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# Incidents Associated with Oil and Gas Operations

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Outer Continental Shelf 2000



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## Outer Continental Shelf 2000

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*This report can also be viewed or printed from MMS's homepage at  
<http://www.mms.gov/stats/ocsincidents>*



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# Foreword

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The following is a compilation of events that occurred on the Outer Continental Shelf (OCS) that were reported to the Minerals Management Service (MMS) during calendar year 2000. Some OCS events are reported to the U.S. Coast Guard, depending on jurisdiction area. We categorized each event by region (i.e., Gulf of Mexico or Pacific) and by type of incident (i.e., collision, explosion, fatality, fire, injury, loss of well control, pipeline event, pollution, or other, including crane-related and welding-related incidents). The Alaska Region is not included because they had no OCS events to report during 2000. An appendix of charts and graphs provide a statistical summary at the end of this document.

As of 1995, all OCS events reported to MMS are input into our Technical Information Management System (TIMS) database. This database automates all business and regulatory functions of MMS's Offshore Program and was created by MMS for both internal and public use. With the increase in operations in the Gulf of Mexico, both MMS and industry are placing greater emphasis on operator performance and safety. Because incident data analysis is an important component in measuring performance, both MMS and industry are paying more attention to the quality of the information reported. In this regard, MMS has made every effort to ensure that data taken from TIMS and recorded in this document are as accurate as possible. However, as with any live database, the data in this document are subject to revision as new information is obtained from investigations or as other clarifications arise.

MMS welcomes any general suggestions or specific corrections regarding the data reported in this document. Please contact

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# Executive Summary

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The OCS events summarized in this report are based solely on those that were reported to MMS and input into the TIMS database during calendar year 2000. For statistical purposes, we make a distinction between the terms *events* and *incidents*. We use *event* when referring to a reported happening. A happening sometimes involves more than one incident (i.e., a fire can involve several incidents, for example, an injury, a fatality, or an explosion, or more). We use *incident* when referring to category of accident that occurred during an event. A total of 298 events were reported to MMS during 2000 (256 in the Gulf of Mexico Region and 42 in the Pacific Region). However, not all of the 298 events are summarized in this document; we excluded two events because one was not work-related and the other one came under USCG jurisdiction. Also, we excluded 71 pollution events because they involved spills of less than 50 barrels.

Analysis of the 225 incidents summarized in this document shows that 39 (38 in the Gulf of Mexico Region and 1 in the Pacific Region) occurred in water depths greater than 1,000 feet, ranging from 1,030 feet to 6,327 feet. The average depth for the deepwater incidents was 2,511 feet, as opposed to an overall average of 526 feet for the 207 event base number. The 39 deepwater events included 2 fatalities, 19 fires, 17 injuries, 6 pollution leaks (each more than 50 barrels), 2 near misses, 2 riser disconnects, and 1 loss of well control. Most of the incidents (about 76%) occurred during the development phase of OCS activity while about 24% occurred during exploration activities. About 46 percent of the incidents happened while performing production operations. Drilling operations accounted for 57 incidents. Other incidents were attributed to operations related to well workover, well completion, plug and abandonment, fuel transfer, blowout preventer testing, motor vessels, moving on location, construction, or diving repair work.

The two major causes of the incidents during 2000 were equipment failure and human error. Equipment failure caused 109 of the incidents and human error caused 108. Five incidents were attributed to slip/trip/fall. Some incidents resulted from more than one cause. Various other causes included weather, leaks, construction mishaps, crane operations, unstable ocean floor conditions, metal fatigue, improper design, and lack of equipment maintenance.

Five fatalities occurred during 2000: two resulted indirectly from equipment failure, one resulted from being struck by a fan that came unattached from its support due to metal fatigue, two resulted from falls because of faulty equipment (a handrail failed and an air hoist latch failed). One of the incidents was also attributed to human error. Three of the fatalities occurred during drilling operations, one occurred during production operations, and one occurred during diving operations.

Fires accounted for most of the events reported during 2000, with a total of 103 for the year, followed by 64 injuries, 9 collisions, 9 losses of well control, 7 pipeline events, 5 fatalities, 6 pollution spills of over 50 barrels, 2 explosions, and 34 categorized as “*Other*.” *Other* included riser disconnects, crane-related mishaps, H<sub>2</sub>S leaks, and equipment overboard. Some events were placed into two different categories (i.e., fire/injury, injury/other—crane-related, etc.). In this case, the incident description appears in each pertinent category with a cross-reference (e.g., *Fire No. 53 also listed as Injury No. 41*).

There were 103 fires reported during 2000. Equipment failure attributed to 59 percent of the fires. Twenty-three fires were welding-related, of which 16 were caused by human error. Five were caused by equipment failure. Two were attributed to leaks. Most of the welding-related fires occurred during development activities and production operations.

A total of 64 injuries resulted from 54 of the incidents during 2000. Human error was the major cause

accounting for 40 of the injuries, followed by equipment failure, which caused 14 injuries. Most of the injuries occurred during development activities while performing drilling or production operations.

Nine losses of well control occurred during 2000 (8 in the Gulf of Mexico Region and 1 in the Pacific Region). Investigations attributed the main cause of five of these incidents to cementing problems. One of the nine losses resulted from equipment failure. Human error attributed to three of the losses of well control. Investigations are still pending for two of the events. Four of these events occurred during the exploration phase; five occurred during the development phase.

Nine collisions were reported during 2000. Five were caused by human error. In two of the collisions, the cause was unknown. One was attributed to equipment failure and one was attributed to an unstable ocean floor.

Only two explosions occurred during 2000 as compared to five in 1999. Both occurred in the development phase: one during production operations and one during completion operations. One explosion was attributed to human error; the other was attributed to equipment failure (i.e., a breaker panel blew up).

Seventeen of the incidents included in this report were crane-related. Equipment failure attributed to 12 of the crane incidents, while human error accounted for 9. Eleven of the crane-related incidents occurred during the development phase of OCS activity.

# Abbreviations and Acronyms

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<b>A</b>		<b>N</b>	
AC	-Alternating Current	NE	-Northeast
AFFF	-Aqueous film-forming foam	NRC	-National Response Center
<b>B</b>		<b>O</b>	
Bbl	-Barrel(s)	OCS	-Outer Continental Shelf
Bbbl	-Billion barrels	OCSLA	-Outer Continental Shelf Lands Act
Bcf	-Billion cubic feet	<b>P</b>	
BDV	-Blow Down Valve	PAC	-Pacific OCS Region
BOP	-Blowout Preventer	POV	-Pressure Operated Valves
BOPD	-Barrels of Oil Per Day	PPE	-Personnel Protection Equipment
BOPE	-Barrels of Oil Per Day Equivalent	ppg	-Parts per gallon
BS&W	-Basic Sediment & Water	PSE	-Pressure Safety Element
BWPD	-Barrels of Water Per Day	PSH	-Pressure Safety High
<b>C</b>		psi	-Pounds per square inch
CFR	-Code of Federal Regulations	psig	-Pounds per square inch, gauge
CT	-Coil Tubing	PSL	-Pressure Safety Low
CTM	-Coil Tubing Measurement	PSV	-Pressure Safety Valve
CO <sub>2</sub>	-Carbon Dioxide	<b>R</b>	
<b>D</b>		ROV	-Remotely Operated Vehicle
DC	-Direct Current	RTU	-Remote Terminal Unit
DCP	-Driller's Control Panel	<b>S</b>	
DOT	-Department of Transportation	SAFE	-Safety Award for Excellence
<b>E</b>		SBM	-synthetic base mud
ESD	-Emergency Shut Down	SCADA	-Supervisory Control and Data Acquisition
<b>F</b>		SCR	-Spot check report
Ft	-Foot (feet)	SCSSV	-Surface Controlled Subsurface Safety Valve
FTP	-Flowing Tubing Pressure	SDV	-Shutdown Valve
<b>G</b>		SITP	-Shut-in Tubing Pressure
G/L	-Gas/Liquid	SO <sub>2</sub>	-sulfur dioxide
Gal	-Gallon	SS	-Stainless Steel
GOM	-Gulf of Mexico OCS Region	SSSV	-Subsurface Safety Valve
<b>H</b>		SSV	-Surface Safety Valve
H <sub>2</sub> S	-Hydrogen Sulfide	SW	-Southwest
HI	-High Island	<b>T</b>	
<b>I</b>		TD	-Total Depth
In	-Inch	TIMS	-Technical Information Management System
IWOCS	-Installation and workover control system	TLP	-Tension Leg Platform
<b>L</b>		TSE	-Temperature Safety Element (fusible material)
LEL	-Lower Exposure Limit	TSH	-Temperature Safety High
LMRP	-Lower Marine Riser Package	<b>U</b>	
LSH	-Level Safety High	USCG	-U.S. Coast Guard
LSL	-Level Safety Low	<b>V</b>	
<b>M</b>		VRS	-Vapor Recovery System
MCC	-Master Control Center	VRU	-Vapor Recovery Unit
MCFD	-thousand Cubic Feet per Day	<b>W</b>	
MD	-Measured Depth	WHRU	-Waste Heat Recovery Unit
MM	-Million		
MMbbl	-Million barrels		
MMS	-Minerals Management Service		
MOPU	-Mobile Producing Unit		
MOU	-Memorandum of Understanding		
MSDS	-Materials Safety Data Sheet		
MUX	-Make Up Crossover (X)		
MWD	-Measurement while drilling		
M/V	-Mobile Vessel		



# Introduction

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## Authority

The Outer Continental Shelf Lands Act (OCSLA) requires either MMS or the U.S. Coast Guard (USCG) to prepare within 30 days a public report for all deaths, serious injuries, major fires, and major oil spills (>200 barrels) resulting from OCS mineral operations. To carry out the requirements in OCSLA, the MMS and the USCG have signed a Memorandum of Understanding (MOU) that provides guidelines for identifying the agency that will normally conduct an accident investigation and prepare the report. Joint investigations can also be conducted.

## Importance and Relation to Other Aspects of Safety Program

A primary mission of the MMS is to manage OCS resources in a safe and environmentally sound manner. Safety of operations has always been a key element of the Federal Government's offshore program. Many factors have contributed to improved safety and environmental protection over the years, including the development of operating regulations, increased regulatory oversight, improved industry safety programs, and improved technology.

Accurate incident reporting, record-keeping, and analysis of incident information is an integral component of a properly functioning regulatory program and a safe OCS oil and gas industry. Incident data can be used to identify operational trends and fluctuations from the norm. Evaluation of this information can then be used as a benchmark to evaluate the performance of the industry. Based on this evaluation, areas of concern can be identified and addressed through a variety of measures including regulatory changes, development of technical standards, and the implementation of new inspection practices or new research initiatives.

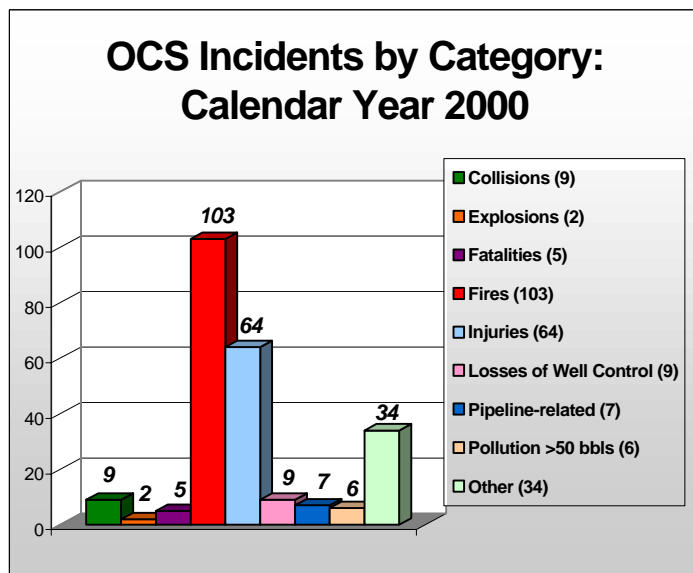
## Accident Reporting Requirements and Policies

The MMS regulations at 30 CFR 250.191 specify industry accident reporting requirements. They require OCS lessees to notify MMS of all serious accidents, any death or serious injury, and all fires, explosions, or losses of well control connected with any activities or operations on the lease. All spills of oil or other liquid pollutants must also be reported to MMS. These regulations also address the preparation of public accident reports and procedures used in conducting accident investigations. The MMS and the USCG are developing a joint accident reporting structure. This Subpart A revision will include a web-based initiative to allow joint reporting of MMS/USCG incidents in one location on the web.

In 1992, MMS instituted a basic policy for collecting accident data and conducting accident investigations. Under that policy, MMS must investigate all major accidents, some minor accidents, and all losses of well control. The degree of investigation is left to the discretion of the District Supervisor. Major accidents are fires and explosions that result in damage of \$1 million or more, liquid hydrocarbon spills of 200 barrels or more during a period of 30 days, or accidents that involve a fatality or serious injury that substantially impairs any bodily unit or function. The MMS completes an Accident Investigation Report (Form 2010) for all accidents investigated and enters the information into TIMS.

## General OCS Incident Trends in 2000

A total of 298 incident reports were received in MMS's district offices during calendar year 2000: 256 in the GOM Region and 42 in the PAC Region. This 298 total included 77 pollution event reports of which 71 were not included in this document (i.e., those with spills less than 50 barrels) and 2 other incidents, which were excluded because one came under USCG jurisdiction and the other was not work-related. This left a base number of 225 events reports, which are described in this document. Some events involved multiple incidents (e.g., a fire with multiple injuries) and thereby appear in several categories. Graphs in the appendix to this report (see pp. 92-104) show the type of activity, operation, and causes for each category of incidents.



In contrast to 1999, there were 28 more fires, 17 more injuries, and 4 more losses of well control reported during 2000. However, there were 3 fewer explosions and 1 fewer collision. Fatalities remained the same.

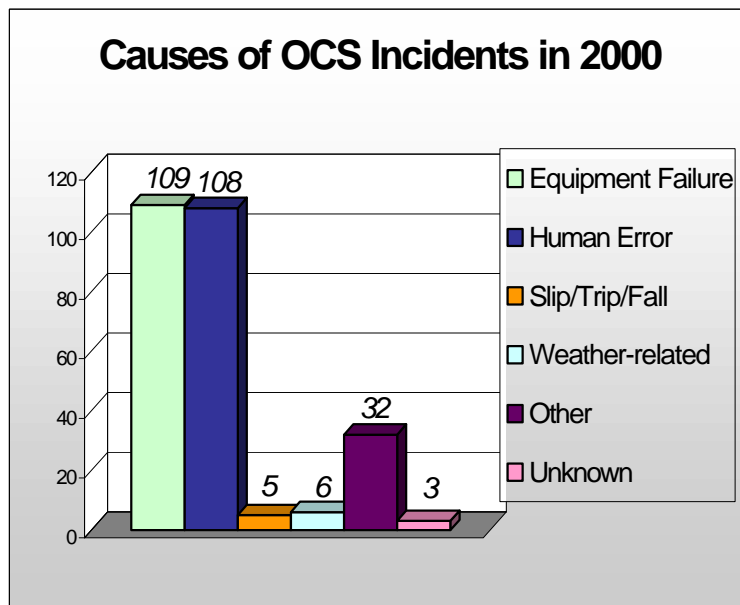
More fires occurred on the OCS during calendar year 2000 than any other category of incident. More than 70 percent of these fires occurred during production operations. Some of the fires had more than one cause (see graph on page 93). Of the 103 fires reported (101 in the GOM Region and 2 in the Pacific Region), 60 (about 53%) were caused by equipment failure. Forty-two of the fires (about 37%) attributed the cause to human error. (Seven of the fires were caused by a combination of equipment failure and human error.) Ninety-six of these fires were categorized as *incidental* in that they were extinguished in a relatively short time with dry chemical extinguishers and resulted in only minor injuries and equipment damage less than \$25,000. One fire was classified as *major* in that property damage was more than \$1 million. Five fires were classified as *minor*, meaning they had property damage amounting to more than \$25,000 but less than \$1 million.

Injuries were second to fires as the most common OCS incident reported during 2000. A total of 64 injuries resulted from 54 separate events. Forty-eight percent of these injuries occurred during drilling operations; 28 percent occurred during production operations. The remaining 24 percent occurred during other operations, which included well workovers, completions, plug and abandonment, BOP testing, fuel transfer, construction, and motor vessel related. About 62 percent of the injuries involved human error and about 22 percent involved equipment failure. Six percent of the injuries were caused by weather-related conditions. Only 5 percent of the injuries were slip/trip/fall related--a contrast from the 28 percent that occurred in 1999. The remaining 10% resulted from other causes, which included weather, completion fluid reaction, lack of equipment maintenance, and improper vent line design.

## v Causes of OCS Incidents in 2000

Equipment failure and human error were the main causes of OCS incidents in 2000, accounting for 42 percent and 41 percent, respectively (see appendix charts, p. 92-94). Only 5 incidents were attributed to slip/trip/fall; however, two of these resulted in fatality. Another 34 incidents were attributed to a variety of causes under the “other” category. Some incidents had multiple causes. The following shows the cause breakdown for each event type:

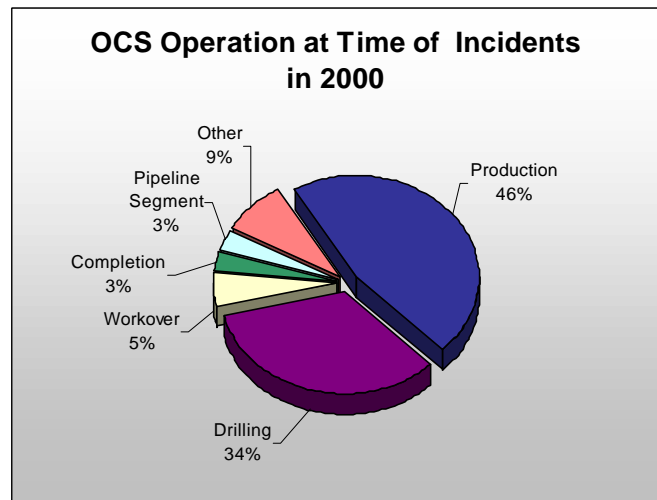
- **Collisions**—Human error caused 5 of the 9 collisions. In two of the collisions, the cause was unknown. One collision was attributed to an unstable ocean floor and one resulted when the motor vessel’s engine stalled.



- **Explosions**—Human error caused one of the 2 explosions. Equipment failure caused the other explosion.
- **Fatalities**—Two of the fatalities were the result of falling (one employee fell while being air hoisted and the other fell when a handrail failed). Sea conditions caused one employee to be crushed between an iron roughneck and a pipe-handling machine riser cart. In two of the cases, equipment failure was the cause.
- **Fires**—Equipment failure caused 60 of the 103 fires and 42 involved human error. (Seven of the 103 fires involved a combination of both equipment failure and human error.) Nine fires resulted from other causes, which included weather, leaks, shallow gas accumulation, completion fluids reaction, spontaneous combustion, and a natural gas seep.
- **Injuries**—Human error caused 39 of the 64 injuries, while equipment failure accounted for 14 injuries. Three injuries were attributed to slip/trip/fall. Seven of the injuries were attributed to other causes, including weather, reaction of completion fluids, improper design of vent line, and lack of equipment maintenance.
- **Loss of Well Control**—The main cause for losses of well control in 2000 was attributed to poor cement jobs. Only two were associated with equipment failure.
- **Pipelines**—Of the 7 pipeline events, 4 were attributed to equipment failure, 2 to human error, and 1 to a pipeline riser leak. External damage was an additional contributing cause in one of the pipeline events.
- **Pollution**—Of the 6 pollution events, 4 were attributed to human error (one of which was attributed to management system failure and one to external damage) and 2 were caused by equipment failure.
- **Other**—Among the causes for the 34 incidents in the “other” category were 23 equipment failures, 12 human errors, and 2 were weather-related.

## v Operations at Time of OCS Incidents in 2000

Although 46 percent of the events occurred during production operations in 2000, this was down from the 63 percent in 1999. On the other hand, the number of events that occurred during drilling operations increased in 2000 compared to the number in 1999 (i.e., 34% vs. 18%). The remaining percentage accounts for a variety of operations, including 1 plug and abandonment, 2 well workovers, 7 well completions, 1 cementing, 1 moving on location, 3 motor vessel, 8 pipeline, and 8 listed as “other.” The following list shows the operations breakdown for each event category (see charts on page 95-97):

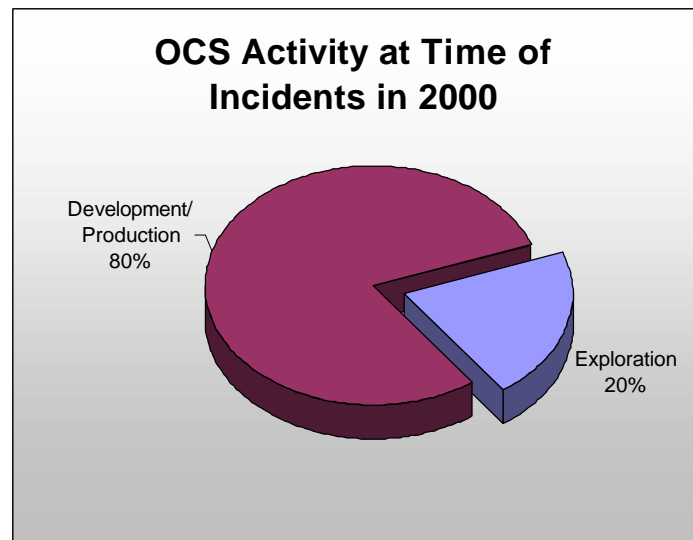


- Five of the 9 collisions occurred during production operations. Three were involved with a motor vessel operation and one occurred during a workover operation.
- One of the two explosions occurred during production operations and the other occurred during completion operations.
- Three of the five fatalities (60%) occurred during drilling operations.
- Seventy-three of the fires (71%) occurred during production operations; 24 fires (23%) occurred during drilling operations.
- Sixteen of the injuries (28%) occurred during production operations; 28 (48%) occurred during drilling operations. Five of the incidents (9%) occurred during workover operations. Among the operations of the remaining incidents were 2 completions, 1 plug and abandonment, 2 motor vessel related, a fuel transfer, and BOP testing.
- All but one of the losses of well control occurred during drilling operations; one occurred during a workover.
- Five of the seven pipeline incidents occurred during pipeline operations.
- Five of the six pollution events greater than 50 barrels occurred during drilling operations, and the other occurred during pipeline operations.
- Fourteen (40%) of the 35 events in the “other” category occurred during drilling operations; thirteen (37%) occurred during production operations, and six (17%) during pipeline operations. The remaining 6 percent occurred during operations that included two well workovers, one well completion, and one coil tubing, one cementing, one while installing a platform, one running wire-line logging tools, and one docking operation.

