval prior to using oil or other pollutant type materials for freeing stuck drill pipe and/or drilling. The materials used shall be properly contained to prevent pollution.

Additional comments:

This well should be drilled in accordance with the provisions of Subpart D and subsequent revisions. The approval of the caisson-size well protector pipe included in this application allows its installation for that purpose only. This approval does not commit the MMS to approve a later application under Subpart I, for use of the protector casing as an integral part of a caisson-type single well platform. Compliance with NTL 83-3 is required. SPECIAL ATTENTION SHOULD BE DIRECTED TO CONDITIONS 9 & 10 OF THE CONDITIONS OF APPROVAL TO DRILL FOR OIL OR GAS.

*Wells completed for production shall be protected by an approved caisson-type well platform prior to moving the rig from the well site.

John D. Borne
District Supervisor
Houma District

BEST AVAILABLE COPY

To: District Supervisor, _____ Hours _____ District _____ Date 7-27-88

From: Staff Geophysicist, _____ Hours _____ District _____

Subject: Geophysical Review Purpose: PCE POD Appl. to Drill DOCD
 Plat. Appl. Field Rules Other _____

CGS-G 8719 Area South Tomb Blk. 4E Operator Corpus Christi Depth 11,000
 Well/Blast. [S. Loc. 1100' F.E.L. 4900' F.N.L. ^{Vert.} EH Loc. 3345' F.N.L. 800' F.E.L.

High Resolution: Data Reviewed Echo Sounder Subbottom Profiler Minisparker
 Magnetometer Side-Scan Sonar Fathometer
 CDP USGS Prospect Reports Other _____

Data Source and References Corpus Christi, mms 12E data

Surface Location is: _____
 Proximity 300' E Line No. 106 Shot Pt. No. 1055 Line Spacing 2500' x 500' mms
 Interpretation (Bathymetry, Shallow Gas, Shallow Faulting): see report

Data is poor because of erosion and redeposition. The section is mostly with no apparent gas near bottom faulting at surface. No data indicates presence of channel fill stranding at gas mtd. No present.

Deep Seismic: Data Source and References Well ST 48-1, m, TUL

Bottom Hole Location is: _____
 Proximity 400' W Line No. 10-1944 Shot Pt. No. 49 Line Spacing 4 x 1/2 mi
 Interpretation (Base of Sand Section or Top of Dolomitic Material, Faulting, Bright Spots, Abnormal Pressure Zones):

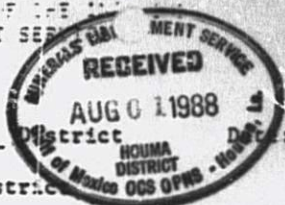
The proposed well will encounter amplitude anomalies near 2345, 4510, 5210, 6255, 9325 and 10745, which may indicate possible hydrocarbon zones. Faulting may be encountered near 6060. No channel fill stranding present before TUL.

Recommendation: Approve
Corpus Christi's shallow
survey report is
based on high
resolution data

Signed [Signature]

BEST AVAILABLE COPY

UNITED STATES DEPARTMENT OF THE INTERIOR
MINERALS MANAGEMENT SERVICE



To: District Supervisor, Houma
From: Staff Geologist, 1600 Orleans District
Subject: Geological Review Purpose: POE DOCD Appl. to Drill Restr. Lease
 Plat. Appl. Field Rules Other _____

OCS-G 8719 Area SO. TIMBACIER Blk. 48 Operator Corpus Christi
Well/Plat. No. 1 Depth 11,000' Water Depth 60' Rig J. Stern XVI
S. Loc. 4900' F.N., 1100' F.E.L BH Loc. 3345' F.N. L. 800' F.E.L Elev. 78'

Anticipated Depths and Thickness of:

1. Potential Oil and/or Gas Bearing Horizons and Shallow Hazards
None known - EXPLORATORY
2. Fresh Water Sands None
3. Domal Material (Cap Rock, False Cap Rock, Salt, Shale) None
4. Possible Lost Circulation Zones None known
5. Possible Abnormal Pressure Zones Below TD
6. Horizons which may need Special Mud, Casing or Cementing Program
None

Distance from nearest well or platform:

about 2 miles

Relationship of surface location to geological structures:

on anticline nose with faulting

Remarks:

Additional Data Needed:

None

Date Reviewed:

Application review

Recommendation:

Approval

Signed

Keith J. Ryan

BEST AVAILABLE COPY

Operator Corpus Christi Date 7/3/83

Lease RCS-G 8719 Area ST Well #1

I. Check Files for:

A. Lessee OK E. Continuation of Operator OK C. Platform Approval N/A

II. Check APD for:

A. Zone Prot Statement

OK	NO	N/A
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

B. Casing Program

OK	NO	N/A
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

C. Cement

OK	NO	N/A
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

1. $V_c = 7854(12) + 471(12) = 97$
 2. $V_s = 5464(2312) + 6336(24) = 14114$

D. Casing Seat Test

OK	NO	N/A
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Test MW
 1. Surface 11.0 vs 10.5
 2. Inter. _____ vs _____
 3. Other _____ vs _____

E. Mud Program

OK	NO	N/A
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

1. List
 a. No H-phenols
 b. No oil base nitrite
 2. Volumes
 3. Disposal

F. Diverter System

OK	NO	N/A
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

1. Schematic P&E View
 2. Spool Outlet ID
 3. Lengths & Diameters
 4. Burst Strength
 5. Radius of Curvature
 6. WP of Valve
 7. Operating Procedure
 8. Hydril vs casing
20" vs 16"

G. BOPs

OK	NO	N/A
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

1. 5000 A vs 10000 R
 2. ASP
 3. BOP vs Casing Size
 4. Schematic Set up
 5. Test Pressures
 6. Activation

H. Rig J. Storm 16

OK	NO	N/A
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

1. Specs
 2. Drawing
 3. Rating

I. Other

OK	NO	N/A
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

1. Logging prog.
 2. Coring prog.
 3. Directional Survey
 4. Location Plat
 5. Floater Evac. Plan
 6. Plot

III. Review

A. Geological Recommendation OK
 B. Geophysical Recommendation OK
 C. Shallow Hazards 2340' sub sea
 D. Date POD Approved 8/15/83

IV. Remarks 200 x gel, Assumptions for SE, shoe test, Mud list, Mud disposal
tm, Div - P&E view, spool outlet ID, Lengths, Burst strength, Rad of Curv.
operating procedure, BOP - Schematic, Test pressures, Activation,
Directional survey, Plot, Casing test, casing test, Plot

Reviewed by: M. Lawrie

BEST AVAILABLE COPY

10 3/4" surf @ 3000' TVD

Lease 8/19 Well # 1 Date 7/20/88
Area ST Block 48

Calculate Effective Fracture Gradient at Casing Shoe in Water Depths Greater Than 50 Feet

DATA:

KB to Water = 78 feet
Water Depth = 60 feet
Csg Setting Depth (TVD) BML = 2862 feet

Calculations:

1. Convert water depth to equivalent section of formation
WD X Gradient of SW = Hydrostatic Pressure

$$\frac{\text{psi}}{\text{ft}} \\ \underline{60} \text{ feet} \times .465 \text{ ft} = \underline{28} \text{ psi}$$

From the overburden stress chart find the gradient at the casing shoe

Casing Shoe = 2922 feet (TD from MLW)
Overburden Stress Gradient = 0.881 psi/ft

Then Hydrostatic Pressure = Equivalent Depth
Overburden Stress Gradient

$$\frac{\text{psi}}{\text{psi/ft}} \\ \frac{\underline{28}}{\underline{0.881}} \text{ psi/ft} = \underline{32} \text{ feet}$$

2. Now calculate and convert apparent fracture gradient to actual fracture gradient

$$\text{Equivalent Depth} + \text{Csg Setting Depth (BML)} = \text{Total Equivalent Depth} \\ \underline{32} \text{ feet} + \underline{2862} \text{ feet} = \underline{2894} \text{ feet}$$

Fracture gradient at Total Equivalent Depth from Eaton's Chart ^{FP=9.8}
(From Chart) = 13.38 + .3 ppg frac. gradient (add 0.3 ppg to chart)

Fracture Pressure at Equivalent Depth =
Fracture Gradient X .052 X Equivalent Depth

$$\frac{\text{psi/ft}}{\text{ppg}} \\ \underline{13.68} \text{ ppg} \times .052 \text{ ppg} \times \underline{2894} \text{ ft} = \underline{2058} \text{ psi}$$

3. Therefore, the effective fracture gradient from the Mud Flowline at the Drill Deck to the Casing Seat =

ppg
Fracture Pressure X 19.23 psi/ft
Total Depth from KB to Casing Shoe

$$\frac{\text{psi}}{\text{ppg}} \\ \frac{\underline{2058} \text{ psi} \times 19.23}{\underline{3000} \text{ feet}} = \underline{13.2} \text{ ppg}$$

4. Equation to evaluate load on the formations exposed below surface casing
Depth of Kick

EMW_D = Mud Wt. when Kick is Taken + Depth of Surface Casing (Kick Size)

Where EMW_D = Equivalent Mud Weight at Depth
Kick Size = Assume 0.5 ppg

$$\text{then EMW}_D = \underline{10.5} \text{ ppg} + \frac{\underline{11000} \text{ ft.}}{\underline{3000} \text{ ft.}} (0.5) \text{ ppg} = \underline{12.3} \text{ ppg}$$

BEST AVAILABLE COPY

Lease _____ Well _____ Date _____
Area _____ Block _____

Anticipated Surface Pressure (A.S.P.)