## v Activity at Time of OCS Incidents in 2000

The majority of incidents occurred during development activities (see appendix for charts, p. 98-100). Of the 225 events recorded in this document, 80 percent (179 events) occurred during development activities and 20 percent (46 events) occurred during exploration activities. In 1999, 120 incidents (83%) happened during development activities and 25 (17%) happened during exploration activities. The following shows the breakdown of those incidents that occurred during development activities:

- All nine collisions occurred during development activities.
- Both explosions occurred during development activities.
- Three of the five fatalities occurred during development activities.
- Eighty-five of the fires (83%) occurred during development activities.
- Forty-two of the injuries (66%) occurred during development activities.
- Five of the losses of well control (56%) occurred during development activities.
- All seven of the pipeline incidents occurred during development activities.
- Five of the six pollution incidents greater than 50 barrels (83%) occurred during development activities.
- Twenty-one of the 34 events (60%) in the “other” category occurred during development activities. Eight of these were crane-related.



## v Welding-Related Incidents on the OCS in 2000

Twenty-one welding-related incidents resulted in fires during 2000. Fifteen of these incidents occurred during development activities and six occurred during exploration activities. Seven involved drilling operations, 11 involved production operations, and 3 involved construction operations. Human error was the cause of 15 of the welding-related fires, 5 were due to equipment failure, 3 were due to the leaking and subsequent ignition of gas. [Two of the fires resulted from the combination of human error and equipment failure.] Nine of the welding-related fires resulted when slag fell onto tarps or decks.

## v Crane-Related Incidents on the OCS in 2000

Seventeen crane-related incidents occurred during 2000 as compared to six in 1999. Ten of these crane incidents occurred during development/production activities and six occurred during exploration activities. Six incidents were associated with drilling operations, eight with production operations. The involved one completion, one plug and abandonment, and one installing an auxillary platform. Causes for these incidents were listed as equipment failure, human error, or both. Of the 17 crane incidents, equipment failure occurred in 9 (52%) of the incidents, human error was responsible for 4 (24%), and 4

were attributed to both human error and equipment failure. Nine of the incidents resulted in an injury. Investigation findings for seven of these incidents showed that

- in three of the incidents, the operators demonstrated a lack of training;
- in three of the incidents, the crane capacity was exceeded and not considered prior to the mishaps;
- in two of the incidents, API recommended practices were violated; and
- in two of the incidents, the cables had not been inspected for corrosion or mechanical damage prior to performing lift operations.

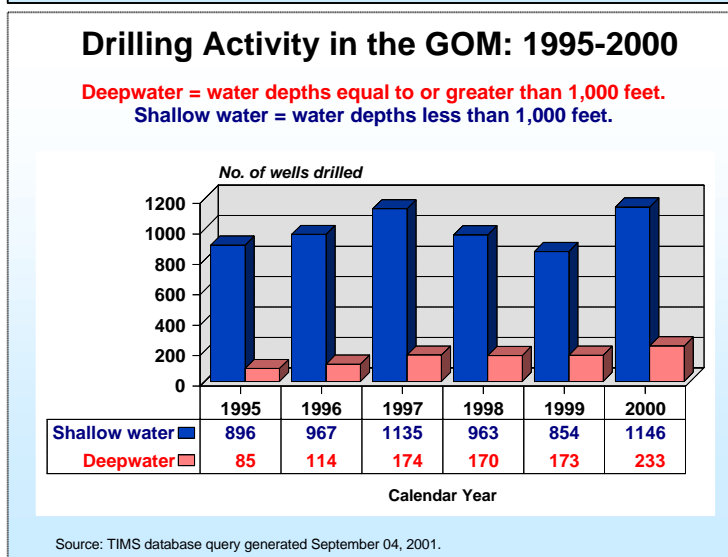
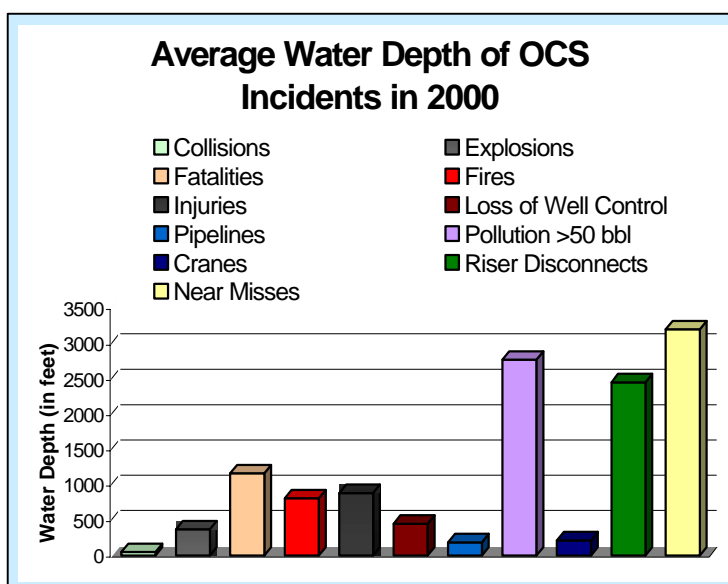
An MMS workgroup report based on the 34 crane incidents that occurred between January 1995 and August 1998 found that the 34 incidents resulted in 7 fatalities and 20 injuries. Since 1998, there have been only 8 crane-related injuries (1 in 1999 and 7 in 2000) and no deaths. For additional information on OCS crane incidents, see <http://www.mms.gov/cranes>.

## v Deepwater (>1,000 ft water depth) Incidents in 2000

The MMS defines deepwater as water depths greater than 1,000 feet. The average water depth based on all incidents that occurred during 2000 was 526 feet. The chart at right shows the average water depth of each of the types of incidents that occurred on the OCS during calendar year 2000. Fifty incidents occurred in water depths greater than 1000 feet: 49 incidents in the Gulf of Mexico OCS Region and 1 in the Pacific OCS Region. The average water depth for these deepwater incidents was 2,748 feet, ranging from 1,030 feet to 6,700 feet. These 50 deepwater incidents included 19 fires, 17 injuries, 4 involved more than 50 barrels of pollution, 2 fatalities, 2 near misses, 3 involved riser disconnects, 1 loss of well control, and 1 fluorescent light lens melt.

The number of incidents and deepwater activity in 2000 was up compared to the number of incidents and deepwater activity in 1999. In 1999, there were 24 deepwater incidents.

Further offshore information can be found on the OCS Safety Facts sheet at <http://www.mms.gov/stats/PDFs/SafetyMAR2001.PDF>.

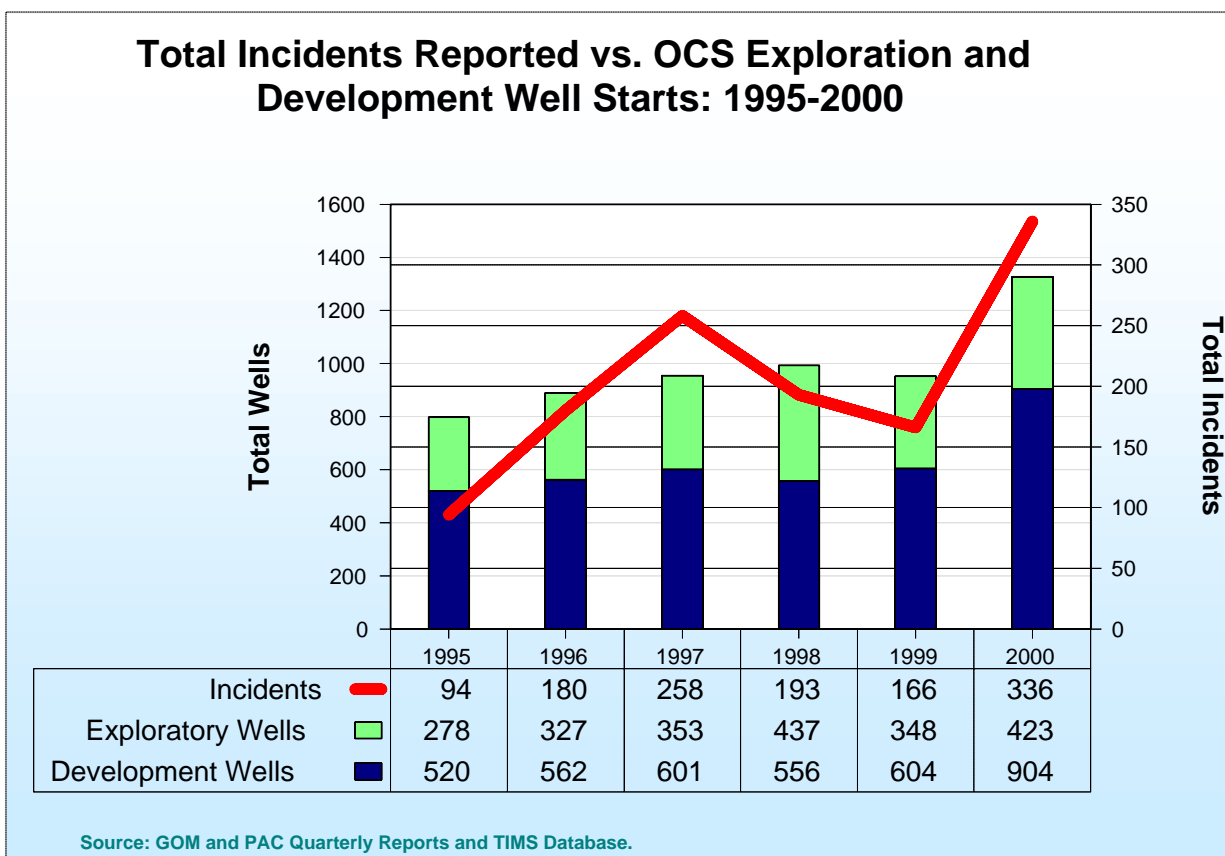




## General OCS Incident Trends: 1995-2000

The table below shows a comparison of the number of offshore incidents with other OCS activities from 1995 to 2000. To normalize the data, the number of OCS incidents that occurred each year is compared with the total number of wells drilled and the total volume of oil and gas produced on the OCS during the same year.

Incidents Compared with OCS Activity: 1995-2000						
	1995	1996	1997	1998	1999	2000
Incidents	94	180	258	193	166	336
Development Wells Drilled	520	562	601	556	604	904
Exploration Wells Drilled	278	327	353	437	348	423
Total Wells Drilled	798	889	954	993	952	1,327
Oil Produced (MMbbl)	417	433	466	491	535	557
Gas Produced (Bcf)	4,841	5,145	5,222	5,118	5,136	5,014
Incidents/Wells Drilled	0.12	0.20	0.27	0.19	0.17	0.25
Incidents/MMbbl Oil Produced	0.23	0.42	0.55	0.39	0.31	0.60
Incidents/Bcf Gas Produced	0.02	0.04	0.05	0.04	0.03	0.07

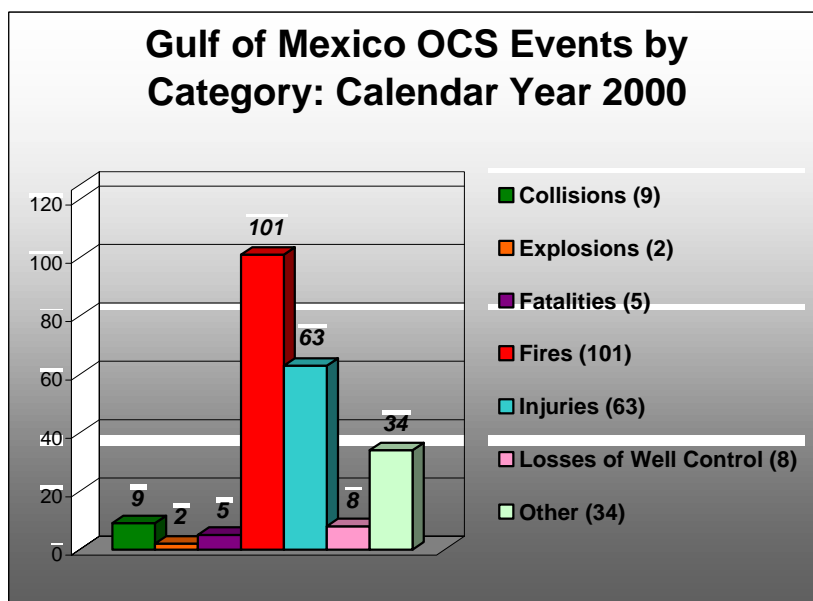


# Gulf of Mexico OCS Incidents: Calendar Year 2000

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More operations-related activity occurs in the Gulf of Mexico OCS Region (GOM) than in any other offshore region of the United States. During calendar year 2000, the GOM was a major hub of exploration, development, and production activities. These activities involved more than 140 operators, a monthly average of 186 drilling units (31 platform rigs and 155 mobile rigs), and an average of 4,000 active platforms (25 in water depths greater than 1,000 feet), and more than 34,706 miles of pipeline. Deepwater activities resulted in exploratory drilling in record-breaking water depths. A world water depth record

of 7,790 feet (2,374 meters) was set for an exploratory well from an anchored rig in the GOM. The chart at right shows the number of incidents by category that occurred during the year. These incidents are described in detail below in alphabetical and chronological order by category.





## GOM Collisions (9 total)

### Collision No. 1

<b>Date:</b>	23-Feb-2000	<b>Operator:</b>	Chevron U.S.A., Inc.
<b>MMS Investigation Report:</b>	No	<b>Activity:</b>	Development/Production
<b>Lease:</b>	00374	<b>Event(s):</b>	Collision
<b>Area:</b>	Main Pass	<b>Operation:</b>	Development/Production
<b>Block:</b>	41	<b>Cause:</b>	Other--Unknown
<b>Rig/Platform:</b>	16	<b>Water Depth:</b>	47 feet

**Remarks:** A boat struck the platform causing extensive damage to the platform and well control panel and bent the departing pipeline. The platform ESD system apparently shut in the two SSV's on the wellhead when the accident occurred. The flowline broke under the choke.

### Collision No. 2

<b>Date:</b>	13-Mar-2000	<b>Operator:</b>	Kerr-McGee Oil & Gas Corporation
<b>MMS Investigation Report:</b>	No	<b>Activity:</b>	Development/Production
<b>Lease:</b>	00347	<b>Event(s):</b>	Collision
<b>Area:</b>	Ship Shoal	<b>Operation:</b>	Motor Vessel
<b>Block:</b>	27	<b>Cause:</b>	Other--Unknown
<b>Rig/Platform:</b>	2	<b>Water Depth:</b>	18 feet

**Remarks:** A shrimp boat hit the No. 2 well jacket and damaged the platform. The handrails were damaged, the nav-aids package was destroyed, and the pipeline was pulled away from the platform.

### Collision No. 3

<b>Date:</b>	16-Apr-2000	<b>Operator:</b>	Forcenergy Gas Exploration, Inc.
<b>MMS Investigation Report:</b>	Completed	<b>Activity:</b>	Development/Production
<b>Lease:</b>	G1182	<b>Event(s):</b>	Collision
<b>Area:</b>	South Marsh Island	<b>Operation:</b>	Production/Motor Vessel
<b>Block:</b>	11	<b>Cause:</b>	Human Error
<b>Rig/Platform:</b>	D-CMP	<b>Water Depth:</b>	70 feet

**Remarks:** A barge under tow by the M/V *Ms. Robin* struck the D compressor platform resulting in major damage to the structural support members. The southeast corner leg of the platform was mashed to half of its original diameter. The main cross member running between the south legs was buckled and broken loose. All associated members and cross bracing were bent and showed stress as the rust has popped off at each joining connection. The stairwell down to the landing was broken loose on one corner where the deck below was buckled. The "D" to "C" gas pipeline remained intact structurally, but the barge scraped off the 2-inch thick protective coating at the water level. Most of the lighting on the "A" platform was knocked loose upon impact. The tugboat captain was unaware that the barge had struck the platform. Damage to the platform totaled \$364,775.

## Collision No. 4

<b>Date:</b>	18-Apr-2000	<b>Operator:</b>	Callon Petroleum Operating Company
<b>MMS Investigation Report:</b>	Completed	<b>Activity:</b>	Development/Production
<b>Lease:</b>	G16337	<b>Event(s):</b>	Collision
<b>Area:</b>	South Marsh Island	<b>Operation:</b>	Motor Vessel/Construction Work
<b>Block:</b>	261	<b>Cause:</b>	Human Error
<b>Rig/Platform:</b>	CAIS. No. 3	<b>Water Depth:</b>	33 feet

**Remarks:** An empty oil barge under tow by the tugboat M/V *Chermie Cenac* collided with Global Industries, Ltd. jack-up boat M/V *Sand Shark*. The M/V *Sand Shark* was positioned about 250 feet east of satellite caisson well No. 3. Eyewitnesses onboard the M/V *Sand Shark* reported that the tugboat was being piloted on an erratic path through the Eugene Island 261 field just prior to the collision. Eyewitnesses onboard the M/V *Sand Shark* reported that no one could be seen in the wheelhouse of the tugboat at the time of impact and that when the tugboat captain appeared in the wheelhouse he looked startled and confused. The captain regained control after colliding with the M/V *Sand Shark*. However, in maneuvering the barge away from the M/V *Sand Shark*, the barge struck the caisson, resulting in minor damage to an above water diagonal support beam. Damage to the M/V *Sand Shark* starboard side was an estimated 3-feet by 8-feet crease in the area where the vertical side meets the bottom of the hull. Damage was estimated at \$15,000.

## Collision No. 5

<b>Date:</b>	11-May-2000	<b>Operator:</b>	Union Oil Company of California
<b>MMS Investigation Report:</b>	Completed	<b>Activity:</b>	Development/Production
<b>Lease:</b>	00811	<b>Event(s):</b>	Collision
<b>Area:</b>	Eugene Island	<b>Operation:</b>	Drilling/Moving on Location
<b>Block:</b>	266	<b>Cause:</b>	Other--Unstable ocean subsea floor
<b>Rig/Platform:</b>	Glomar Adriatic III / E	<b>Water Depth:</b>	167 feet

**Remarks:** The MODU port leg punched through an additional 28 feet of seafloor causing the *Glomar Adriatic III* to shift during pre-load operations and strike the platform. The platform's handrails were bent, the crane power pack was dislodged and knocked to the rig deck, the support I beams and decking for the power pack were bent and buckled, and the nav-aid lights were broken. The exhaust piping for the rig engines was damaged, requiring replacement; the wind wall protecting the cantilever area of rig buckled; and one wall was penetrated. The MMS investigation findings estimated the damage at \$270,000.

## Collision No. 6

<b>Date:</b>	17-May-2000	<b>Operator:</b>	Ocean Energy, Inc.
<b>MMS Investigation Report:</b>	No	<b>Activity:</b>	Development/Production
<b>Lease:</b>	00050	<b>Event(s):</b>	Collision
<b>Area:</b>	Eugene Island	<b>Operation:</b>	Production
<b>Block:</b>	120	<b>Cause:</b>	Human Error
<b>Rig/Platform:</b>	Caisson No. 19	<b>Water Depth:</b>	37 feet

**Remarks:** The 195-foot M/V *Sea Probe*, a research vessel, collided with single well caisson No. 19. As the captain of the M/V was documenting information into his logbook, the vessel grazed the boat landing of the well caisson, resulting in minor damage to both the M/V and well caisson. A plastic storage tank filled with 360 gallons of corrosion inhibitor was knocked onto the deck of the well caisson releasing the contents into the Gulf waters. The MSDS states that the corrosion inhibitor diluted with water is non-toxic.

## Collision No. 7 (also listed as Injury Nos. 42 and 43)

<b>Date:</b>	01-Aug-2000	<b>Operator:</b>	Shell Offshore, Inc.
<b>MMS Investigation Report:</b>	Completed	<b>Activity:</b>	Development/Production
<b>Lease:</b>	00046	<b>Event(s):</b>	Collision/Injuries (2)
<b>Area:</b>	Eugene Island	<b>Operation:</b>	Workover
<b>Block:</b>	95	<b>Cause:</b>	Human Error
<b>Rig/Platform:</b>	Nabors Dolphin 105	<b>Water Depth:</b>	15 feet

**Remarks:** The M/V *Sea Bulk Georgia* collided with both Shell Offshore Inc. Eugene Island Block 95, No. 17 satellite well and then collided with the underside of Nabors Drilling Company's Dolphin 105 drilling rig. The M/V *Sea Bulk Georgia* sustained major damage in the incident with its wheelhouse being sheared away after contacting the hull of the drilling rig. The vessel's first mate was piloting the M/V *Sea Bulk Georgia* at the time of the incident. He sustained serious injury with both legs severed at the knees. The night cook sustained slight injury to his ankle and back when he fell, as a result of the impact, but did not need medical attention. Investigation findings showed that the wheelhouse of the motor vessel was left unattended allowing it to stray off its charted course and collide with both structures. Estimated damage was \$855,000.

## Collision No. 8

<b>Date:</b>	04-Aug-2000	<b>Operator:</b>	Murphy Exploration & Production
<b>MMS Investigation Report:</b>	No	<b>Activity:</b>	Development/Production
<b>Lease:</b>	G05549	<b>Event(s):</b>	Other--Hit by work boat while docking
<b>Area:</b>	Ship Shoal	<b>Operation:</b>	Other--Docking vessel
<b>Block:</b>	166	<b>Cause:</b>	Equipment Failure/Other--Engine stalled
<b>Rig/Platform:</b>	A	<b>Water Depth:</b>	Not given

**Remarks:** While docking with the well, the boat's engine stalled when shifting into reverse. The boat drifted into the well, causing minor damage. No one was injured and there was no pollution.

## Collision No. 9

<b>Date:</b>	13-Sep-2000	<b>Operator:</b>	Newfield Exploration Company
<b>MMS Investigation Report:</b>	Completed	<b>Activity:</b>	Development/Production
<b>Lease:</b>	G15276	<b>Event(s):</b>	Collision
<b>Area:</b>	Ship Shoal	<b>Operation:</b>	New well waiting for flow line hook-up
<b>Block:</b>	76	<b>Cause:</b>	Human Error
<b>Rig/Platform:</b>	Caisson No. 2	<b>Water Depth:</b>	24 feet

**Remarks:** The shrimp boat M/V *Thai Hung* struck the 30-inch caisson No. 2 structure. After the collision, the caisson was not visible above the waterline. There was no flow from the well. The well had three levels of protection—the surface controlled subsurface safety valve, the back pressure valve, and the tree wellhead valves. Divers inspected the well and found that it was leaning westerly at 30 to 40 degrees with the top of the tree 5 feet below the waterline. The MMS investigation findings showed the well was damaged beyond repair so it was plugged and abandoned. Repair costs were estimated at \$12,600,000.

## GOM Explosions (2 total)

### Explosion No. 1

<b>Date:</b>	08-Feb-2000	<b>Operator:</b>	Marathon Oil Company
<b>MMS Investigation Report:</b>	Completed	<b>Activity:</b>	Development/Production
<b>Lease:</b>	G01618	<b>Event(s):</b>	Explosion
<b>Area:</b>	South Pass	<b>Operation:</b>	Production
<b>Block:</b>	89	<b>Cause:</b>	Human Error
<b>Rig/Platform:</b>	B	<b>Water Depth:</b>	422 feet

**Remarks:** An operator was attempting to light the Condensate Line Heater, Natural Draft Burner (EAW 5200). In accordance with the operating procedures, the operator pulled out the Versa Valve (Bypass) for the Burner Safety Low (BSL) Line Heater at the control panel, opened the manual pilot gas block valve, and turned the Pilot Igniter Switch to the ON position. After several tries, the pilot was successfully lit. The main fuel gas block valve was manually opened to light the main burner. The operator visually checked the flame inside the fire tube through the Observation View Port and then walked over to check the fuel gas pressure. When he returned to recheck the flame, he detected the BSL light ON, indicating that the pilot light had gone out. He turned the Igniter Switch OFF. As he was reaching to close the main fuel gas block valve, gas in the unit ignited, forcing the flame arrestor at the top of the exhaust to dislodge from the unit into the Gulf of Mexico. The dampener section of the heater was damaged; however, no one was injured. The MMS investigation team found no absolute cause of the event; however, the operator may have inadvertently reset the BSL/Ignitor Switch to the ON position in his effort to turn it OFF. Damage to the stack arrestor and the dampener spool was estimated at \$6,544.

### Explosion No. 2 (also listed as Injury No. 53)

<b>Date:</b>	23-Sep-2000	<b>Operator:</b>	Anadarko Petroleum Corporation
<b>MMS Investigation Report:</b>	No	<b>Activity:</b>	Development/Production
<b>Lease:</b>	G14482	<b>Event(s):</b>	Injury(1)/Explosion
<b>Area:</b>	Eugene Island	<b>Operation:</b>	Completion
<b>Block:</b>	346	<b>Cause:</b>	Equipment Failure
<b>Rig/Platform:</b>	Parker Rig 3-P/A (Tanzanite)	<b>Water Depth:</b>	320 feet

**Remarks:** The rig electrician received an electrical shock from a 480-volt breaker and consequently sustained a sprained ankle after jumping off the skid where the electrical breaker was located. The blower motor associated with the drawworks was not working so the electrician went to the breaker panel to try to energize it, at which time the breaker panel blew up.

## GOM Fatalities (5 total)

### Fatality No. 1

<b>Date:</b>	19-May-2000	<b>Operator:</b>	BP Amoco Corporation
<b>MMS Investigation Report:</b>	Completed	<b>Activity:</b>	Development/Production
<b>Lease:</b>	G02193	<b>Event(s):</b>	Fatality
<b>Area:</b>	Main Pass	<b>Operation:</b>	Production
<b>Block:</b>	140	<b>Cause:</b>	Slip/Trip/Fall
<b>Rig/Platform:</b>	B	<b>Water Depth:</b>	165 feet

**Remarks:** A contractor was using a come-a-long anchored to a handrail on the platform to move equipment. The handrail failed and the employee fell 70 feet, impacted the Plus 10 level on the way down, and then the water. He was recovered from the water by boat within minutes and then flown to West Jefferson Hospital where he was pronounced dead. For more details see MMS 2001-042 on the web at [http://www.gomr.mms.gov/homepg/offshore/safety/acc\\_repo/01-042.pdf](http://www.gomr.mms.gov/homepg/offshore/safety/acc_repo/01-042.pdf).

### Fatality No. 2

<b>Date:</b>	16-Aug-2000	<b>Operator:</b>	BP Amoco Corporation
<b>MMS Investigation Report:</b>	Completed	<b>Activity:</b>	Development/Production
<b>Lease:</b>	G05825	<b>Event(s):</b>	Fatality
<b>Area:</b>	Mississippi Canyon	<b>Operation:</b>	Drilling
<b>Block:</b>	109	<b>Cause:</b>	Fall/Equipment Failure
<b>Rig/Platform:</b>	H&P 91	<b>Water Depth:</b>	1,030 feet

**Remarks:** A rig floorhand was being lifted into the derrick via an air hoist. He fell 80 feet to the rig floor. For more details, see the investigation report on the web at [http://www.gomr.mms.gov/homepg/offshore/safety/acc\\_repo/00-089.pdf](http://www.gomr.mms.gov/homepg/offshore/safety/acc_repo/00-089.pdf).

### Fatality No. 3

<b>Date:</b>	08-Sep-2000	<b>Operator:</b>	Exxon Mobil Corporation
<b>MMS Investigation Report:</b>	Completed	<b>Activity:</b>	Exploration
<b>Lease:</b>	G08801	<b>Event(s):</b>	Fatality
<b>Area:</b>	Mississippi Canyon	<b>Operation:</b>	Drilling
<b>Block:</b>	167	<b>Cause:</b>	Other—sea conditions
<b>Rig/Platform:</b>	Marine 700	<b>Water Depth:</b>	4,350 feet

**Remarks:** An employee was crushed between the iron roughneck and the pipe-handling machine riser cart. Investigation findings showed that sea conditions, the list of the rig, and the lack of brake-holding capacity of the cart caused the cart to move and strike the employee pinning him against the iron rough neck. For more details, see MMS OCS Report 2001-045 on the web at [http://www.gomr.mms.gov/homepg/offshore/safety/acc\\_repo/2001-045.pdf](http://www.gomr.mms.gov/homepg/offshore/safety/acc_repo/2001-045.pdf).

## Fatality No. 4

<b>Date:</b>	27-Oct-2000	<b>Operator:</b>	Ocean Energy, Inc.
<b>MMS Investigation Report:</b>	Pending (as of Feb. 26, 2002 )	<b>Activity:</b>	Exploration
<b>Lease:</b>	G15815	<b>Event(s):</b>	Fatality
<b>Area:</b>	High Island	<b>Operation:</b>	Drilling
<b>Block:</b>	A 329	<b>Cause:</b>	Other—Metal fatigue on fan support
<b>Rig/Platform:</b>	Rowan Louisiana	<b>Water Depth:</b>	215 feet

**Remarks:** The employee was found unconscious on the motor room floor. A circulation fan fell without warning and struck the employee. MMS's investigation findings listed structural fatigue of the fan mounting bracket as the probable cause. The U.S. Coast Guard is also investigating this incident.

## Fatality No. 5

<b>Date:</b>	11-Nov-2000	<b>Operator:</b>	Energy Partners, Ltd.
<b>MMS Investigation Report:</b>	No	<b>Activity:</b>	Development/Production
<b>Lease:</b>	00694	<b>Event(s):</b>	Fatality
<b>Area:</b>	South Pass	<b>Operation:</b>	Pipeline Segment/Other – Diving Accident
<b>Block:</b>	28	<b>Cause:</b>	Equipment Failure/Human Error
<b>Rig/Platform:</b>	T	<b>Water Depth:</b>	75 feet

**Remarks:** A diver was working on the 18-inch low-pressure gas pipeline from Platform Z to Platform T to determine if the pipeline was parted. The diver was jetting the area near the lower flange end when he lost communication with the surface. About 250 feet of air hose and communication line were pulled off the lift boat. A standby diver jumped into the water but was unable to find the first diver. The U.S. Coast Guard investigated this incident on Nov. 11, 2000.

## GOM Fires (101 total)

### Fire No. 1 (also listed as Loss of Well Control No. 1)

<b>Date:</b>	02-Jan-2000	<b>Operator:</b>	Callon Petroleum Operating Company
<b>MMS Investigation Report:</b>	Pending as of Feb. 26, 2002	<b>Activity:</b>	Exploration
<b>Lease:</b>	G16337	<b>Event(s):</b>	Fire/Loss of well control
<b>Area:</b>	South Marsh Island	<b>Operation:</b>	Drilling
<b>Block:</b>	261	<b>Cause:</b>	Equipment Failure
<b>Rig/Platform:</b>	R&B Falcon 153	<b>Water Depth:</b>	33 feet

**Remarks:** Preliminary findings indicate that while on bottom drilling, the rig experienced a kick. The crew shut in the BOP's. The 10 ¾-inch casing head by 16-inch casing head spool began leaking and caught fire. The rig personnel were evacuated via escape capsules. The well was killed on January 7, 2000, after it stopped flowing.

### Fire No. 2

<b>Date:</b>	03-Jan-2000	<b>Operator:</b>	Union Oil Company of California
<b>MMS Investigation Report:</b>	No	<b>Activity:</b>	Development/Production
<b>Lease:</b>	G01230	<b>Event(s):</b>	Fire
<b>Area:</b>	Ship Shoal	<b>Operation:</b>	Production
<b>Block:</b>	215	<b>Cause:</b>	Equipment Failure
<b>Rig/Platform:</b>	I	<b>Water Depth:</b>	112 feet

**Remarks:** A pinhole in a glycol reboiler allowed oil and condensate to leak and ignite. The fire lasted 8 to 10 minutes and reached a height of 8 to 12 inches.

### Fire No. 3

(Welding-related)

<b>Date:</b>	13-Jan-2000	<b>Operator:</b>	BP Amoco Corporation
<b>MMS Investigation Report:</b>	No	<b>Activity:</b>	Exploration
<b>Lease:</b>	G14658	<b>Event(s):</b>	Fire
<b>Area:</b>	Mississippi Canyon	<b>Operation:</b>	Drilling
<b>Block:</b>	822	<b>Cause:</b>	Human Error
<b>Rig/Platform:</b>	TSF Discoverer Enterprise	<b>Water Depth:</b>	6,327 feet

**Remarks:** Welders were cutting, burning, and welding on the rig's crude oil handling system when slag fell into a pile of trash. This created a smoldering fire, which was extinguished immediately.

**Fire No. 4****(Welding-related)**

<b>Date:</b>	20-Jan-2000	<b>Operator:</b>	BP Amoco Corporation
<b>MMS Investigation Report:</b>	No	<b>Activity:</b>	Exploration
<b>Lease:</b>	G14658	<b>Event(s):</b>	Fire
<b>Area:</b>	Green Canyon	<b>Operation:</b>	Drilling
<b>Block:</b>	782	<b>Cause:</b>	Human Error
<b>Rig/Platform:</b>	Transocean Discoverer 534	<b>Water Depth:</b>	4,423 feet

**Remarks:** Slag from nearby welding operations fell on some foam rubber that was in a waste bag and started smoldering. The fire watch immediately extinguished the fire (smoldering foam rubber).

**Fire No. 5****(Welding-related)**

<b>Date:</b>	30-Jan-2000	<b>Operator:</b>	Vastar Resources, Inc.
<b>MMS Investigation Report:</b>	No	<b>Activity:</b>	Exploration
<b>Lease:</b>	00130	<b>Event(s):</b>	Fire
<b>Area:</b>	Grand Isle	<b>Operation:</b>	Drilling
<b>Block:</b>	41	<b>Cause:</b>	Equipment Failure
<b>Rig/Platform:</b>	Glomar Adriatic II	<b>Water Depth:</b>	85 feet

**Remarks:** A welding lead shorted out and caught a plastic tarp on fire in the wash room of the rig. The plastic tarp was covering the air dryer in the wash room. The fire was extinguished immediately with a water hose. Damage was minimal.

**Fire No. 6****(Welding-related)**

<b>Date:</b>	03-Feb-2000	<b>Operator:</b>	Vastar Resources, Inc.
<b>MMS Investigation Report:</b>	No	<b>Activity:</b>	Development/Production
<b>Lease:</b>	00839	<b>Event(s):</b>	Fire
<b>Area:</b>	West Delta	<b>Operation:</b>	Production
<b>Block:</b>	94	<b>Cause:</b>	Human Error
<b>Rig/Platform:</b>	G	<b>Water Depth:</b>	133 feet

**Remarks:** A welding crew was replacing grating on the +10 boat level in the vicinity of the sump pile when a small fire was detected and extinguished immediately. It appeared that an underwater line was not flushed before the welding started.



## Fire No. 7

<b>Date:</b>	06-Feb-2000	<b>Operator:</b>	Shell Offshore, Inc.
<b>MMS Investigation Report:</b>	No	<b>Activity:</b>	Development/Production
<b>Lease:</b>	G02968	<b>Event(s):</b>	Fire
<b>Area:</b>	Mississippi Canyon	<b>Operation:</b>	Production/Other--Crane
<b>Block:</b>	311	<b>Cause:</b>	Equipment Failure
<b>Rig/Platform:</b>	A	<b>Water Depth:</b>	343 feet

**Remarks:** A small fire ignited on the wiring from the starter to the alternator on the N. crane. A hydraulic hose had a metal guard over it, and the wiring from the starter to the alternator was routed through the metal guard. The wire had a bare spot and it ignited when it came in contact with the metal guard. The insulation over the starter-alternator wire provided the fuel. The fire was extinguished immediately.

## Fire No. 8

<b>Date:</b>	09-Feb-2000	<b>Operator:</b>	Vastar Resources, Inc.
<b>MMS Investigation Report:</b>	No	<b>Activity:</b>	Development/Production
<b>Lease:</b>	G01608	<b>Event(s):</b>	Fire
<b>Area:</b>	South Pass	<b>Operation:</b>	Production
<b>Block:</b>	60	<b>Cause:</b>	Equipment Failure
<b>Rig/Platform:</b>	D	<b>Water Depth:</b>	185 feet

**Remarks:** A small fire was detected near the exciter on the No. 1 turbine gas generator on the platform. The platform was shut in with the ESD system, and the fire was extinguished immediately with a 30-lb dry chemical unit. The generator was shut down.

## Fire No. 9

<b>Date:</b>	21-Feb-2000	<b>Operator:</b>	Exxon Corporation
<b>MMS Investigation Report:</b>	No	<b>Activity:</b>	Development/Production
<b>Lease:</b>	00026	<b>Event(s):</b>	Fire
<b>Area:</b>	West Delta	<b>Operation:</b>	Production
<b>Block:</b>	30	<b>Cause:</b>	Equipment Failure
<b>Rig/Platform:</b>	J	<b>Water Depth:</b>	45 feet

**Remarks:** A fire occurred at the compressor due to a hole in the exhaust expansion joint of the compressor. It was extinguished immediately with a 20-lb chemical hand-held unit.

## Fire No. 10

<b>Date:</b>	24-Feb-2000	<b>Operator:</b>	Texaco Exploration and Production
<b>MMS Investigation Report:</b>	No	<b>Activity:</b>	Development/Production
<b>Lease:</b>	G02937	<b>Event(s):</b>	Fire
<b>Area:</b>	West Delta	<b>Operation:</b>	Production
<b>Block:</b>	109	<b>Cause:</b>	Equipment Failure/Human Error
<b>Rig/Platform:</b>	A	<b>Water Depth:</b>	187 feet

**Remarks:** The bolts that attach the fuel gas manifold to cylinder No. 8 of compressor No. 4 were loose causing a small fire. The flames attained a height of 12 to 18 inches. The fire lasted 30 seconds and was extinguished with two handheld dry chemical extinguishers. The bolts were tightened and the unit was put back in service.

## Fire No. 11

<b>Date:</b>	28-Feb-2000	<b>Operator:</b>	Shell Offshore, Inc.
<b>MMS Investigation Report:</b>	No	<b>Activity:</b>	Development/Production
<b>Lease:</b>	G02638	<b>Event(s):</b>	Fire
<b>Area:</b>	Mississippi Canyon	<b>Operation:</b>	Production
<b>Block:</b>	194	<b>Cause:</b>	Equipment Failure
<b>Rig/Platform:</b>	A (Cognac)	<b>Water Depth:</b>	1,024 feet

**Remarks:** The stainless steel sensing line from the compressor suction scrubber was in contact with a rigid ¾-inch conduit line, which was covering electrical lines to light the compressor area. Over time, the sensing line rubbed through the conduit and ignited the conduit, which created a small fire. The fire was detected and extinguished immediately.

## Fire No. 12

<b>Date:</b>	07-Mar-2000	<b>Operator:</b>	Phillips Petroleum Company
<b>MMS Investigation Report:</b>	Completed	<b>Activity:</b>	Development/Production
<b>Lease:</b>	00434	<b>Event(s):</b>	Fire
<b>Area:</b>	Ship Shoal	<b>Operation:</b>	Production
<b>Block:</b>	149	<b>Cause:</b>	Equipment Failure
<b>Rig/Platform:</b>	A	<b>Water Depth:</b>	50 feet

**Remarks:** A fire on the pipeline pump skid caused the emergency fire alarm to sound. The ESD/TSE shut down the platform. Personnel fought the fire with the nearby firefighting equipment. It took about 3 minutes to extinguish the fire. The investigation findings showed that vibration had caused fatigue of the flex hose on the pipeline pump discharge. The age of the hose may have also been a contributing factor.

**Fire No. 13** (also listed as Injury Nos. 10, 11, 12, 13)

<b>Date:</b>	07-Mar-2000	<b>Operator:</b>	BP Amoco Corporation
<b>MMS Investigation Report:</b>	No	<b>Activity:</b>	Development/Production
<b>Lease:</b>	G06898	<b>Event(s):</b>	Fire and 4 Injuries
<b>Area:</b>	Viosca Knoll	<b>Operation:</b>	Drilling
<b>Block:</b>	989	<b>Cause:</b>	Equipment Failure
<b>Rig/Platform:</b>	H&P 100	<b>Water Depth:</b>	1,290 feet

**Remarks:** The deep fat fryer in the rig's kitchen caught on fire. It was extinguished immediately by the CO<sub>2</sub> system located over the deep fat fryer and three 30-lb dry chemical units. Three people are being treated for smoke inhalation and one person for a burn.

**Fire No. 14**

<b>Date:</b>	12-Mar-2000	<b>Operator:</b>	Transworld Exploration and Production, Inc.
<b>MMS Investigation Report:</b>	Completed	<b>Activity:</b>	Development/Production
<b>Lease:</b>	G02900	<b>Event(s):</b>	Fire
<b>Area:</b>	Eugene Island	<b>Operation:</b>	Production
<b>Block:</b>	261	<b>Cause:</b>	Equipment Failure/Weather-related
<b>Rig/Platform:</b>	A	<b>Water Depth:</b>	166 feet

**Remarks:** This incident involved two separate fires, which resulted in damage to the communication building, wiring from the communication building, platform structural beams near the escape capsule, the battery box and life jacket box. Ten jackets and the nav-aid solar panel were completely destroyed. The first fire resulted when a carryover of oil out the vacuum relief hatch on the wet oil tank came in contact with the hot surfaces of an expansion joint on the exhaust piping of the compressor. Platform personnel immediately extinguished this fire and activated the ESD station on the stairway leading to the production deck, which resulted in shutdown of the compressor and all process equipment. A substantial oil mist was discharged from the flare boom and a 30-mph wind sprayed the oil mist back onto the platform generator, resulting in a second fire on the top deck of the platform. The second fire was extinguished with portable handheld dry chemical fire extinguishers. The investigation findings showed that failure of the platform master panel main shut down relay resulted in a continued carryover of liquid hydrocarbons without alarming platform personnel of the problem or shutdown of the platform.

**Fire No. 15**

<b>Date:</b>	21-Mar-2000	<b>Operator:</b>	BP Amoco Corporation
<b>MMS Investigation Report:</b>	No	<b>Activity:</b>	Exploration
<b>Lease:</b>	G14658	<b>Event(s):</b>	Fire
<b>Area:</b>	Mississippi Canyon	<b>Operation:</b>	Drilling
<b>Block:</b>	822	<b>Cause:</b>	Human Error
<b>Rig/Platform:</b>	Discoverer Enterprise	<b>Water Depth:</b>	6,327 feet

**Remarks:** Two galley personnel took galley rags out of the dryer and put them in a plastic bag. The bag began to smoke. The fire was extinguished with water and a 30-lb dry chemical unit.

## Fire No. 16

<b>Date:</b>	23-Mar-2000	<b>Operator:</b>	Chevron U.S.A., Inc.
<b>MMS Investigation Report:</b>	No	<b>Activity:</b>	Development/Production
<b>Lease:</b>	00457	<b>Event(s):</b>	Fire
<b>Area:</b>	South Timbalier	<b>Operation:</b>	Drilling
<b>Block:</b>	131	<b>Cause:</b>	Equipment Failure
<b>Rig/Platform:</b>	J / ENSCO 94	<b>Water Depth:</b>	246

**Remarks:** A portable light-stand extension cord melted the connection where it was plugged in. The fire was extinguished with one handheld 30-lb dry chemical fire extinguisher.