Data:

Frac. Grad. @ 3000 ft. = 13.7 ppg
Form. Pore Press. Grad. @ 11000 ft. = 10.0 ppg
Mud Wt. @ 11000 ft. = 10.5 ppg
Gas Grad. 0' to 10,000' = 0.1 psi/ft
Gas Grad. 10,000' or below = 0.15 psi/ft

Frac. Press. @ Depth = Depth (ft) X Frac. Grad (ppg) X 0.52 ^{psi/ft} ppg
Frac. Press. = 3000 ft X 13.7 ppg X 0.052 ^{psi/ft} ppg

Frac. Press. = 2137 psi

Frac. Grad. A.S.P. = Frac. Press - [Frac. Depth (ft) X Gas Grad. (psi/ft)]

Frac. Grad. A.S.P. = 2137 psi - [3000 ft. X 0.1 ^{psi} ft]

Frac. Grad. A.S.P. = 1837 psi

BHP A.S.P. assumes that you have .70 of the hole filled with gas and .30 filled with mud.

Press. of Gas Column = 0.70 Depth (ft) X Gas Grad. (psi/ft),
Press. of Gas Column = 0.70 11000 ft X 0.1 psi/ft
Press. of Gas Column = 770 psi

Press. of Mud Column = 0.30 Depth (ft) X Mud Wt. (ppg) X 0.052 ^{psi/ft} ppg
Press. of Mud Column = 0.30 11000 ft X 10.5 ppg X 0.052
Press. of Mud Column = 1802 psi

B H P = Depth (ft) X Form. Pore Press. (ppg) X 0.052 ^{psi/ft} ppg

B H P = 11000 ft X 10.0 ppg X 0.052 ^{psi/ft} ppg

B H P = 5720 psi

Bi. A.S.P. = BHP - Press. of Mud Column - Press. of Gas Column

BHP A.S.P. = 5720 psi - 1802 psi - 770 psi

BHP A.S.P. = 3148 psi

A.S.P. = Lesser of Frac. Grad. A.S.P. or BHP A.S.P.

A.S.P. = 1837 psi or 3148 psi

A.S.P. = 1837 psi

Casing Size	Grade	Weight	Burst
<u>10³/₄</u>	<u>1.55</u>	<u>40.5</u>	<u>3130</u>

$7(3130) - (4 - 40)(0.52)(3000) = 2191$

$7160(0.7) - (1.5)(0.52)(11000) = 4154$

BEST AVAILABLE COPY

Area Code 512
888-0301

CORPUS CHRISTI OIL AND GAS COMPANY

THE 600 BUILDING
P.O. BOX 2928
CORPUS CHRISTI, TEXAS 78403

well file

January 6, 1989

Minerals Management Service
1201 Elmwood Park Blvd.
New Orleans, LA 70123

RECEIVED

Attn: Jack Hendricks

MINERAL MANAGEMENT SERVICE
NEW ORLEANS DISTRICT
Gulf of Mexico * OCS Reg * NO LA

RE: **OCS-G-8719**
Block 48 Well No. 1
South Timbalier Area

(Final Site Map)
Enclosed please find the As-Built Location Plat for the above mentioned well. If further information is needed, please advise.

Yours very truly,

George E. Taylor
George E. Taylor
Vice President, Operations

JCH/kr
enclosures

MINERAL MANAGEMENT SERVICE

BEST AVAILABLE COPY

90 055 88

4830'

1134'

SOUTH TIMBALIER 48

WELL # 1
X 2 318 719 7
Y 85 225 6
LAT 028°53'49.90"
LONG 090°20'14.785"

12" TENNESSEE GAS PIPELINE (GAS)

X 2 305 036.10

X 2 319 854.14

75 297 84



I hereby certify that this plot is true and correct.

ROBERT D ELLIS RPS
TX NO 4006

DATUM	CORPUS CHRISTI OIL & GAS	
SPHEROID CLARKE 1866	SOUTH TIMBALIER AREA	
PROJECTION LAMBERT	BLOCK 48	
ZONE LOUISIANA (SOUTH)	LOUISIANA OFFSHORE	
JOB No	SCALE	DATE
N 264	1 to 24000	01/03/89

BEST AVAILABLE COPY