## Fire No. 17

(Welding-related)

<b>Date:</b>	23-Mar-2000	<b>Operator:</b>	Chevron U.S.A., Inc.
<b>MMS Investigation Report:</b>	No	<b>Activity:</b>	Development/Production
<b>Lease:</b>	G04473	<b>Event(s):</b>	Fire
<b>Area:</b>	West Delta	<b>Operation:</b>	Production/Workover/Completion
<b>Block:</b>	27	<b>Cause:</b>	Other--Leak
<b>Rig/Platform:</b>	Pool 53	<b>Water Depth:</b>	45 feet

**Remarks:** During welding operations on the rig derrick, a spark apparently fell to the third deck below and ignited the supply gas to the platform water clarifier vessel. The fire watch on the second deck saw the fire and immediately extinguished it.

## Fire No. 18

<b>Date:</b>	23-Mar-2000	<b>Operator:</b>	Ocean Energy, Inc.
<b>MMS Investigation Report:</b>	No	<b>Activity:</b>	Development/Production
<b>Lease:</b>	G01967	<b>Event(s):</b>	Fire
<b>Area:</b>	Main Pass	<b>Operation:</b>	Drilling
<b>Block:</b>	153	<b>Cause:</b>	Equipment Failure
<b>Rig/Platform:</b>	Glomar Adriatic IX	<b>Water Depth:</b>	290 feet

**Remarks:** While a connection of drill pipe was being broken, synthetic base mud (SBM) was released and blown by the wind to the production generator package below. The SBM landed on the insulated generator exhaust and ignited when the SBM went through the insulation seam to the exhaust piping. The fire was extinguished within minutes using a firewater monitor.

## Fire No. 19

<b>Date:</b>	27-Mar-2000	<b>Operator:</b>	CXY Energy Inc.
<b>MMS Investigation Report:</b>	No	<b>Activity:</b>	Development/Production
<b>Lease:</b>	G15390	<b>Event(s):</b>	Fire
<b>Area:</b>	Main Pass	<b>Operation:</b>	Production
<b>Block:</b>	262	<b>Cause:</b>	Equipment Failure
<b>Rig/Platform:</b>	A	<b>Water Depth:</b>	288 feet

**Remarks:** The rental generator had a short in the cable, which caused the rubber diesel hose to melt and the diesel caught fire. The fire was extinguished with two fire extinguishers.

## Fire No. 20

<b>Date:</b>	30-Mar-2000	<b>Operator:</b>	Union Oil Company of California
<b>MMS Investigation Report:</b>	No	<b>Activity:</b>	Development/Production
<b>Lease:</b>	G03241	<b>Event(s):</b>	Fire
<b>Area:</b>	High Island	<b>Operation:</b>	Production
<b>Block:</b>	443	<b>Cause:</b>	Equipment Failure
<b>Rig/Platform:</b>	A	<b>Water Depth:</b>	170 feet

**Remarks:** The glycol reboiler caught fire where the stack bolts to the reboiler. The fire was extinguished with one 30-lb dry chemical fire extinguisher and cooled with a fire hose. There was a possible glycol leakage at flange. The unit was located on the top deck at the southwest corner of the platform. The unit was shut in so the stack could be pulled and the gasket repaired before bringing the unit back on line.

## Fire No. 21

<b>Date:</b>	10-Apr-2000	<b>Operator:</b>	Chevron U.S.A., Inc.
<b>MMS Investigation Report:</b>	No	<b>Activity:</b>	Development/Production
<b>Lease:</b>	G04473	<b>Event(s):</b>	Fire
<b>Area:</b>	West Delta	<b>Operation:</b>	Production
<b>Block:</b>	27	<b>Cause:</b>	Equipment Failure/Human Error
<b>Rig/Platform:</b>	A	<b>Water Depth:</b>	39 feet

**Remarks:** A small fire over a 480-volt junction near the MCC room caused the fire alarm to sound. Personnel extinguished the fire immediately with a 30-lb dry chemical unit.

## Fire No. 22

<b>Date:</b>	10-Apr-2000	<b>Operator:</b>	Exxon Mobil Corporation
<b>MMS Investigation Report:</b>	No	<b>Activity:</b>	Development/Production
<b>Lease:</b>	G1092	<b>Event(s):</b>	Fire
<b>Area:</b>	West Delta	<b>Operation:</b>	Production
<b>Block:</b>	93	<b>Cause:</b>	Human Error
<b>Rig/Platform:</b>	E	<b>Water Depth:</b>	160 feet

**Remarks:** The platform was shut in because the steel grating was being welded in the well bay near well E-21. The area had been sniffed with a gas detector, but the 16-inch conductor casing on well E-21 had not been sniffed. The cement in the 16-inch casing had a small migration of gas, resulting in a 5-second flash fire. The fire was extinguished with a 30-lb dry chemical unit.

## Fire No. 23

(Welding-related)

<b>Date:</b>	15-Apr-2000	<b>Operator:</b>	Vastar Resources, Inc.
<b>MMS Investigation Report:</b>	No	<b>Activity:</b>	Development/Production
<b>Lease:</b>	G13645	<b>Event(s):</b>	Fire
<b>Area:</b>	West Delta	<b>Operation:</b>	Drilling
<b>Block:</b>	122	<b>Cause:</b>	Human Error
<b>Rig/Platform:</b>	H&P 105	<b>Water Depth:</b>	267 feet

**Remarks:** A welder was cutting pad-eyes off the 24-inch drive pipe with an oxygen-acetylene cutting torch. Sparks generated from this operation landed near the oxygen-acetylene bottle rack and ignited acetylene that was leaking from a loose connection at the manifold. The flame was quickly extinguished with air and the connection was checked for leaks before welding or cutting.

## Fire No. 24

<b>Date:</b>	16-Apr-2000	<b>Operator:</b>	EOG Resources, Inc.
<b>MMS Investigation Report:</b>	No	<b>Activity:</b>	Development/Production
<b>Lease:</b>	G14103	<b>Event(s):</b>	Fire
<b>Area:</b>	Mustang Island	<b>Operation:</b>	Production
<b>Block:</b>	759	<b>Cause:</b>	Human Error
<b>Rig/Platform:</b>	A	<b>Water Depth:</b>	154 feet

**Remarks:** A lube oil storage tank used to feed lube oil to the compressor overflowed into the drip pan. The oil ignited when it was blown into the exhaust of the compressor. The compressor was shut down and the fire was extinguished with a 30-lb handheld fire extinguisher. The fire re-ignited and was extinguished again with water used to cool the exhaust and wash off residuals.

## Fire No. 25

<b>Date:</b>	16-Apr-2000	<b>Operator:</b>	Union Oil Company of California
<b>MMS Investigation Report:</b>	No	<b>Activity:</b>	Development/Production
<b>Lease:</b>	G02646	<b>Event(s):</b>	Fire
<b>Area:</b>	East Breaks	<b>Operation:</b>	Production
<b>Block:</b>	159	<b>Cause:</b>	Equipment Failure
<b>Rig/Platform:</b>	A	<b>Water Depth:</b>	900 feet

**Remarks:** Unocal personnel were shutting down the compressor to service the unit when the vent gas off of the fuel shutdown valve caught fire. The fire was extinguished with one 150-lb and one 30-lb fire extinguisher and a fire hose.

## Fire No. 26

(Welding-related)

<b>Date:</b>	30-Apr-2000	<b>Operator:</b>	BP Amoco Corporation
<b>MMS Investigation Report:</b>	No	<b>Activity:</b>	Development/Production
<b>Lease:</b>	G06894	<b>Event(s):</b>	Fire
<b>Area:</b>	Viosca Knoll	<b>Operation:</b>	Production
<b>Block:</b>	915	<b>Cause:</b>	Equipment Failure
<b>Rig/Platform:</b>	A (TLP Marlin)	<b>Water Depth:</b>	3,236 feet

**Remarks:** Two employees were welding a flange onto a 10-inch piece of pipe that had been purged and cold cut. A Stopple Vent Plug was installed inside the 10-inch pipe. The initial weld was made followed by grinding of a high spot on the weld. Pressure built up behind the plug and blew the plug outward, striking one of the workers in the midsection. When the plug exited the pipe, a small flash fire occurred. No one was injured.

## Fire No. 27

<b>Date:</b>	02-May-2000	<b>Operator:</b>	ATP Oil & Gas Corporation
<b>MMS Investigation Report:</b>	Completed	<b>Activity:</b>	Development/Production
<b>Lease:</b>	G09574	<b>Event(s):</b>	Fire
<b>Area:</b>	Eugene Island	<b>Operation:</b>	Production
<b>Block:</b>	30	<b>Cause:</b>	Equipment Failure
<b>Rig/Platform:</b>	JA	<b>Water Depth:</b>	13 feet

**Remarks:** A pulsation damper, located on the pipeline pump discharge piping, became disconnected, allowing oil to spray onto a nearby heater treator exhaust stack. Platform personnel extinguished the fire within 30 minutes of its discovery. Platform damage was confined to the area of the pump and heater treator. There were no injuries and no pollution. The investigation findings showed that excessive vibration generated by the platform pipeline transfer pumps during normal operation caused a threaded pipe connection to disconnect. Condensate, under about 30 to 40 lbs of pressure was sprayed out the open ended piping onto the exposed hot surface of the heater treator exhaust stack, resulting in ignition. The company was cited for not complying with the requirements of 30 CFR 250.830(b)(5). The heater treator exhaust stack was not protected from hydrocarbon liquid spillage or leakage.

## Fire No. 28

<b>Date:</b>	02-May-2000	<b>Operator:</b>	BP Amoco Corporation
<b>MMS Investigation Report:</b>	No	<b>Activity:</b>	Exploration
<b>Lease:</b>	G14658	<b>Event(s):</b>	Fire
<b>Area:</b>	Mississippi Canyon	<b>Operation:</b>	Drilling
<b>Block:</b>	822	<b>Cause:</b>	Human Error
<b>Rig/Platform:</b>	TSF Discoverer Enterprise	<b>Water Depth:</b>	6,327 feet

**Remarks:** While a 6-inch pipe was being cut with a beveling machine, a spark escaped the fire blanket, entering a 1/8-inch crack in a nailed up crate, causing foam insulation packing to smolder. The firewatch saw the smoke and sprayed water into the box. A second fire watch assisted in extinguishing the fire.

## Fire No. 29

<b>Date:</b>	03-May-2000	<b>Operator:</b>	Stone Energy Corporation
<b>MMS Investigation Report:</b>	No	<b>Activity:</b>	Development/Production
<b>Lease:</b>	G11052	<b>Event(s):</b>	Fire
<b>Area:</b>	Vermilion	<b>Operation:</b>	Production
<b>Block:</b>	255	<b>Cause:</b>	Equipment Failure
<b>Rig/Platform:</b>	B	<b>Water Depth:</b>	68 feet

**Remarks:** A small flash fire started when a leaking union on the compressor sprayed gas on the compressor exhaust. The fire was extinguished with a 30-lb extinguisher.

## Fire No. 30

<b>Date:</b>	07-May-2000	<b>Operator:</b>	Texaco Exploration & Production, Inc.
<b>MMS Investigation Report:</b>	No	<b>Activity:</b>	Development/Production
<b>Lease:</b>	G02937	<b>Event(s):</b>	Fire
<b>Area:</b>	West Delta	<b>Operation:</b>	Production
<b>Block:</b>	109	<b>Cause:</b>	Equipment Failure
<b>Rig/Platform:</b>	A	<b>Water Depth:</b>	184 feet

**Remarks:** A 12-inch high flame was observed at the No. 4 gas compressor waste-gate actuator, located on the turbo charger. The compressor was shut in and the fire was extinguished immediately.



## Fire No. 31

<b>Date:</b>	20-May-2000	<b>Operator:</b>	Chevron U.S.A., Inc.
<b>MMS Investigation Report:</b>	No	<b>Activity:</b>	Development/Production
<b>Lease:</b>	00375	<b>Event(s):</b>	Fire
<b>Area:</b>	Main Pass	<b>Operation:</b>	Production
<b>Block:</b>	42	<b>Cause:</b>	Human Error
<b>Rig/Platform:</b>	M-QTR	<b>Water Depth:</b>	35 feet

**Remarks:** A trash can in the smoking room caught fire, apparently caused by a match that was not extinguished before being thrown into the trash can. The fire was immediately extinguished by covering the trash can with a lid. The trashcan was removed permanently from the smoke room.

## Fire No. 32

<b>Date:</b>	23-May-2000	<b>Operator:</b>	W & T Offshore, L.L.C.
<b>MMS Investigation Report:</b>	No	<b>Activity:</b>	Development/Production
<b>Lease:</b>	G14528	<b>Event(s):</b>	Fire
<b>Area:</b>	South Timbalier	<b>Operation:</b>	Drilling
<b>Block:</b>	145	<b>Cause:</b>	Equipment Failure
<b>Rig/Platform:</b>	A - (Prod). MOPU	<b>Water Depth:</b>	228 feet

**Remarks:** The operator observed flames coming from the vent portion of the generator armature. The generator shut down automatically. A review of the generator damage determined that the insulation on the windings failed and allowed the electrical flow to go to ground. Either a foreign object entering through the fan housing or a degradation of the insulation on the windings could have caused this type of damage.

## Fire No. 33

(Welding-related)

<b>Date:</b>	25-May-2000	<b>Operator:</b>	BP Amoco Corporation
<b>MMS Investigation Report:</b>	No	<b>Activity:</b>	Exploration
<b>Lease:</b>	G14658	<b>Event(s):</b>	Fire
<b>Area:</b>	Mississippi Canyon	<b>Operation:</b>	Drilling
<b>Block:</b>	822	<b>Cause:</b>	Human Error
<b>Rig/Platform:</b>	Discoverer Enterprise	<b>Water Depth:</b>	1,680 feet

**Remarks:** A canvas duck wind tarp caught fire while a pre-heat procedure was being performed for a welding procedure on the No. 2 standpipe manifold. The maximum temperature on the pre-heat thermocouple recorded prior to the fire was 220 degrees Fahrenheit. A man was raised into the derrick via a crane basket and the tarp was pulled down and lowered to the scaffolding. The fire was extinguished using the rig floor monitor and a water extinguisher canister.

## Fire No. 34

<b>Date:</b>	26-May-2000	<b>Operator:</b>	Newfield Exploration Company
<b>MMS Investigation Report:</b>	No	<b>Activity:</b>	Development/Production
<b>Lease:</b>	G03137	<b>Event(s):</b>	Fire
<b>Area:</b>	Vermilion	<b>Operation:</b>	Production
<b>Block:</b>	287	<b>Cause:</b>	Equipment Failure
<b>Rig/Platform:</b>	A	<b>Water Depth:</b>	77 feet

**Remarks:** The platform had an emergency shutdown when operators discovered the TSE in the compressor room was burned. The diaphragm on the oil pump had sprayed oil onto the turbocharger, which started a small fire at the base of the compressor. There was no damage.

## Fire No. 35

<b>Date:</b>	31-May-2000	<b>Operator:</b>	Vastar Resources, Inc.
<b>MMS Investigation Report:</b>	No	<b>Activity:</b>	Development/Production
<b>Lease:</b>	00130	<b>Event(s):</b>	Fire
<b>Area:</b>	Grand Isle	<b>Operation:</b>	Production
<b>Block:</b>	41	<b>Cause:</b>	Equipment Failure
<b>Rig/Platform:</b>	E	<b>Water Depth:</b>	85 feet

**Remarks:** The electrician had shut down a 25-kilowatt diesel generator to repair the voltage meter. A small fire in the engine enclosure occurred when the generator was restarted and was immediately extinguished with a 30-lb dry chemical unit.

## Fire No. 36

(Welding-related)

<b>Date:</b>	08-Jun-2000	<b>Operator:</b>	Freeport-McMoRan Sulphur, LLC
<b>MMS Investigation Report:</b>	Completed	<b>Activity:</b>	Development/Production
<b>Lease:</b>	G09372	<b>Event(s):</b>	Fire
<b>Area:</b>	Main Pass	<b>Operation:</b>	Production
<b>Block:</b>	299	<b>Cause:</b>	Human Error
<b>Rig/Platform:</b>	STR	<b>Water Depth:</b>	16 feet

**Remarks:** While welding inside the main sulfur tank, the sulfur within the tank caught fire. The fire burned for 2 hours until it was extinguished. There was no pollution and no SO<sub>2</sub> emissions recorded. The investigation findings show that the operator did not follow established company procedures before beginning welding, burning, and hot tapping work on the No. 2 sulfur storage tank. The tank's air sparging system should have been turned off before the welding operation began. The operator didn't conduct a thorough job safety analysis with all personnel before beginning the task. Also, the fire watch was not providing continuous surveillance with a portable gas detector prior to the fire.

## Fire No. 37

<b>Date:</b>	10-Jun-2000	<b>Operator:</b>	Exxon Mobil Corporation
<b>MMS Investigation Report:</b>	No	<b>Activity:</b>	Development/Production
<b>Lease:</b>	G02970	<b>Event(s):</b>	Fire
<b>Area:</b>	Mississippi Canyon	<b>Operation:</b>	Production
<b>Block:</b>	268	<b>Cause:</b>	Human Error
<b>Rig/Platform:</b>	A	<b>Water Depth:</b>	343 feet

**Remarks:** A welder was repairing a handrail on the top production deck when a 6-inch flame was observed coming from the cellar deck by the fire watch. Sparks fell from the top deck to the cellar deck and ignited a 1-inch starter vent line that came out of the top of a gas generator building. The flame was extinguished immediately with a water hose.

## Fire No. 38

<b>Date:</b>	13-Jun-2000	<b>Operator:</b>	BP Amoco Corporation
<b>MMS Investigation Report:</b>	No	<b>Activity:</b>	Development/Production
<b>Lease:</b>	G09777	<b>Event(s):</b>	Fire
<b>Area:</b>	Mississippi Canyon	<b>Operation:</b>	Drilling
<b>Block:</b>	108	<b>Cause:</b>	Equipment Failure
<b>Rig/Platform:</b>	H&P 91	<b>Water Depth:</b>	1,030 feet

**Remarks:** The rig was running all five generators at 90 percent power when the No. 2 generator caught fire internally, resulting in an external flame on the turbo air filter. The fire was extinguished and the No. 2 generator was shut down.

## Fire No. 39

<b>Date:</b>	15-Jun-2000	<b>Operator:</b>	Shell Deepwater Production, Inc.
<b>MMS Investigation Report:</b>	No	<b>Activity:</b>	Development/Production
<b>Lease:</b>	G05868	<b>Event(s):</b>	Fire
<b>Area:</b>	Mississippi Canyon	<b>Operation:</b>	Production
<b>Block:</b>	809	<b>Cause:</b>	Equipment Failure
<b>Rig/Platform:</b>	A (URSA TLP)	<b>Water Depth:</b>	3,800 feet

**Remarks:** The recycle gas compressor (CBA-1053) experienced a small fire within the turbine enclosure. Personnel had started the compressor and were in attendance at the time of the fire. The compressor was shut down immediately and the fire was quickly extinguished.

**Fire No. 40****(Welding-related)**

<b>Date:</b>	15-Jun-2000	<b>Operator:</b>	Chevron U.S.A., Inc.
<b>MMS Investigation Report:</b>	No	<b>Activity:</b>	Development/Production
<b>Lease:</b>	G01101	<b>Event(s):</b>	Fire
<b>Area:</b>	West Delta	<b>Operation:</b>	Production
<b>Block:</b>	117	<b>Cause:</b>	Human Error
<b>Rig/Platform:</b>	G	<b>Water Depth:</b>	211 feet

**Remarks:** The construction crew was dropping an acetylene welding hose through the grating to a lower deck section. The hose landed on the turbocharger of the compressor. The heat of the turbocharger melted the hose and ignited the acetylene trapped in the hose (bottles were closed). The fire was extinguished immediately with a 30-lb chemical unit. Damages were limited to a small section of hose.

**Fire No. 41**

<b>Date:</b>	16-Jun-2000	<b>Operator:</b>	Exxon Mobil Corporation
<b>MMS Investigation Report:</b>	No	<b>Activity:</b>	Development/Production
<b>Lease:</b>	G00031	<b>Event(s):</b>	Fire
<b>Area:</b>	Grand Isle	<b>Operation:</b>	Production
<b>Block:</b>	22	<b>Cause:</b>	Equipment Failure
<b>Rig/Platform:</b>	L-PRD	<b>Water Depth:</b>	55 feet

**Remarks:** A solar compressor backfired during startup. The flame leaving the exhaust stack ignited a post-lube pump vent due to strong winds; the vent will be relocated.

**Fire No. 42**

<b>Date:</b>	17-Jun-2000	<b>Operator:</b>	Devon Energy Production Company, L. P.
<b>MMS Investigation Report:</b>	No	<b>Activity:</b>	Development/Production
<b>Lease:</b>	G12803	<b>Event(s):</b>	Fire
<b>Area:</b>	West Cameron	<b>Operation:</b>	Workover
<b>Block:</b>	580	<b>Cause:</b>	Equipment Failure
<b>Rig/Platform:</b>	A	<b>Water Depth:</b>	243 feet

**Remarks:** The operator was killing a well with the snubbing unit and diesel mud pump. The pump engine started blowing motor oil and caught the exhaust and intake on fire. The pump was shut down and the fire was extinguished. The pump was replaced.

## Fire No. 43

<b>Date:</b>	18-Jun-2000	<b>Operator:</b>	Exxon Mobil Corporation
<b>MMS Investigation Report:</b>	No	<b>Activity:</b>	Development/Production
<b>Lease:</b>	G10380	<b>Event(s):</b>	Fire
<b>Area:</b>	Alaminos Canyon	<b>Operation:</b>	Drilling
<b>Block:</b>	25	<b>Cause:</b>	Human Error
<b>Rig/Platform:</b>	A (Hoover)	<b>Water Depth:</b>	4,825 feet

**Remarks:** Tarps were hung to isolate an area for hot work around temporary quarters. A helicopter blew the tarps onto a hot exhaust stack. The tarps ignited but were quickly extinguished with water. Damage was estimated at \$250.

## Fire No. 44

<b>Date:</b>	24-Jun-2000	<b>Operator:</b>	Shell Deepwater Production Inc.
<b>MMS Investigation Report:</b>	No	<b>Activity:</b>	Development/Production
<b>Lease:</b>	G07963	<b>Event(s):</b>	Fire
<b>Area:</b>	Mississippi Canyon	<b>Operation:</b>	Production
<b>Block:</b>	807	<b>Cause:</b>	Human Error
<b>Rig/Platform:</b>	A (Mars)	<b>Water Depth:</b>	2,933

**Remarks:** A tarp that was suspended near a turbine gas generator caught fire. The tarp came into contact with an exhaust that was 280 degrees Fahrenheit. The fire was detected and extinguished immediately with damage to the tarp only.

## Fire No. 45

(Welding-related)

<b>Date:</b>	05-Jul-2000	<b>Operator:</b>	Basin Exploration, Inc.
<b>MMS Investigation Report:</b>	Completed	<b>Activity:</b>	Development/Production
<b>Lease:</b>	00146	<b>Event(s):</b>	Fire
<b>Area:</b>	West Delta	<b>Operation:</b>	Completion
<b>Block:</b>	58	<b>Cause:</b>	Leak/Other—shallow gas accumulation
<b>Rig/Platform:</b>	Diamond Ocean Crusader	<b>Water Depth:</b>	50 feet

**Remarks:** All personnel were evacuated from the rig when attempts to extinguish a fire failed. A fire ignited presumably from weld slag reacting with biogenic gas originating from the 48-inch caisson by 26-inch drive pipe annulus from No. D-5 well caisson, located about 7.5 feet from No. D-6 well caisson. Both caissons were about 150 feet from Platform D. The fire was extinguished by rig fire fighting equipment and marine support vessels. The investigation findings show that hot slag from welding operations on the adjacent D-6 well caisson fell down into the annulus between the 48-inch caisson and the 26-inch drive pipe on well No. D-5 and came in contact with gas from a shallow gas pocket under the annulus of the D-5 well. The cement job on well No. D-5 annuli prior to this job leaked and allowed gas to migrate up through the cement into the annular void of the well and into the atmosphere, contributing to the fire.

## Fire No. 46

<b>Date:</b>	06-Jul-2000	<b>Operator:</b>	Dominion Exploration Production, Inc.
<b>MMS Investigation Report:</b>	No	<b>Activity:</b>	Development/Production
<b>Lease:</b>	G01029	<b>Event(s):</b>	Fire
<b>Area:</b>	Ship Shoal	<b>Operation:</b>	Production
<b>Block:</b>	248	<b>Cause:</b>	Equipment Failure
<b>Rig/Platform:</b>	G	<b>Water Depth:</b>	180 feet

**Remarks:** A small fire occurred when a valve broke off the compressor head and broke the piston head. Pressure built up in the crankcase and caused a leak at the filter. Escaping crankcase oil burned. The fire was immediately extinguished.

## Fire No. 47

<b>Date:</b>	07-Jul-2000	<b>Operator:</b>	Murphy Exploration & Production Company
<b>MMS Investigation Report:</b>	No	<b>Activity:</b>	Development/Production
<b>Lease:</b>	G01023	<b>Event(s):</b>	Fire
<b>Area:</b>	Ship Shoal	<b>Operation:</b>	Production
<b>Block:</b>	224	<b>Cause:</b>	Equipment Failure
<b>Rig/Platform:</b>	A	<b>Water Depth:</b>	150 feet

**Remarks:** The air intake on an engine became clogged, making the air fuel mixture very rich. This rich mixture leaked out of the muffler and caused a fire. The fire was extinguished with a fire extinguisher in seconds.

## Fire No. 48 (also listed as Injury Nos. 38, 39, 40 ) (Welding-related)

<b>Date:</b>	11-Jul-2000	<b>Operator:</b>	J.M. Huber Corporation
<b>MMS Investigation Report:</b>	Completed	<b>Activity:</b>	Development/Production
<b>Lease:</b>	G09048	<b>Event(s):</b>	Fire/Injuries (3)
<b>Area:</b>	West Cameron	<b>Operation:</b>	Production
<b>Block:</b>	248	<b>Cause:</b>	Human Error
<b>Rig/Platform:</b>	A	<b>Water Depth:</b>	80 feet

**Remarks:** Platform operators had removed a small spool piece (dump valve, block valve, shot pipe, and nipples) and the welder was cutting rusty bolts from the dump valve. The dump valve was in the closed position and at the other end was an open block valve. When most of the bolts were cut, the flange parted and a small flash fire occurred. Three people were slightly burned, sent to the hospital, and later released that day. The investigation findings show that the fire was caused by cutting on hydrocarbon handling equipment that had residual hydrocarbons left in the valves and piping. It was recommended that hydrocarbon handling lines and valves always be thoroughly flushed and cleaned before beginning any welding or cutting.

## Fire No. 49

<b>Date:</b>	14-Jul-2000	<b>Operator:</b>	Chevron U.S.A., Inc.
<b>MMS Investigation Report:</b>	No	<b>Activity:</b>	Development/Production
<b>Lease:</b>	G01249	<b>Event(s):</b>	Fire
<b>Area:</b>	South Timbalier	<b>Operation:</b>	Production
<b>Block:</b>	162	<b>Cause:</b>	Human Error
<b>Rig/Platform:</b>	A	<b>Water Depth:</b>	120 feet

**Remarks:** The operator was attempting to start an engine with ether. The engine backfired and a flash fire occurred. No damages and no injuries occurred.

## Fire No. 50

(Welding-related)

<b>Date:</b>	17-Jul-2000	<b>Operator:</b>	Union Oil Company of California
<b>MMS Investigation Report:</b>	No	<b>Activity:</b>	Development/Production
<b>Lease:</b>	00827	<b>Event(s):</b>	Fire
<b>Area:</b>	Ship Shoal	<b>Operation:</b>	Other—Construction
<b>Block:</b>	209	<b>Cause:</b>	Human Error
<b>Rig/Platform:</b>	G	<b>Water Depth:</b>	100 feet

**Remarks:** While welding on the top deck, slag fell onto a Fisher Controller, on the deck below, and ignited a small amount of escaping gas. A nearby fire watch immediately extinguished the fire with a continuous spray of water.

## Fire No. 51

<b>Date:</b>	20-Jul-2000	<b>Operator:</b>	Exxon Mobil Corporation
<b>MMS Investigation Report:</b>	No	<b>Activity:</b>	Development/Production
<b>Lease:</b>	G01618	<b>Event(s):</b>	Fire
<b>Area:</b>	South Pass	<b>Operation:</b>	Production
<b>Block:</b>	89	<b>Cause:</b>	Human Error
<b>Rig/Platform:</b>	A	<b>Water Depth:</b>	456 feet

**Remarks:** The operator was installing a deck drain on the platform when a tarp under the drain caught on fire. The fire watch immediately extinguished the small fire.

## Fire No. 52

<b>Date:</b>	22-Jul-2000	<b>Operator:</b>	Newfield Exploration Company
<b>MMS Investigation Report:</b>	No	<b>Activity:</b>	Development/Production
<b>Lease:</b>	G02696	<b>Event(s):</b>	Fire
<b>Area:</b>	High Island	<b>Operation:</b>	Production
<b>Block:</b>	A531	<b>Cause:</b>	Equipment Failure
<b>Rig/Platform:</b>	A	<b>Water Depth:</b>	200 feet

**Remarks:** The supply gas line to the pipeline SDV caught fire and shut in the pipeline. The PSH on the production separator shut in the platform. Hot work to replace the grating was completed at 2000 hours and fire watch was completed at 2030. At 2200 hours, the platform shut-in. The fire was extinguished with a 3-lb dry chemical fire extinguisher. There was minor damage to the panel.

## Fire No. 53 (also listed as Injury No. 41)

<b>Date:</b>	28-Jul-2000	<b>Operator:</b>	Shell Deepwater Production Inc.
<b>MMS Investigation Report:</b>	No	<b>Activity:</b>	Development/Production
<b>Lease:</b>	G08241	<b>Event(s):</b>	Fire/Injury(1)
<b>Area:</b>	Garden Banks	<b>Operation:</b>	Workover
<b>Block:</b>	426	<b>Cause:</b>	Other—Completion fluids reaction
<b>Rig/Platform:</b>	A	<b>Water Depth:</b>	2,862 feet

**Remarks:** An employee suffered first and second degree burns to his face, hands, and arms when a small flash fire occurred in the Cetco weir tank where completion fluids were being treated in conjunction with flowing well A-10. The fire was immediately extinguished with no damage to the platform.

## Fire No. 54

<b>Date:</b>	30-Jul-2000	<b>Operator:</b>	Chevron U.S.A., Inc.
<b>MMS Investigation Report:</b>	No	<b>Activity:</b>	Development/Production
<b>Lease:</b>	G02177	<b>Event(s):</b>	Fire
<b>Area:</b>	South Pass	<b>Operation:</b>	Production
<b>Block:</b>	49	<b>Cause:</b>	Equipment Failure
<b>Rig/Platform:</b>	A	<b>Water Depth:</b>	300 feet

**Remarks:** A small fire occurred on the gas compressor exhaust manifold when the stainless steel tubing from a hydraulic oil pump leaked oil onto the exhaust. The fire was extinguished immediately with almost no damages.



## Fire No. 55

<b>Date:</b>	03-Aug-2000	<b>Operator:</b>	BP Amoco Corporation
<b>MMS Investigation Report:</b>	No	<b>Activity:</b>	Development/Production
<b>Lease:</b>	G06894	<b>Event(s):</b>	Fire
<b>Area:</b>	Viosca Knoll	<b>Operation:</b>	Production
<b>Block:</b>	915	<b>Cause:</b>	Equipment Failure
<b>Rig/Platform:</b>	A (TLP Marlin)	<b>Water Depth:</b>	3,216 feet

**Remarks:** During startup on the solar gas compressor, a small fire was observed at the end of the exhaust of the turbine enclosure. The CO<sub>2</sub> fire suppression system was activated. The fire was extinguished immediately with minimal damage.

## Fire No. 56

<b>Date:</b>	08-Aug-2000	<b>Operator:</b>	Coastal Oil & Gas Corporation
<b>MMS Investigation Report:</b>	No	<b>Activity:</b>	Exploration
<b>Lease:</b>	G15102	<b>Event(s):</b>	Fire
<b>Area:</b>	West Cameron	<b>Operation:</b>	Drilling
<b>Block:</b>	515	<b>Cause:</b>	Equipment Failure
<b>Rig/Platform:</b>	Glomar Adriatic X	<b>Water Depth:</b>	155 feet

**Remarks:** The No. 4 engine turbo blew an oil-cooler gasket, causing the oil that blew out to catch on fire, generating smoke and some small flames. The fire was extinguished with a small CO<sub>2</sub> bottle. There were no injuries and no damage other than to the turbo.

## Fire No. 57

<b>Date:</b>	09-Aug-2000	<b>Operator:</b>	Elf Exploration, Inc.
<b>MMS Investigation Report:</b>	Completed	<b>Activity:</b>	Development/Production
<b>Lease:</b>	G00988	<b>Event(s):</b>	Fire
<b>Area:</b>	Eugene Island	<b>Operation:</b>	Production
<b>Block:</b>	275	<b>Cause(s):</b>	Equipment Failure/Leak/Human Error
<b>Rig/Platform:</b>	A	<b>Water Depth:</b>	172 feet

**Remarks:** Oil from a 200-barrel maximum capacity bad oil tank overflowed through the pressure vacuum relief valve and spilled through the first deck grating onto the generator building located on the second deck. Oil penetrated various small openings in the generator building roof and gravitated down an "I" beam onto an exposed hot surface of the generator exhaust where it ignited. The fire flashed back through the building roof and ignited oil that had accumulated in the adjacent heater treator skid. The fire flashed through the first deck grating and melted the plastic sight glasses on both the bad oil and good oil tanks. This released additional oil that fueled the fire through the sight glass valves. After attempts to extinguish the fire failed, all personnel were evacuated to the M/V *Ocean Runner 1* and transported to Unocal's EI 276 B platform. The platform fire loop located on the generator melted and performed a total platform shut-in. Workboats from adjacent fields sprayed seawater onto the EI 275 A platform. A Fast Response Unit equipped with 500 feet of expanded boom was dispatched to the platform. A total of nine M/V's responded to the distress call and assisted throughout the night to contain and control the fire that continued on the top deck of the platform. A pollution surveillance flight of the area determined that pollution originating from the platform was tear-dropped shaped and extended 10 miles in length from the platform and about 5 miles wide at the widest point. The investigation findings show that the platform operators bypassed the LSH on the bad oil tank to make use of the full capacity of the storage space during platform start up operations. They failed to monitor the bypassed LSH sufficiently to prevent tank overflow. The containment pan was not sufficient to contain an overflow.

## Fire No. 58

<b>Date:</b>	13-Aug-2000	<b>Operator:</b>	BP Amoco Corporation
<b>MMS Investigation Report:</b>	No	<b>Activity:</b>	Exploration
<b>Lease:</b>	G09866	<b>Event(s):</b>	Fire/Pollution (60 barrels--oil)
<b>Area:</b>	Mississippi Canyon	<b>Operation:</b>	Drilling
<b>Block:</b>	776	<b>Cause:</b>	Equipment Failure
<b>Rig/Platform:</b>	Transocean Discoverer 534	<b>Water Depth:</b>	5,700 feet

**Remarks:** The electric line in the service loop to the motion compensator in the derrick on the rig developed a short creating a spark. The spark caused the insulation in the electric line to start a small fire. The fire was detected and extinguished immediately.

## Fire No. 59

<b>Date:</b>	15-Aug-2000	<b>Operator:</b>	Linder Oil Company
<b>MMS Investigation Report:</b>	Completed	<b>Activity:</b>	Development/Production
<b>Lease:</b>	00015	<b>Event(s):</b>	Fire
<b>Area:</b>	South Timbalier	<b>Operation:</b>	Production
<b>Block:</b>	53	<b>Cause:</b>	Equipment Failure/Leak
<b>Rig/Platform:</b>	A	<b>Water Depth:</b>	62 feet

**Remarks:** Tubing parted inside the cooler allowing a glycol-based antifreeze solution (Ambitol FL) to be discharged through the cooler-filler cap. The solution sprayed onto the insulated compressor exhaust at a point where there was about a ¼-inch gap between two blankets of insulation. The contact of the solution with this hot space resulted in a flash fire. A 150-lb dry chemical unit was used to extinguish the flame. It was recommended in the investigation findings that the compressor cooler should be periodically tested for leaks or deterioration, that the compressor exhaust where the fire occurred should be insulated, and that a nonflammable antifreeze solution be used.

## Fire No. 60

(Welding-related)

<b>Date:</b>	16-Aug-2000	<b>Operator:</b>	Coastal Oil & Gas Corporation
<b>MMS Investigation Report:</b>	Completed	<b>Activity:</b>	Development/Production
<b>Lease:</b>	G04834	<b>Event(s):</b>	Fire
<b>Area:</b>	Main Pass	<b>Operation:</b>	Production
<b>Block:</b>	265	<b>Cause:</b>	Human Error/Leak
<b>Rig/Platform:</b>	Platform A	<b>Water Depth:</b>	206 feet

**Remarks:** At about 6:30 a.m., an employee was welding an old light bracket when a flash fire occurred when molten slag ignited a cotton tarp. The Temperature Safety Element loop activated a platform shut-in. The fire was extinguished immediately. A second flash fire started at about 3:15 p.m. the same day, when a welder burned through a fire wall about 12-15 feet from the dry oil storage tank. The fire traveled the length of tarps and ignited a diesel spill, a paint locker, and a storage shed. Investigation findings showed that the welding ignited escaping natural gas from faulty AFFF valves and PSV's located on top of the dry oil storage tank. The faulty AFFF valves and PSV's were not installed and tested properly prior to both the fires. The valves continued to leak after the first fire was extinguished and were not repaired before continuing to weld. The following were cited as contributing factors: (1) production equipment contained hydrocarbons within 35 feet of the welding site, (2) the area was not approved safe for welding operations, (3) a separate hot work permit was not obtained after the first fire, (4) crews did not adhere to the hot work permits issued before the fires, (5) cotton tarps compounded the situation, (6) there was no Job Safety Analysis meeting with all personnel prior to the fires, and (7) the approved welding and burning plans were not adhered to. OCS violations 30 CFR 250.402(a)(4), G-303-C and 30 CFR 250.402(d)(4), G-310-C were specified. Damages were estimated at \$500,000.

## Fire No. 61

(Welding-related)

Date:	16-Aug-2000	Operator:	Coastal Oil & Gas Corporation
MMS Investigation Report:	Completed	Activity:	Development/Production
Lease:	G04834	Event(s):	Fire
Area:	Main Pass	Operation:	Production
Block:	265	Cause:	Human Error/Leak
Rig/Platform:	A	Water Depth:	206 feet

**Remarks:** This fire was the second of two fires on the same day—one at 6:30 a.m. and the other at 3:15 p.m. The first fire resulted when a welder was welding an old light bracket when molten slag caused a flash fire, which ignited a cotton tarp. The temperature safety element loop activated a platform shut-in and the fire was extinguished immediately. This second fire was also generated by a welder burning through a fire wall. The flash fire that traveled along tarps ignited (1) diesel fuel that had spilled while a crane diesel tank was being filled, (2) a paint locker, and (3) a storage shed. The investigation findings show that faulty AFFF valves and PSV's had not been installed and tested properly. After the first fire, the valves were still leaking gas and were not repaired before continuing hot work after the first fire was extinguished.

## Fire No. 62

Date:	21-Aug-2000	Operator:	Newfield Exploration Company
MMS Investigation Report:	Pending as of Feb. 27, 2002	Activity:	Development/Production
Lease:	G02690	Event(s):	Fire
Area:	High Island	Operation:	Production
Block:	A 471	Cause:	Equipment Failure
Rig/Platform:	CJ	Water Depth:	189 feet

**Remarks:** An oxy/acetylene tank developed a leak and caught fire. After an attempt to extinguish the fire with a dry chemical extinguisher failed, the crew evacuated the platform until the tank extinguished itself. The crew re-boarded the platform and extinguished the residual fire.

## Fire No. 63

Date:	26-Aug-2000	Operator:	Chevron U.S.A., Inc.
MMS Investigation Report:	Completed	Activity:	Development/Production
Lease:	G02625	Event(s):	Fire
Area:	South Timbalier	Operation:	Production
Block:	37	Cause:	Human Error/Other (leak)
Rig/Platform:	A	Water Depth:	57 feet

**Remarks:** A fire started when a glycol reboiler burner system, which was being returned to service after maintenance, leaked oil from the flange onto the hot surface of the vessel and started a fire. The fire was extinguished with dry chemical and firewater. Property damage was minimal. Investigation findings showed that proper operating procedures were not being conducted while the glycol dehydration system was being placed back into service and that oil got into the system through the fuel gas, which had been contaminated by liquid hydrocarbons. The following recommendations were made: (1) eliminate flash gas from the skimmer as a fuel source for the glycol reboiler burner, (2) reconfigure the safety panel logic and update the safety chart accordingly to shut the main burner fuel shut-down valve and the fuel gas filter shut-down valve on LSH system upsets, (3) modify operating procedures for the case when the unit is taken out of service for an extended period, (4) bypass gas flow through the contactor to prevent hydrocarbon buildup in the supply gas system, and (5) replace the fire tube flange gasket.

## Fire No. 64

Date:	28-Aug-2000	Operator:	Newfield Exploration Company
MMS Investigation Report:	No	Activity:	Development/Production
Lease:	00768	Event(s):	Fire
Area:	East Cameron	Operation:	Production
Block:	48	Cause:	Equipment Failure/Human Error
Rig/Platform:	H	Water Depth:	47 feet

**Remarks:** A fire started when gas blew from a leaking compressor discharge valve plate gasket on either the turbo or an electrical connection that was not explosion proof. Only the compressor was damaged. The operator extinguished the fire with a fire extinguisher.

## Fire No. 65

Date:	29-Aug-2000	Operator:	Burlington Resources, Inc.
MMS Investigation Report:	No	Activity:	Development/Production
Lease:	00487	Event(s):	Fire
Area:	Vermilion	Operation:	Production
Block:	119	Cause:	Human Error
Rig/Platform:	D	Water Depth:	71 feet

**Remarks:** Sparks from a cutting torch ignited fluid on the deck. Operators were removing a float cell and a red fox unit from the platform. They had drained water from the float cell onto the deck. Welders were demolishing the red fox unit in the same area. Fire watch personnel extinguished the fire with dry chemical extinguishers. There was no property damage and no injuries.

## Fire No. 66

Date:	29-Aug-2000	Operator:	BP Amoco Corporation
MMS Investigation Report:	No	Activity:	Exploration
Lease:	G09866	Event(s):	Fire
Area:	Mississippi Canyon	Operation:	Drilling
Block:	776	Cause:	Equipment Failure
Rig/Platform:	Transocean Discoverer 534	Water Depth:	5,700 feet

**Remarks:** The muffler on a diesel powered pressure washer vibrated loose and melted the fuel line creating a flash fire. The fire was extinguished immediately. Damage to the pressure washer was minimal.

## Fire No. 67

<b>Date:</b>	06-Sep-2000	<b>Operator:</b>	BP Amoco Corporation
<b>MMS Investigation Report:</b>	No	<b>Activity:</b>	Exploration
<b>Lease:</b>	G09866	<b>Event(s):</b>	Fire
<b>Area:</b>	Mississippi Canyon	<b>Operation:</b>	Drilling
<b>Block:</b>	776	<b>Cause:</b>	Human Error
<b>Rig/Platform:</b>	Transocean Discoverer 534	<b>Water Depth:</b>	5,700 feet

**Remarks:** A small fire occurred in a designated smoking area on the rig and was extinguished immediately with a gallon of water.

## Fire No. 68

<b>Date:</b>	07-Sep-2000	<b>Operator:</b>	Callon Petroleum Operating Company
<b>MMS Investigation Report:</b>	No	<b>Activity:</b>	Development/Production
<b>Lease:</b>	G01967	<b>Event(s):</b>	Fire
<b>Area:</b>	Main Pass	<b>Operation:</b>	Production
<b>Block:</b>	153	<b>Cause:</b>	Equipment Failure/Human Error
<b>Rig/Platform:</b>	B	<b>Water Depth:</b>	300 feet

**Remarks:** Molten slag fell on a tarp and created a small fire. The firewatch observed smoke coming from the cargo room in the hull of the platform and extinguished the fire with water. Only the fire-resistant tarp was damaged.

## Fire No. 69

<b>Date:</b>	23-Sep-2000	<b>Operator:</b>	Chevron U.S.A., Inc.
<b>MMS Investigation Report:</b>	No	<b>Activity:</b>	Exploration
<b>Lease:</b>	G00977	<b>Event(s):</b>	Fire
<b>Area:</b>	Eugene Island	<b>Operation:</b>	Drilling
<b>Block:</b>	214	<b>Cause:</b>	Equipment Failure
<b>Rig/Platform:</b>	R&B Falcon 205	<b>Water Depth:</b>	108 feet

**Remarks:** A small flash fire occurred because engine oil leaked and accumulated on the engine. The rig motorman sounded the rig alarms and extinguished the fire with a 30-lb handheld unit. There were no injuries or pollution reported.

## Fire No. 70

<b>Date:</b>	23-Sep-2000	<b>Operator:</b>	Unocal Exploration Corporation
<b>MMS Investigation Report:</b>	No	<b>Activity:</b>	Development/Production
<b>Lease:</b>	G02757	<b>Event(s):</b>	Fire
<b>Area:</b>	High Island	<b>Operation:</b>	Production
<b>Block:</b>	A 382	<b>Cause:</b>	Equipment Failure
<b>Rig/Platform:</b>	F	<b>Water Depth:</b>	95 feet

**Remarks:** The field mechanic was working on the diesel fire pump and observed the exhaust blanket burning. Further investigation revealed two fuel injectors were malfunctioning, allowing raw fuel to enter the exhaust system. The fuel ignited within the exhaust system, causing excessive heat that ignited the insulation blanket. The fire was extinguished with a fresh water hose.

## Fire No. 71

<b>Date:</b>	25-Sep-2000	<b>Operator:</b>	Murphy Exploration & Production Company
<b>MMS Investigation Report:</b>	No	<b>Activity:</b>	Development/Production
<b>Lease:</b>	00605	<b>Event(s):</b>	Fire
<b>Area:</b>	South Timbalier	<b>Operation:</b>	Production
<b>Block:</b>	86	<b>Cause:</b>	Equipment Failure
<b>Rig/Platform:</b>	E	<b>Water Depth:</b>	92 feet

**Remarks:** A small fire occurred when an oil pump failure allowed oil to be blown out the flare and ignited. An estimated .01 gallon of oil was spilled. No H<sub>2</sub>S was released.

## Fire No. 72

<b>Date:</b>	25-Sep-2000	<b>Operator:</b>	Exxon Mobil Corporation
<b>MMS Investigation Report:</b>	No	<b>Activity:</b>	Development/Production
<b>Lease:</b>	G04940	<b>Event(s):</b>	Fire
<b>Area:</b>	Green Canyon	<b>Operation:</b>	Production
<b>Block:</b>	18	<b>Cause:</b>	Equipment Failure
<b>Rig/Platform:</b>	A	<b>Water Depth:</b>	700 Feet

**Remarks:** A split at the joint of stainless steel tubing, located 2 inches from the turbo charger, allowed lubrication oil to spray out and start the fire. An employee activated a platform alarm and quickly extinguished the fire with a fire hose.

## Fire No. 73

<b>Date:</b>	02-Oct-2000	<b>Operator:</b>	Shell Offshore, Inc.
<b>MMS Investigation Report:</b>	No	<b>Activity:</b>	Development/Production
<b>Lease:</b>	G07824	<b>Event(s):</b>	Fire
<b>Area:</b>	Main Pass	<b>Operation:</b>	Production
<b>Block:</b>	252	<b>Cause:</b>	Equipment Failure
<b>Rig/Platform:</b>	A	<b>Water Depth:</b>	276 feet

**Remarks:** The insulation on the glycol reboiler caught fire. It appeared that a 2-inch L. P. plug on the reboiler had leaked glycol and condensate onto the insulation. The heat from the reboiler caused the insulation to ignite. The small fire was extinguished immediately. Damage was minimal.

## Fire No. 74

<b>Date:</b>	09-Oct-2000	<b>Operator:</b>	Devon Energy Corporation
<b>MMS Investigation Report:</b>	No	<b>Activity:</b>	Exploration
<b>Lease:</b>	G02433	<b>Event(s):</b>	Fire
<b>Area:</b>	High Island	<b>Operation:</b>	Production
<b>Block:</b>	A 368	<b>Cause:</b>	Human Error
<b>Rig/Platform:</b>	Glomar Baltic I	<b>Water Depth:</b>	342 feet

**Remarks:** After obtaining a hot work permit from the rig and platform, a welder used a cutting torch to make a rough cut on a 9 5/8-inch intermediate casing. Fluid came out of the cut and caught fire. The fire was extinguished with a portable fire extinguisher and cutting was suspended.

## Fire No. 75

(Welding-related)

<b>Date:</b>	10-Oct-2000	<b>Operator:</b>	Amoco Production Company
<b>MMS Investigation Report:</b>	No	<b>Activity:</b>	Development/Production
<b>Lease:</b>	G03088	<b>Event(s):</b>	Fire
<b>Area:</b>	Matagorda Island	<b>Operation:</b>	Production
<b>Block:</b>	623	<b>Cause:</b>	Equipment Failure
<b>Rig/Platform:</b>	A	<b>Water Depth:</b>	63 feet

**Remarks:** A crane cab was being removed and the retaining bolts were being cut with a cutting torch. The hose on the cutting torch failed, causing a fire at the hose next to the torch. The fire watch immediately extinguished the fire with a cotton wiping rag as he shut off the supply at the bottle valve.

**Fire No. 76****(Welding-related)**

<b>Date:</b>	12-Oct-2000	<b>Operator:</b>	BP Amoco Corporation
<b>MMS Investigation Report:</b>	No	<b>Activity:</b>	Development/Production
<b>Lease:</b>	G02193	<b>Event(s):</b>	Fire
<b>Area:</b>	Main Pass	<b>Operation:</b>	Production/Other—construction
<b>Block:</b>	140	<b>Cause:</b>	Equipment Failure/Human Error
<b>Rig/Platform:</b>	B	<b>Water Depth:</b>	165 feet

**Remarks:** The construction crew was welding and burning handrails on the top production deck. Some molten steel fell on a deck support beam below, burning a hole in the stainless steel sensing line for a PSH on the gas compressor. The operator saw the flame and pulled the ESD system controls and shut in the production on the platform. The fire watch extinguished the fire immediately. Damage was minimal.

**Fire No. 77**

<b>Date:</b>	13-Oct-2000	<b>Operator:</b>	BP Amoco Corporation
<b>MMS Investigation Report:</b>	No	<b>Activity:</b>	Development/Production
<b>Lease:</b>	G01608	<b>Event(s):</b>	Fire
<b>Area:</b>	South Pass	<b>Operation:</b>	Production
<b>Block:</b>	60	<b>Cause:</b>	Equipment Failure
<b>Rig/Platform:</b>	A	<b>Water Depth:</b>	185 feet

**Remarks:** The engine turbo charger oil supply hose on the auxiliary diesel generator leaked on the engine exhaust, resulting in a 4-inch flame on the exhaust. The fire was extinguished with a 30-lb dry chemical unit. The generator had minimal damage.

**Fire No. 78**

<b>Date:</b>	15-Oct-2000	<b>Operator:</b>	Elf Exploration, Inc.
<b>MMS Investigation Report:</b>	No	<b>Activity:</b>	Development/Production
<b>Lease:</b>	G10942	<b>Event(s):</b>	Fire
<b>Area:</b>	Viosca Knoll	<b>Operation:</b>	Production
<b>Block:</b>	823	<b>Cause:</b>	Equipment Failure/Human Error
<b>Rig/Platform:</b>	A (Virgo)	<b>Water Depth:</b>	1,130 Feet

**Remarks:** A lube oil tank was overfilled on the No. 1 gas compressor. The excess lube oil flowed out the plastic vent line outside the containment skid and dripped on the No. 2 gas compressor exhaust on the deck below. A small fire occurred and was extinguished immediately with a 30-lb dry chemical extinguisher.



**Fire No. 79****(Welding-related)**

<b>Date:</b>	16-Oct-2000	<b>Operator:</b>	BP Amoco Corporation
<b>MMS Investigation Report:</b>	No	<b>Activity:</b>	Exploration
<b>Lease:</b>	G14658	<b>Event(s):</b>	Fire
<b>Area:</b>	Mississippi Canyon	<b>Operation:</b>	Drilling
<b>Block:</b>	822	<b>Cause:</b>	Equipment Failure
<b>Rig/Platform:</b>	Discoverer Enterprise	<b>Water Depth:</b>	1,680 feet

**Remarks:** A welding lead cable was observed arcing with smoke coming from it. No flame was observed and no fire extinguisher was required. All welding units were shut down and the cables were inspected.

**Fire No. 80**

<b>Date:</b>	19-Oct-2000	<b>Operator:</b>	Exxon Mobil Corporation
<b>MMS Investigation Report:</b>	No	<b>Activity:</b>	Development/Production
<b>Lease:</b>	00026	<b>Event(s):</b>	Fire
<b>Area:</b>	West Delta	<b>Operation:</b>	Production
<b>Block:</b>	30	<b>Cause:</b>	Human Error
<b>Rig/Platform:</b>	P	<b>Water Depth:</b>	43 feet

**Remarks:** While the sour surge oil tank was being cleaned out, the tank was hit with a metal wrench resulting in a flash fire that was extinguished immediately with a 30-lb dry chemical extinguisher.

**Fire No. 81****(Welding-related)**

<b>Date:</b>	20-Oct-2000	<b>Operator:</b>	Apache Oil Corporation
<b>MMS Investigation Report:</b>	No	<b>Activity:</b>	Development/Production
<b>Lease:</b>	G01294	<b>Event(s):</b>	Fire
<b>Area:</b>	South Pass	<b>Operation:</b>	Other—construction
<b>Block:</b>	62	<b>Cause:</b>	Human Error
<b>Rig/Platform:</b>	A	<b>Water Depth:</b>	322 feet

**Remarks:** Welding and burning was being conducted on handrails on the top production deck near the living quarters. Hot slag (molten steel) fell into a deck drain and created a small fire. The fire watch extinguished the fire immediately with a 30-lb dry chemical unit.

## Fire No. 82

<b>Date:</b>	25-Oct-2000	<b>Operator:</b>	BP Amoco Corporation
<b>MMS Investigation Report:</b>	No	<b>Activity:</b>	Development/Production
<b>Lease:</b>	G04003	<b>Event(s):</b>	Fire
<b>Area:</b>	Grand Isle	<b>Operation:</b>	Drilling
<b>Block:</b>	90	<b>Cause:</b>	Equipment Failure
<b>Rig/Platform:</b>	Glomar Adriatic II	<b>Water Depth:</b>	300 feet

**Remarks:** At 12:30 a.m. the rig lost power. Upon investigation, smoke was seen coming out of the generator room. One of the generators was on fire. The fire was extinguished immediately with a chemical unit. The rig regained power at 1:00 a.m.

## Fire No. 83

<b>Date:</b>	26-Oct-2000	<b>Operator:</b>	Newfield Exploration Company
<b>MMS Investigation Report:</b>	No	<b>Activity:</b>	Development/Production
<b>Lease:</b>	G05599	<b>Event(s):</b>	Fire
<b>Area:</b>	South Timbalier	<b>Operation:</b>	Production
<b>Block:</b>	100	<b>Cause:</b>	Human Error
<b>Rig/Platform:</b>	A	<b>Water Depth:</b>	56 Feet

**Remarks:** While cutting on the upper deck was being done, slag fell near the control panel and ignited escaping natural gas. The fire was quickly extinguished with a fire extinguisher. The alarm was sounded and the platform was shut in.

## Fire No. 84

(Welding-related)

<b>Date:</b>	05-Nov-2000	<b>Operator:</b>	Vastar Offshore, Inc.
<b>MMS Investigation Report:</b>	No	<b>Activity:</b>	Development/Production
<b>Lease:</b>	00071	<b>Event(s):</b>	Fire
<b>Area:</b>	South Pelto	<b>Operation:</b>	Production
<b>Block:</b>	11	<b>Cause:</b>	Human Error
<b>Rig/Platform:</b>	G	<b>Water Depth:</b>	20 feet

**Remarks:** Slag/sparks from welding operations ignited a cotton glove that the welder was using during his non-welding jobs. The smoldering glove burned through the acetylene hose that was lying on it and ignited the gas. A deckhand detected the fire and personnel responded to the area. The acetylene hose was pinched closed, the fire went out, the valve was shut off, and the glove was extinguished by stepping on it.

## Fire No. 85

<b>Date:</b>	06-Nov-2000	<b>Operator:</b>	Newfield Exploration Company
<b>MMS Investigation Report:</b>	No	<b>Activity:</b>	Development/Production
<b>Lease:</b>	G01898	<b>Event(s):</b>	Fire
<b>Area:</b>	South Timbalier	<b>Operation:</b>	Production
<b>Block:</b>	148	<b>Cause:</b>	Equipment Failure
<b>Rig/Platform:</b>	B	<b>Water Depth:</b>	105 feet

**Remarks:** A vibration caused the engine's air flapper valve that is mounted on the air intake to partially close, causing the valve to not function properly. The exhaust insulation caught fire. The unit was shut down and the flame went out. A weak spring on the flapper valve was a possible cause.

## Fire No. 86

<b>Date:</b>	11-Nov-2000	<b>Operator:</b>	Shell Offshore, Inc.
<b>MMS Investigation Report:</b>	No	<b>Activity:</b>	Development/Production
<b>Lease:</b>	G06178	<b>Event(s):</b>	Fire
<b>Area:</b>	High Island	<b>Operation:</b>	Drilling
<b>Block:</b>	A 20	<b>Cause:</b>	Other—spontaneous combustion
<b>Rig/Platform:</b>	Chiles Magellan	<b>Water Depth:</b>	105 feet

**Remarks:** Mops that were used to clean diesel residue from the floor were placed in a 55-gallon drum. The mopheads ignited spontaneously and were noticed by a deckhand. The 2-foot flames were extinguished using a 30-lb dry chemical unit.

## Fire No. 87

<b>Date:</b>	15-Nov-2000	<b>Operator:</b>	Bois d'Arc Offshore, L.L.C.
<b>MMS Investigation Report:</b>	Completed	<b>Activity:</b>	Development/Production
<b>Lease:</b>	G12027	<b>Event(s):</b>	Fire
<b>Area:</b>	South Pelto	<b>Operation:</b>	Production
<b>Block:</b>	5	<b>Cause:</b>	Equipment Failure
<b>Rig/Platform:</b>	B (Caisson No. 3)	<b>Water Depth:</b>	34 feet

**Remarks:** Two operators noticed liquid falling from the still column on the glycol reboiler and began to shut in the glycol reboiler when they noticed a small fire coming from the flange on the glycol reboiler stack. The fire was extinguished immediately using a 30-lb fire extinguisher and a firehose. There were no injuries or pollution. The investigation findings showed that because of the well's paraffin content, the glycol contactor was contaminated with condensate and paraffin from the high-pressure separator due to foaming. The paraffin plugged the ceramic saddles in the still column of the reboiler causing the condensate in the still column not to drain back into the reboiler. This caused condensate to escape through the top of the still column onto the stack. The hot flange ignited the condensate.

## Fire No. 88

<b>Date:</b>	15-Nov-2000	<b>Operator:</b>	Newfield Exploration Company
<b>MMS Investigation Report:</b>	No	<b>Activity:</b>	Development/Production
<b>Lease:</b>	G02696	<b>Event(s):</b>	Fire
<b>Area:</b>	High Island	<b>Operation:</b>	Production
<b>Block:</b>	A 531	<b>Cause:</b>	Equipment Failure
<b>Rig/Platform:</b>	A	<b>Water Depth:</b>	200 feet

**Remarks:** A small fire occurred on a rental air compressor. The fire was extinguished with a 30-lb fire extinguisher. Damage to the compressor was estimated at \$1,000. No other damage was reported.

## Fire No. 89

<b>Date:</b>	16-Nov-2000	<b>Operator:</b>	Apache Oil Corporation
<b>MMS Investigation Report:</b>	Completed	<b>Activity:</b>	Development/Production
<b>Lease:</b>	G02951	<b>Event(s):</b>	Fire
<b>Area:</b>	Main Pass	<b>Operation:</b>	Production
<b>Block:</b>	151	<b>Cause:</b>	Human Error
<b>Rig/Platform:</b>	A	<b>Water Depth:</b>	330 feet

**Remarks:** A re-circulation blower fan was equipped with additional insulation installed over the manufacturer's insulation. The manufacturer's insulation was ignited due to heat from the re-circulation blower. The platform was shut in, and the fire was put out with dry chemical extinguishers. The investigation findings showed that new insulation was installed over the existing insulation, possibly causing a heat buildup, which ignited the older insulation. Also, the original insulation might have had a build up of hydrocarbons. It was recommended that the old insulation be removed before adding new insulation.

## Fire No. 90

**(Welding-related)**

<b>Date:</b>	23-Nov-2000	<b>Operator:</b>	BP Amoco Corporation
<b>MMS Investigation Report:</b>	No	<b>Activity:</b>	Development/Production
<b>Lease:</b>	G02919	<b>Event(s):</b>	Fire
<b>Area:</b>	Ship Shoal	<b>Operation:</b>	Production
<b>Block:</b>	91	<b>Cause:</b>	Human Error
<b>Rig/Platform:</b>	B	<b>Water Depth:</b>	35 feet

**Remarks:** Slag from welding operations on the deck above fell on a tarp on the lower deck, causing it to catch fire. The tarp was over the sewage treatment plant. The platform was already shut in. The fire was extinguished immediately with a 30-lb handheld fire extinguisher.

## Fire No. 91

<b>Date:</b>	29-Nov-2000	<b>Operator:</b>	Phillips Petroleum Corporation
<b>MMS Investigation Report:</b>	No	<b>Activity:</b>	Development/Production
<b>Lease:</b>	00434	<b>Event(s):</b>	Fire
<b>Area:</b>	Ship Shoal	<b>Operation:</b>	Production
<b>Block:</b>	149	<b>Cause:</b>	Equipment Failure
<b>Rig/Platform:</b>	A	<b>Water Depth:</b>	45 feet

**Remarks:** Natural gas that was escaping from the crankcase of the compressor ignited and burned a small plastic piece on the vent. The fire was quickly extinguished and the vent was redirected.

## Fire No. 92

<b>Date:</b>	30-Nov-2000	<b>Operator:</b>	BP Amoco Corporation
<b>MMS Investigation Report:</b>	No	<b>Activity:</b>	Development/Production
<b>Lease:</b>	G01608	<b>Event(s):</b>	Fire
<b>Area:</b>	South Pass	<b>Operation:</b>	Production
<b>Block:</b>	60	<b>Cause:</b>	Human Error
<b>Rig/Platform:</b>	A	<b>Water Depth:</b>	185 feet

**Remarks:** Hot charcoals put in a trash bin caused a fire.

## Fire No. 93

<b>Date:</b>	02-Dec-2000	<b>Operator:</b>	Exxon Mobil Corporation
<b>MMS Investigation Report:</b>	No	<b>Activity:</b>	Development/Production
<b>Lease:</b>	G01619	<b>Event(s):</b>	Fire
<b>Area:</b>	South Pass	<b>Operation:</b>	Drilling
<b>Block:</b>	93	<b>Cause:</b>	Equipment Failure
<b>Rig/Platform:</b>	Ensco 24	<b>Water Depth:</b>	448 feet

**Remarks:** A small fire on the rig top drive motor brakes was extinguished by the derrick man, who saw smoke and arc light flashes coming from the derrick.

## Fire No. 94

<b>Date:</b>	05-Dec-2000	<b>Operator:</b>	Amerada Mess Corporation
<b>MMS Investigation Report:</b>	No	<b>Activity:</b>	Exploration
<b>Lease:</b>	G12978	<b>Event(s):</b>	Fire
<b>Area:</b>	South Timbalier	<b>Operation:</b>	Drilling
<b>Block:</b>	251	<b>Cause:</b>	Equipment Failure
<b>Rig/Platform:</b>	Diamond Ocean Champion	<b>Water Depth:</b>	180 feet

**Remarks:** A fire occurred in the insulation on the exhaust manifold of the No. 2 RMD motor. Oil accumulated in the insulation of the exhaust. Heat is suspected to have ignited the fire. The fire was quickly extinguished with a handheld fire extinguisher.

## Fire No. 95

<b>Date:</b>	10-Dec-2000	<b>Operator:</b>	Chevron U.S.A., Inc.
<b>MMS Investigation Report:</b>	No	<b>Activity:</b>	Exploration
<b>Lease:</b>	G12008	<b>Event(s):</b>	Fire
<b>Area:</b>	Ship Shoal	<b>Operation:</b>	Drilling
<b>Block:</b>	349	<b>Cause:</b>	Other—natural gas seep
<b>Rig/Platform:</b>	A	<b>Water Depth:</b>	367

**Remarks:** While a cut was being made on a 30-inch casing, the cutting torch ignited natural gas that had seeped to the top of the casing. The flash fire went out by itself.

## Fire No. 96

<b>Date:</b>	13-Dec-2000	<b>Operator:</b>	Shell Offshore, Inc.
<b>MMS Investigation Report:</b>	No	<b>Activity:</b>	Development/Production
<b>Lease:</b>	G07824	<b>Event(s):</b>	Fire
<b>Area:</b>	Main Pass	<b>Operation:</b>	Other—crane operations
<b>Block:</b>	252	<b>Cause:</b>	Human Error
<b>Rig/Platform:</b>	A	<b>Water Depth:</b>	277 Feet

**Remarks:** A soft rope tagline on a crane load got caught in an exposed hot exhaust pipe on the turbine gas compressor. The tagline was removed from the exhaust and the fire extinguished on its own. Only the rope was damaged.

## Fire No. 97

<b>Date:</b>	15-Dec-2000	<b>Operator:</b>	Murphy Exploration & Production Company
<b>MMS Investigation Report:</b>	No	<b>Activity:</b>	Development/Production
<b>Lease:</b>	G01023	<b>Event(s):</b>	Fire
<b>Area:</b>	Ship Shoal	<b>Operation:</b>	Production
<b>Block:</b>	224	<b>Cause:</b>	Equipment Failure
<b>Rig/Platform:</b>	A	<b>Water Depth:</b>	130 feet

**Remarks:** Upon investigation after an ESD alarm shut in the platform, a TSE was found burned out above the glycol reboiler and the insulation was burned. Water was used to cool down the component.

## Fire No. 98

(Welding-related)

<b>Date:</b>	17-Dec-2000	<b>Operator:</b>	Newfield Exploration Company
<b>MMS Investigation Report:</b>	No	<b>Activity:</b>	Development/Production
<b>Lease:</b>	G01604	<b>Event(s):</b>	Fire
<b>Area:</b>	West Delta	<b>Operation:</b>	Production
<b>Block:</b>	152	<b>Cause:</b>	Human Error
<b>Rig/Platform:</b>	A	<b>Water Depth:</b>	373 feet

**Remarks:** Welding was being performed on a JPS field transport tank on the top production deck when a piece of molten steel slag was blown down to the deck below. The slag fell into an out-of-service line heater skid, igniting a small fire. The fire watch extinguished the fire with a 30-lb dry chemical unit.

## Fire No. 99

<b>Date:</b>	17-Dec-2000	<b>Operator:</b>	Vastar Resources, Inc.
<b>MMS Investigation Report:</b>	No	<b>Activity:</b>	Development/Production
<b>Lease:</b>	00175	<b>Event(s):</b>	Fire
<b>Area:</b>	Grand Isle	<b>Operation:</b>	Production
<b>Block:</b>	43	<b>Cause:</b>	Equipment Failure
<b>Rig/Platform:</b>	AA-CMP	<b>Water Depth:</b>	110 feet

**Remarks:** A flange leaked hot glycol into the insulation between the glycol shell heat exchange. The insulation created a small fire, which was extinguished immediately.

## Fire No. 100

<b>Date:</b>	21-Dec-2000	<b>Operator:</b>	Chevron U.S.A., Inc.
<b>MMS Investigation Report:</b>	Completed	<b>Activity:</b>	Development/Production
<b>Lease:</b>	G03998	<b>Event(s):</b>	Fire
<b>Area:</b>	Ship Shoal	<b>Operation:</b>	Production
<b>Block:</b>	182	<b>Cause:</b>	Human Error
<b>Rig/Platform:</b>	C	<b>Water Depth:</b>	55 feet

**Remarks:** A small fire occurred due to duct tape being left on a hot nozzle on the glycol reboiler. The intense heat ignited the duct tape. The operator extinguished the fire with a garden hose after an attempt using a 30-lb portable fire extinguisher failed. The investigation findings revealed that the incident occurred due to the duct tape that was used to patch a 2-inch nozzle in the vapor space of the reboiler. The lease operator circulated a Safety Alert about the auto-ignition of combustible materials left in contact with elevated temperatures.

## Fire No. 101

<b>Date:</b>	27-Dec-2000	<b>Operator:</b>	Exxon Mobil Corporation
<b>MMS Investigation Report:</b>	No	<b>Activity:</b>	Development/Production
<b>Lease:</b>	G06093	<b>Event(s):</b>	Fire
<b>Area:</b>	Galveston	<b>Operation:</b>	Production
<b>Block:</b>	209	<b>Cause:</b>	Human Error
<b>Rig/Platform:</b>	C	<b>Water Depth:</b>	58 feet

**Remarks:** A small fire occurred in the heating and air conditioning system of the living quarters. It appears that trash in the ductwork was next to a heater and caught fire. The fire was extinguished with two 30-lb fire extinguishers. Damage, due mainly to smoke, was estimated between \$10,000 to \$15,000.



## GOM Injuries (62 total)

### Injury No. 1

<b>Date:</b>	02-Jan-2000	<b>Operator:</b>	Callon Petroleum Operating Company
<b>MMS Investigation Report:</b>	No	<b>Activity:</b>	Development/Production
<b>Lease:</b>	G06842	<b>Event(s):</b>	Injury
<b>Area:</b>	CA	<b>Operation:</b>	Production
<b>Block:</b>	40	<b>Cause:</b>	Human Error
<b>Rig/Platform:</b>	A	<b>Water Depth:</b>	108 feet

**Remarks:** The injured person was attempting to raise the escape capsule using a manual wrench. The capsule started to fall and the injured person attempted to set the brake. The hand crank for the winch hit him in the head and his left hand.

### Injury No. 2

<b>Date:</b>	10-Jan-2000	<b>Operator:</b>	Chevron Corporation
<b>MMS Investigation Report:</b>	No	<b>Activity:</b>	Development/Production
<b>Lease:</b>	G02445	<b>Event(s):</b>	Injury
<b>Area:</b>	Viosca Knoll	<b>Operation:</b>	Drilling
<b>Block:</b>	900	<b>Cause:</b>	Human Error
<b>Rig/Platform:</b>	ISS No. 17	<b>Water Depth:</b>	340 feet

**Remarks:** The rig travel block struck a floorhand's foot during an attempt to latch onto another stand of drill pipe while pulling a double stand of drill pipe out of the hole and attempting to guide the stand from the drill basket to the rocking board. The employee's heel/foot was injured, requiring surgery.

### Injury Nos. 3, 4, 5

<b>Date:</b>	11-Jan-2000	<b>Operator:</b>	British-Borneo Exploration, Inc.
<b>MMS Investigation Report:</b>	Completed	<b>Activity:</b>	Exploration
<b>Lease:</b>	G12145	<b>Event(s):</b>	3 injuries
<b>Area:</b>	Ewing Bank	<b>Operation:</b>	Drilling
<b>Block:</b>	965	<b>Cause:</b>	Equipment Failure
<b>Rig/Platform:</b>	Diamond Ocean Endeavor	<b>Water Depth:</b>	1,630 feet

**Remarks:** While the rig crew deployed the IWOCS (Installation and Workover Control System) umbilical lines in the moon pool area of the rig, the pad eye and cable for the umbilical reel broke free and subsequently injured three employees. The umbilical line was being lowered and clamps were being installed every 50 feet to clamp the hydraulic hoses and electric hoses to a stainless steel guide. Once the final depth was achieved, the crew lifted the umbilical assembly 35 feet to attach the last clamp located at the waterline and then lowered the assembly back down. One of the crew detected a split in the electric line coating. The crew was attempting to lift the assembly back up 5 feet to repair the electric line, when the assembly snagged on something, which overloaded the winch. Unable to determine why the assembly had hung up, the crew began pulling up the assembly again when the pad eye supporting the sheaves and cable broke free. The pad eye and cable fell about 30 feet toward the moon pool area, putting tension on the electric hose and pulling the electric hose reel forward, pinning the leg of one employee to the hand rail. The cable and electric hoses fell on two other employees. The three injured personnel were transported to the nearest hospital.

## Injury No. 6

<b>Date:</b>	15-Jan-2000	<b>Operator:</b>	Chevron U.S.A., Inc
<b>MMS Investigation Report:</b>	No	<b>Activity:</b>	Development/Production
<b>Lease:</b>	G02940	<b>Event(s):</b>	Injury
<b>Area:</b>	South Pass	<b>Operation:</b>	Production
<b>Block:</b>	57	<b>Cause:</b>	Human Error/Weather Related
<b>Rig/Platform:</b>	B	<b>Water Depth:</b>	194 feet

**Remarks:** A roustabout was injured while being lowered in a personnel basket from the platform to a motor vessel below. While being lowered, the basket caught on the edge of a toolbox, tilted, and the man fell to the boat deck.

## Injury No. 7

(Crane-related)

<b>Date:</b>	11-Feb-2000	<b>Operator:</b>	Exxon Corporation
<b>MMS Investigation Report:</b>	No	<b>Activity:</b>	Development/Production
<b>Lease:</b>	00026	<b>Event(s):</b>	Injury
<b>Area:</b>	West Delta	<b>Operation:</b>	Drilling
<b>Block:</b>	30	<b>Cause:</b>	Equipment Failure
<b>Rig/Platform:</b>	J/Ensco 86	<b>Water Depth:</b>	45 feet

**Remarks:** While being moved by the starboard-side crane, a 12-inch overboard hose struck an individual. The rope that attached the hose to the crane hook broke and fell on a worker standing under the hose. The hose struck the worker's left shoulder and arm.

## Injury No. 8

<b>Date:</b>	13-Feb-2000	<b>Operator:</b>	Vastar Resources, Inc.
<b>MMS Investigation Report:</b>	No	<b>Activity:</b>	Development/Production
<b>Lease:</b>	G01608	<b>Event(s):</b>	Injury
<b>Area:</b>	South Pass	<b>Operation:</b>	Production
<b>Block:</b>	60	<b>Cause:</b>	Human Error
<b>Rig/Platform:</b>	C	<b>Water Depth:</b>	192 feet

**Remarks:** While performing maintenance on the crane, an employee injured his right knee when he planted his foot on the crane platform deck (steel grating) and then turned, twisting his knee. Surgery was required to repair the knee.

## Injury No. 9

<b>Date:</b>	04-Mar-2000	<b>Operator:</b>	Santa Fe Snyder Corporation
<b>MMS Investigation Report:</b>	Completed	<b>Activity:</b>	Development/Production
<b>Lease:</b>	G13035	<b>Event(s):</b>	Injury/Hose Rupture
<b>Area:</b>	Main Pass	<b>Operation:</b>	Workover/Other--Test BOP's
<b>Block:</b>	261	<b>Cause:</b>	Equipment Failure/Human Error
<b>Rig/Platform:</b>	A/Sundowner I	<b>Water Depth:</b>	282 feet

**Remarks:** The "Sundowner I" drill crew was testing the BOP System. An employee was sent into the derrick to grease the leaking Kelly swivel, where he remained after completing the task. The driller directed the employee to move back to the corner of the derrick. The rig crew proceeded to test the Kelly hose to 5,000 lbs. The Kelly hose held the 5,000 lbs. of pressure for several moments, then the Kelly hose burst and parted about 12 inches from the hammer union on the Kelly hose, releasing test fluid. The test fluid struck the employee who had started to descend the derrick via a ladder. His safety harness kept him from falling out of the derrick. He managed to climb down out of the derrick by himself but received serious internal injuries as a result of this accident.

## Injury Nos. 10, 11, 12, 13 (also listed as Fire No. 13)

<b>Date:</b>	07-Mar-2000	<b>Operator:</b>	BP Amoco Corporation
<b>MMS Investigation Report:</b>	No	<b>Activity:</b>	Development/Production
<b>Lease:</b>	G06898	<b>Event(s):</b>	Fire and 4 injuries
<b>Area:</b>	Viosca Knoll	<b>Operation:</b>	Drilling
<b>Block:</b>	989	<b>Cause:</b>	Equipment Failure
<b>Rig/Platform:</b>	H&P 100	<b>Water Depth:</b>	1,290 feet

**Remarks:** The deep fat fryer in the rig's kitchen caught on fire. It was extinguished immediately by the CO<sub>2</sub> system located over the deep fat fryer and three 30-lb dry chemical units. Three people were treated for smoke inhalation and one person for a burn.

## Injury No. 14

<b>Date:</b>	10-Mar-2000	<b>Operator:</b>	Chevron U.S.A., Inc.
<b>MMS Investigation Report:</b>	Completed	<b>Activity:</b>	Development/Production
<b>Lease:</b>	00385	<b>Event(s):</b>	Injury
<b>Area:</b>	West Delta	<b>Operation:</b>	Drilling
<b>Block:</b>	28	<b>Cause:</b>	Human Error
<b>Rig/Platform:</b>	Sundowner Dolphin II	<b>Water Depth:</b>	38 feet

**Remarks:** A derrickhand had both hands caught in the air hoist sheave during an operation to service the crown block. Three fingers on his left hand and two fingers on his right hand were amputated. The drill crew had pulled the drill string out of the hole and was greasing the crown and travel block when the accident occurred. The derrickhand greased the crown sheaves first and descended to the air hoist sheaves. The driller, seeing the derrickhand begin his descent, assumed he had completed his task and was coming down from the derrick. The driller instructed the floorhands to service the traveling block, not realizing that the derrickhand had stopped at the air hoist sheave to service it. The floorhands engaged the air hoist and attempted to lift the person in the riding belt into the derrick. A roustabout on the pipe rack heard the derrickhand in distress. The operation was stopped immediately and the drill crew rescued the derrickhand. The investigation showed (1) that the drill crew failed to perform a complete Job Safety Analysis before beginning the task and (2) that the drill crew failed to have a meeting on the rig floor and communicate their activities before starting to grease the crown and air hoist sheaves.

**Injury No. 15****(Crane-related)**

<b>Date:</b>	16-Mar-2000	<b>Operator:</b>	BP Amoco Corporation
<b>MMS Investigation Report:</b>	Completed	<b>Activity:</b>	Exploration
<b>Lease:</b>	G14658	<b>Event(s):</b>	Injury
<b>Area:</b>	Mississippi Canyon	<b>Operation:</b>	Drilling
<b>Block:</b>	822	<b>Cause:</b>	Equipment Failure/Human Error
<b>Rig/Platform:</b>	Discoverer Enterprise	<b>Water Depth:</b>	6,300 feet

**Remarks:** A crew member was hit in the head, left arm, and shoulder by a 2-inch drill line that had slipped through the primary clamp while being hoisted by the rig crane. The 2-inch cable clamp failed. It had not been tested before the slipping and cutting of the drill line began. It had last been load tested on March 3, 1999, and should have been re-certified on March 3, 2000. The incident occurred when the running end of the line reached an elevation about 67 feet above the motor shed and the cable pulled through the clamp and fell to the shed on the rig floor. As the cable fell, it struck a floorhand on the head, face, and upper body, lacerating his head and face, bruising his left upper arm, and fracturing his right shoulder blade.

**Injury No. 16 (also listed as Other Event No. 8)****(Crane Incident)**

<b>Date:</b>	21-Mar-2000	<b>Operator:</b>	LLECO Holdings, Inc.
<b>MMS Investigation Report:</b>	Completed	<b>Activity:</b>	Development/Production
<b>Lease:</b>	G01569	<b>Event(s):</b>	Injury/Other--Crane Accident
<b>Area:</b>	South Timbalier	<b>Operation:</b>	Production
<b>Block:</b>	185	<b>Cause:</b>	Human Error/Equipment Failure
<b>Rig/Platform:</b>	A	<b>Water Depth:</b>	180 feet

**Remarks:** While moving a 25-barrel tank of calcium bromide on the deck of the vessel, the crane snapped at the pedestal and fell onto the vessel below. The crane operator was injured. Sea conditions at the time were 3 to 5 feet seas. The investigation findings showed that the crane operator had minimal experience and operated the crane outside of the designed limitations of the crane by picking up weight outside the crane's safe load limitations. Also, the on-site supervisor failed to recognize hazards or ignored them. Underlying causes included personnel factors, capability, knowledge and skill, stress, improper motivation, job factors, organizational structure, management and supervision. It was recommended that MMS issue a safety alert to heighten awareness of API Specification 2C, specifically the current recommended ball ring design criteria and those manufactured under different design criteria. For details read OCS Report MMS 2001-010 located on our website at [http://www.gomr.mms.gov/homepg/offshore/safety/acc\\_repo/01-010.pdf](http://www.gomr.mms.gov/homepg/offshore/safety/acc_repo/01-010.pdf).

**Injury Nos. 17, 18****(Crane Incident)**

<b>Date:</b>	31-Mar-2000	<b>Operator:</b>	Stone Energy Corporation
<b>MMS Investigation Report:</b>	Completed	<b>Activity:</b>	Exploration
<b>Lease:</b>	00762	<b>Event(s):</b>	2 Injuries
<b>Area:</b>	West Cameron	<b>Operation:</b>	Completion
<b>Block:</b>	176	<b>Cause:</b>	Equipment Failure
<b>Rig/Platform:</b>	Cliffs Drilling 156	<b>Water Depth:</b>	50 feet

**Remarks:** While equipment was being moved from the rig to a workboat, a boom cable parted allowing the boom to collapse onto the boat. The loose cable struck one employee and the other employee fell while trying to avoid the loose cable.

## Injury No. 19

<b>Date:</b>	02-Apr-2000	<b>Operator:</b>	Chevron U.S.A., Inc.
<b>MMS Investigation Report:</b>	No	<b>Activity:</b>	Exploration
<b>Lease:</b>	G10930	<b>Event(s):</b>	Injury (1)
<b>Area:</b>	Viosca Knoll	<b>Operation:</b>	Drilling
<b>Block:</b>	251	<b>Cause:</b>	Human Error
<b>Rig/Platform:</b>	Pride Texas	<b>Water Depth:</b>	120 feet

**Remarks:** The injured person was in the derrick at the crown with a safety belt on. He was standing on the traveling block. An air hoist was being used to raise a tubing-testing cable and tools. The injured person observed a ¾-inch piece of rope that had become entangled with the cable as it was being raised to him. He leaned over to retrieve the rope, and his right hand was pulled into a sheave by the cable. Two of his fingers were amputated.

## Injury No. 20

<b>Date:</b>	24-Apr-2000	<b>Operator:</b>	British-Borneo Exploration, Inc.
<b>MMS Investigation Report:</b>	No	<b>Activity:</b>	Exploration
<b>Lease:</b>	G07049	<b>Event(s):</b>	Injury(1)
<b>Area:</b>	Green Canyon	<b>Operation:</b>	Drilling
<b>Block:</b>	254	<b>Cause:</b>	Human Error
<b>Rig/Platform:</b>	Atwood Hunter	<b>Water Depth:</b>	3,135

**Remarks:** While running casing, one of the floorhands attempted to perform a last minute function that was forgotten. He was attempting to put a bag on the spider (a piece of casing running equipment). Not knowing the floorhand had moved to his new location, the driller picked up a joint of casing. The casing swung pinning the floorhand between the casing and the spider.

## Injury No. 21

<b>Date:</b>	03-May-2000	<b>Operator:</b>	OXY U.S.A., Inc.
<b>MMS Investigation Report:</b>	No	<b>Activity:</b>	Development/Production
<b>Lease:</b>	G03108	<b>Event(s):</b>	Injury(1)
<b>Area:</b>	Matagorda Island	<b>Operation:</b>	Production
<b>Block:</b>	700	<b>Cause:</b>	Human Error
<b>Rig/Platform:</b>	A	<b>Water Depth:</b>	104 feet

**Remarks:** The artery of an employee's left upper arm was penetrated by a flying piece of metal chipped from a bolt, which was being removed from the auxiliary winch of the crane. A hammer and center punch was being used at the time to remove the bolt.

## Injury No. 22

<b>Date:</b>	04-May-2000	<b>Operator:</b>	Amoco Production Company
<b>MMS Investigation Report:</b>	No	<b>Activity:</b>	Exploration
<b>Lease:</b>	G0500	<b>Event(s):</b>	Injury(1)
<b>Area:</b>	Matagorda Isle	<b>Operation:</b>	Drilling
<b>Block:</b>	622	<b>Cause:</b>	Slip/Trip/Fall
<b>Rig/Platform:</b>	Ensco 82/C	<b>Water Depth:</b>	84 feet

**Remarks:** A roustabout leaned against a handrail near the starboard leg of the rig. The handrail sheared off at the base causing him to fall through the leg well area from the main deck 91 feet to the water. He suffered minor bruising to his lower chest and several lacerations on arms and legs caused by the barnacle growth on jack-up legs. He returned to work the next day.

## Injury No. 23

<b>Date:</b>	04-May-2000	<b>Operator:</b>	BP Amoco Corporation
<b>MMS Investigation Report:</b>	Completed	<b>Activity:</b>	Development/Production
<b>Lease:</b>	G14658	<b>Event(s):</b>	Injury(1)
<b>Area:</b>	Mississippi Canyon	<b>Operation:</b>	Drilling
<b>Block:</b>	822	<b>Cause:</b>	Human Error
<b>Rig/Platform:</b>	TSF Discoverer Enterprise	<b>Water Depth:</b>	6,300 feet

**Remarks:** A sudden release of pressure caused a ½-inch hydraulic hose with a steel coupling on the end to buck violently and strike the face of the worker who was holding it. The roughneck was using the hose to function test the BOP. The hose was being filled with light pressure BOP fluid to purge the air from it. The hose was connected to a three-position valve input port that was connected to the downstream side of a regulator coming from the rig BOP accumulator room. The BOP accumulator maintains a pressure of about 5,000 psi. While one worker controlled the rate of purge, another worker held the free end of the hose until it was purged of air and then connected it to the BOP device. The handle of the three-position valve was pushed too far in the wrong direction, and it is believed that 1,600 psi was pumped into the hose inadvertently. An investigation determined that unsafe and unworkmanlike procedures were used during the BOP hose purging operation.

## Injury No. 24

<b>Date:</b>	10-May-2000	<b>Operator:</b>	Vastar Resources Corporation
<b>MMS Investigation Report:</b>	No	<b>Activity:</b>	Development/Production
<b>Lease:</b>	G01608	<b>Event(s):</b>	Injury(1)
<b>Area:</b>	South Pass	<b>Operation:</b>	Production/Motor Vessel
<b>Block:</b>	60	<b>Cause:</b>	Human Error
<b>Rig/Platform:</b>	A	<b>Water Depth:</b>	185 feet

**Remarks:** An employee on the motor vessel was assisting in offloading equipment from the motor vessel onto the above platform when he twisted his right wrist.

## Injury No. 25

<b>Date:</b>	15-May-2000	<b>Operator:</b>	BP Exploration & Oil, Inc.
<b>MMS Investigation Report:</b>	No	<b>Activity:</b>	Exploration
<b>Lease:</b>	G11076	<b>Event(s):</b>	Injury(1)
<b>Area:</b>	Green Canyon	<b>Operation:</b>	Drilling
<b>Block:</b>	563	<b>Cause:</b>	Equipment Failure
<b>Rig/Platform:</b>	Glomar Celtic Sea	<b>Water Depth:</b>	4,144 feet

**Remarks:** A bolt failure on the high-pressure mud pump released mud, striking an employee in the right ankle. He was treated for a dislocated ankle.

## Injury No. 26

<b>Date:</b>	17-May-2000	<b>Operator:</b>	Coastal Oil & Gas Corporation
<b>MMS Investigation Report:</b>	No	<b>Activity:</b>	Exploration
<b>Lease:</b>	G17912	<b>Event(s):</b>	Injury(1)
<b>Area:</b>	Vermilion	<b>Operation:</b>	Drilling
<b>Block:</b>	253	<b>Cause:</b>	Human Error
<b>Rig/Platform:</b>	Rowan Cecil Provine	<b>Water Depth:</b>	78 feet

**Remarks:** An employee was mixing caustic in a drum. He filled half of the drum with water and mixed in two sacks of caustic. The drum boiled over, splashing the employee on the chest. The employee jumped back, fell, and slipped under the drum. Caustic spilled over most of his body.

## Injury No. 27

<b>Date:</b>	20-May-2000	<b>Operator:</b>	El Paso Production Company
<b>MMS Investigation Report:</b>	Completed	<b>Activity:</b>	Exploration
<b>Lease:</b>	G21153	<b>Event(s):</b>	Injury(1)
<b>Area:</b>	Viosca Knoll	<b>Operation:</b>	Drilling
<b>Block:</b>	475	<b>Cause:</b>	Human Error
<b>Rig/Platform:</b>	R&B Falcon 201	<b>Water Depth:</b>	137 feet

**Remarks:** The rig motor man was checking the fluid level in a radiator of a diesel engine. When he removed the radiator cap, the hot fluid sprayed him, and he fell off the brace he was standing on, 46 inches to the deck below. He injured one leg and received burns to his face and upper torso. The operator was issued a violation because the motorman was not provided an elevated work stand deck to safely perform equipment maintenance duties. Sight glasses were not installed on the radiators to determine the fluid levels. Also, there was no relief valve to relieve the pressure inside the radiator before removing the cap.

## Injury Nos. 28, 29

<b>Date:</b>	21-May-2000	<b>Operator:</b>	Ocean Energy, Inc.
<b>MMS Investigation Report:</b>	Completed	<b>Activity:</b>	Development/Production
<b>Lease:</b>	G01967	<b>Event(s):</b>	Injury(1)
<b>Area:</b>	Main Pass	<b>Operation:</b>	Drilling
<b>Block:</b>	153	<b>Cause:</b>	Human Error
<b>Rig/Platform:</b>	Glomar Adriatic IX/Platform B	<b>Water Depth:</b>	290 feet

**Remarks:** The rig drilling crew was running into the well with 5-inch drill pipe when the accident occurred. The crew picked up 5-inch drill pipe from the rig V-door with an air hoist and wire rope slings and was preparing to stab the joint of pipe into the mouse hole on the rig floor. A joint of drill pipe struck the top drive causing it to be released from the wire rope sling. The pipe struck a rig floorhand. Investigation findings showed that the drill crew did not use a secured fastening device to attach the joint of drill pipe to the air hoist cable before lifting operations began. The rig top drive was lowered before the drill pipe was securely stabbed and lowered into the mouse hole. The operator and contractor did not have properly established standards for the handling of drill string equipment during rig operations.

## Injury No. 30

(Crane-related)

<b>Date:</b>	28-May-2000	<b>Operator:</b>	Callon Petroleum Operating Company
<b>MMS Investigation Report:</b>	No	<b>Activity:</b>	Development/Production
<b>Lease:</b>	G06842	<b>Event(s):</b>	Injury(1)
<b>Area:</b>	Chandeleur Area	<b>Operation:</b>	Production
<b>Block:</b>	40	<b>Cause:</b>	Human Error
<b>Rig/Platform:</b>	Platform A	<b>Water Depth:</b>	108

**Remarks:** The crane was picking up a personnel basket when the tag line got hung up between oil tanks. An employee reached over to pull the tag line free and injured his back.

## Injury No. 31

<b>Date:</b>	03-Jun-2000	<b>Operator:</b>	Shell Offshore, Inc.
<b>MMS Investigation Report:</b>	Completed	<b>Activity:</b>	Exploration
<b>Lease:</b>	G16698	<b>Event(s):</b>	Injury(1)
<b>Area:</b>	Green Canyon	<b>Operation:</b>	Drilling
<b>Block:</b>	155	<b>Cause:</b>	Equipment Failure
<b>Rig/Platform:</b>	Diamond Ocean Worker	<b>Water Depth:</b>	1,890 feet

**Remarks:** An overshot assembly weighing 450 pounds fell from a suspended vertical position to a horizontal position on the drill floor, knocking a rig floor workman down and striking his left leg. The workman was sent to the hospital and was in good condition. Investigation findings showed that during the process of freeing a stuck electric line cable, the iron roughneck malfunctioned because of a partially inoperable hydraulic valve within the pipe spinner lifting system.



## Injury No. 32

<b>Date:</b>	06-Jun-2000	<b>Operator:</b>	Enron Corp.
<b>MMS Investigation Report:</b>	Completed	<b>Activity:</b>	Development/Production
<b>Lease:</b>	G14467	<b>Event(s):</b>	Injury(1)
<b>Area:</b>	Eugene Island	<b>Operation:</b>	Drilling
<b>Block:</b>	135	<b>Cause:</b>	Slip/Trip/Fall
<b>Rig/Platform:</b>	A	<b>Water Depth:</b>	68 feet

**Remarks:** A welder was seriously injured when he fell 15 to 20 feet from a scaffolding platform located inside a preload tank of the drilling rig. He was diagnosed with a broken clavicle and concussion. Investigation findings showed that the worker failed to secure his safety harness in accordance with the rig's safety program. Furthermore, the company failed to assure that fall protection equipment was in use by all personnel in accordance with the regulations. A contributing factor was that the scaffold was not secured properly. The welding crew failed to communicate sufficiently that the scaffold had been moved and that the tie down that normally holds the scaffold secure had not been replaced.

## Injury No. 33

<b>Date:</b>	18-Jun-2000	<b>Operator:</b>	Exxon Mobil Corporation
<b>MMS Investigation Report:</b>	No	<b>Activity:</b>	Development/Production
<b>Lease:</b>	G10380	<b>Event(s):</b>	Injury(1)
<b>Area:</b>	Alaminos Canyon	<b>Operation:</b>	Drilling
<b>Block:</b>	25	<b>Cause:</b>	Human Error
<b>Rig/Platform:</b>	ENSCO 26/A (Hoover)	<b>Water Depth:</b>	4,825 feet

**Remarks:** A worker had gone into the derrick on a man rider winch to untangle elevators from the top drive service loop. As he was being raised to the monkey board, the shackle from his riding board system got hung up on the top drive. The winch continued to pull until the shackle came free, shooting the worker up into the derrick board racking fingers. The worker sustained injuries to the head, neck, abdomen, and ribs.

## Injury No. 34

<b>Date:</b>	28-Jun-2000	<b>Operator:</b>	Dominion Exploration & Production, Inc.
<b>MMS Investigation Report:</b>	No	<b>Activity:</b>	Development/Production
<b>Lease:</b>	G02391	<b>Event(s):</b>	Injury(1)
<b>Area:</b>	High Island A	<b>Operation:</b>	Production/Other--Construction
<b>Block:</b>	571	<b>Cause:</b>	Human Error
<b>Rig/Platform:</b>	A	<b>Water Depth:</b>	283 feet

**Remarks:** A worker suffered a compound fracture of his left ankle, pain in his lower back, hip and left shoulder, which he sustained from a fall. He was removing a deck plate, when he slipped, lost his balance, and fell through the beams and into the water, hitting a diagonal brace above the waterline on the way down. The worker was not using safety equipment.

## Injury No. 35

<b>Date:</b>	28-Jun-2000	<b>Operator:</b>	Bellwether Exploration Company
<b>MMS Investigation Report:</b>	No	<b>Activity:</b>	Exploration
<b>Lease:</b>	G06237	<b>Event(s):</b>	Injury(1)
<b>Area:</b>	High Island A	<b>Operation:</b>	Drilling
<b>Block:</b>	553	<b>Cause:</b>	Human Error
<b>Rig/Platform:</b>	ENSCO 60	<b>Water Depth:</b>	263 feet

**Remarks:** A worker was running casing when the stabbing board fell. The worker sustained facial fractures, a broken right wrist, and a laceration above his right eye.

## Injury No. 36

<b>Date:</b>	01-Jul-2000	<b>Operator:</b>	El Paso Production Company
<b>MMS Investigation Report:</b>	No	<b>Activity:</b>	Exploration
<b>Lease:</b>	G18079	<b>Event(s):</b>	Injury(1)
<b>Area:</b>	West Delta	<b>Operation:</b>	Drilling
<b>Block:</b>	136	<b>Cause:</b>	Human Error
<b>Rig/Platform:</b>	Rowan Gorilla IV	<b>Water Depth:</b>	305 feet

**Remarks:** An employee was changing out the chain on the pipe spinner, when his right thumb was smashed between the pipe spinner chain and the pumping sub that was inserted into the pipe spinners to test the repairs. His right thumb was fractured and lacerated.

## Injury No. 37

<b>Date:</b>	02-Jul-2000	<b>Operator:</b>	Basin Exploration, Inc.
<b>MMS Investigation Report:</b>	No	<b>Activity:</b>	Exploration
<b>Lease:</b>	00146	<b>Event(s):</b>	Injury(1)
<b>Area:</b>	West Delta	<b>Operation:</b>	Drilling
<b>Block:</b>	58	<b>Cause:</b>	Human Error
<b>Rig/Platform:</b>	Diamond Ocean Crusader	<b>Water Depth:</b>	50

**Remarks:** A rig hand's leg was fractured when a bundle of pipe shifted and a joint of drill pipe rolled onto the worker's leg. He had just unwrapped the sling on the bundle of pipe and had turned to get a pry bar to roll the bundle into place when the bundle shifted.

Injury No. 38, 39, 40 (also listed as Fire No. 48) (Welding-related)			
Date:	11-Jul-2000	Operator:	J.M. Huber Corporation
MMS Investigation Report:	Completed	Activity:	Development/Production
Lease:	G09048	Event(s):	Fire/Injury(3)
Area:	West Cameron	Operation:	Production
Block:	248	Cause:	Human Error
Rig/Platform:	A	Water Depth:	80 feet
<b>Remarks:</b> Three platform operators were slightly burned when a small flash fired occurred while a welder was cutting rusty bolts from the dump valve. All three workers were sent to the hospital and later released. Investigation findings showed that the welder was cutting on hydrocarbon handling equipment. The hydrocarbon handling lines and valves had not been thoroughly flushed and cleaned before beginning the cutting and welding process.			

Injury No. 41 (also listed as Fire No. 53)			
Date:	28-Jul-2000	Operator:	Shell Deepwater Production, Inc.
MMS Investigation Report:	No	Activity:	Development/Production
Lease:	G08241	Event(s):	Fire/Injury(1)
Area:	Garden Banks	Operation:	Workover
Block:	426	Cause:	Other—Completion fluids reaction
Rig/Platform:	A	Water Depth:	2,862 feet
<b>Remarks:</b> An employee suffered first and second degree burns to his face, hands, and arms when a small flash fire occurred in the Cetco weir tank where completion fluids were being treated in conjunction with flowing well A-10. The fire was immediately extinguished with no damage to the platform.			

Injury Nos. 42, 43 (also listed as Collision No. 7)			
Date:	01-Aug-2000	Operator:	Shell Offshore, Inc.
MMS Investigation Report:	Completed	Activity:	Development/Production
Lease:	00046	Event(s):	Collision/Injury(2)
Area:	Eugene Island	Operation:	Workover
Block:	95	Cause:	Human Error
Rig/Platform:	Nabors Dolphin 105	Water Depth:	15 feet
<b>Remarks:</b> The motor vessel sustained major damage and the pilot's legs were seriously injured as a result of a collision with a four-pile well jacket structure and jack-up drilling rig. The investigation findings showed that the wheelhouse of the motor vessel was left unattended allowing the vessel to stray off its charted course and collide with both structures.			

## Injury No. 44 (also listed as Other Event No. 24) (Crane-related)

<b>Date:</b>	22-Aug-2000	<b>Operator:</b>	Union Oil Company of California
<b>MMS Investigation Report:</b>	No	<b>Activity:</b>	Development/Production
<b>Lease:</b>	G02689	<b>Event(s):</b>	Injury(1) (Crane-related)
<b>Area:</b>	High Island	<b>Operation:</b>	Drilling
<b>Block:</b>	A 469	<b>Cause:</b>	Human Error
<b>Rig/Platform:</b>	A	<b>Water Depth:</b>	203 feet

**Remarks:** An employee was performing a lift using the platform crane. A roustabout was operating a fuel valve on the upper deck of the platform crane when the crane rotated and the roustabout was caught between the stairs and the handrail. He suffered fractures with injuries to his shoulder blade and two ribs.

## Injury No. 45

<b>Date:</b>	24-Aug-2000	<b>Operator:</b>	BP Exploration & Oil, Inc.
<b>MMS Investigation Report:</b>	No	<b>Activity:</b>	Exploration
<b>Lease:</b>	G12210	<b>Event(s):</b>	Injury(1)
<b>Area:</b>	Green Canyon	<b>Operation:</b>	Drilling
<b>Block:</b>	201	<b>Cause:</b>	Human Error
<b>Rig/Platform:</b>	Transocean Rather	<b>Water Depth:</b>	2,670 feet

**Remarks:** A derrickman was laying down marine riser on the rig floor. A joint had been disconnected and was being pulled out on the pipe skid with one end on the skate and one end in the elevators. Half of a flotation module fell from the riser joint to the pipe skid, breaking apart, and striking the derrickman on the right side, fracturing his lower right leg.

## Injury No. 46

<b>Date:</b>	27-Aug-2000	<b>Operator:</b>	BP Exploration & Oil, Inc.
<b>MMS Investigation Report:</b>	No	<b>Activity:</b>	Exploration
<b>Lease:</b>	G15555	<b>Event(s):</b>	Injury(1)
<b>Area:</b>	Green Canyon	<b>Operation:</b>	Drilling
<b>Block:</b>	165	<b>Cause:</b>	Human Error
<b>Rig/Platform:</b>	Diamond Ocean America	<b>Water Depth:</b>	2,705 feet

**Remarks:** An employee was working on the drill floor when an electrical connection box dropped 61 feet, striking him on the leg and right arm. The box weighed 61 pounds.

## Injury No. 47

<b>Date:</b>	29-Aug-2000	<b>Operator:</b>	Union Oil Company of California
<b>MMS Investigation Report:</b>	Completed	<b>Activity:</b>	Development/Production
<b>Lease:</b>	00559	<b>Event(s):</b>	Injury(1)
<b>Area:</b>	Vermilion	<b>Operation:</b>	Production
<b>Block:</b>	67	<b>Cause:</b>	Human Error/Other—Improper design of vent line
<b>Rig/Platform:</b>	2	<b>Water Depth:</b>	35 feet

**Remarks:** A worker was injured while blowing down a well through the test separator. The vent line was not anchored and the nipple that was screwed into the top of the separator was not tightened fully. When the worker grabbed the handle, the valve went to full open and caused the line to spin, knocking the worker off the vessel, breaking both of his arms and lacerating his head.

## Injury No. 48

<b>Date:</b>	03-Sep-2000	<b>Operator:</b>	Shell Offshore Inc.
<b>MMS Investigation Report:</b>	No	<b>Activity:</b>	Exploration
<b>Lease:</b>	G06178	<b>Event(s):</b>	Injury(1)
<b>Area:</b>	High Island A	<b>Operation:</b>	Drilling
<b>Block:</b>	20	<b>Cause:</b>	Human Error
<b>Rig/Platform:</b>	Chiles Magellan/Caisson No. 5	<b>Water Depth:</b>	57 feet

**Remarks:** A worker was struck by a lift while he was working on the lower pipe rack helping place a piece of 13 5/8-inch casing that was being unloaded from a boat. The worker's right arm was pinned between the accumulator deck and the casing. His right arm was broken and lacerated.

## Injury No. 49

(Crane-related)

<b>Date:</b>	11-Sep-2000	<b>Operator:</b>	EOG Resources, Inc.
<b>MMS Investigation Report:</b>	No	<b>Activity:</b>	Exploration
<b>Lease:</b>	G07892	<b>Event(s):</b>	Injury(1)
<b>Area:</b>	Viosca Knoll	<b>Operation:</b>	Plug and Abandonment
<b>Block:</b>	213	<b>Cause:</b>	Equipment Failure/Human Error
<b>Rig/Platform:</b>	Cal Dive Uncle John	<b>Water Depth:</b>	122 feet

**Remarks:** A crane operator was injured while attempting to lift a joint of 24-inch caisson from the motor vessel. The crane cable unspooled when the 24-inch caisson was dropped on the deck of the boat. The shackle on the cable struck the crane operator in the head.

## Injury No. 50

<b>Date:</b>	11-Sep-2000	<b>Operator:</b>	Stone Energy Corporation
<b>MMS Investigation Report:</b>	No	<b>Activity:</b>	Development/Production
<b>Lease:</b>	G01238	<b>Event(s):</b>	Injury(1)
<b>Area:</b>	South Pelto	<b>Operation:</b>	Production
<b>Block:</b>	23	<b>Cause:</b>	Human Error
<b>Rig/Platform:</b>	D	<b>Water Depth:</b>	61 feet

**Remarks:** The employee was injured when the ladder he was climbing slipped and fell.

## Injury No. 51, 52

<b>Date:</b>	14-Sep-2000	<b>Operator:</b>	PANOCO, Inc.
<b>MMS Investigation Report:</b>	No	<b>Activity:</b>	Development/Production
<b>Lease:</b>	G02650	<b>Event(s):</b>	Injury(2)
<b>Area:</b>	East Breaks	<b>Operation:</b>	Production/Drilling
<b>Block:</b>	110	<b>Cause:</b>	Equipment Failure
<b>Rig/Platform:</b>	Parker Drilling 41-P	<b>Water Depth:</b>	660

**Remarks:** Two employees were changing halon bottles in the generator room, when the valve of the charged halon bottle broke off. The bottle ricocheted around the generator room and struck both men, breaking a leg of each man.

## Injury No. 53 (also listed as Explosion No. 2)

<b>Date:</b>	23-Sep-2000	<b>Operator:</b>	Anadarko Petroleum Corporation
<b>MMS Investigation Report:</b>	No	<b>Activity:</b>	Development/Production
<b>Lease:</b>	G14482	<b>Event(s):</b>	Injury(1)/Explosion
<b>Area:</b>	Eugene Island	<b>Operation:</b>	Completion
<b>Block:</b>	346	<b>Cause:</b>	Equipment Failure
<b>Rig/Platform:</b>	Parker Rig 3-P/A (Tanzanite)	<b>Water Depth:</b>	320 feet

**Remarks:** The rig electrician received an electrical shock from a 480-volt breaker and consequently sustained a sprained ankle after jumping off the skid where the electrical breaker was located. The blower motor associated with the draw works was not working so the electrician went to the breaker panel to try to energize it, at which time the breaker panel blew up.

## Injury No. 54

<b>Date:</b>	28-Sep-2000	<b>Operator:</b>	W & T Offshore, Inc.
<b>MMS Investigation Report:</b>	No	<b>Activity:</b>	Development/Production
<b>Lease:</b>	G02759	<b>Event(s):</b>	Injury(1)
<b>Area:</b>	High Island	<b>Operation:</b>	Production
<b>Block:</b>	A 389	<b>Cause:</b>	Human Error
<b>Rig/Platform:</b>	A	<b>Water Depth:</b>	410 feet

**Remarks:** An electrician was removing a fuse when it arced, burning his hand and wrist. The generator was offline but the line was still connected to DC power.

## Injury No. 55

<b>Date:</b>	12-Oct-2000	<b>Operator:</b>	El Paso Production Company
<b>MMS Investigation Report:</b>	No	<b>Activity:</b>	Development/Production
<b>Lease:</b>	G18065	<b>Event(s):</b>	Injury(1)
<b>Area:</b>	Grand Isle	<b>Operation:</b>	Drilling
<b>Block:</b>	31	<b>Cause:</b>	Human Error
<b>Rig/Platform:</b>	B/R&B Falcon 203	<b>Water Depth:</b>	25 feet

**Remarks:** While two employees were moving four plate metal sheets, the load fell and hit one worker, breaking his ankle.

## Injury No. 56

<b>Date:</b>	20-Oct-2000	<b>Operator:</b>	Newfield Exploration Company
<b>MMS Investigation Report:</b>	Completed	<b>Activity:</b>	Development/Production
<b>Lease:</b>	00767	<b>Event(s):</b>	Injury(1)
<b>Area:</b>	East Cameron	<b>Operation:</b>	Motor Vessel/Other—Fuel transfer from boat to platform
<b>Block:</b>	47	<b>Cause:</b>	Human Error
<b>Rig/Platform:</b>	JP	<b>Water Depth:</b>	45 feet

**Remarks:** While getting a hose ready to take on diesel, the boat kicked on the diesel pump before the operators were ready. The hose pressured up and popped out. The hose struck a worker in the chest, causing him to swallow some diesel. The investigation findings showed that the boat diesel pump was turned on with improper hose connection and with the diesel hose valve closed. Pump pressure caused the hose to disengage from the improper connection. There should have been better communication between the boat and platform personnel.

## Injury No. 57

<b>Date:</b>	24-Oct-2000	<b>Operator:</b>	Newfield Exploration Company
<b>MMS Investigation Report:</b>	No	<b>Activity:</b>	Development/Production
<b>Lease:</b>	G01014	<b>Event(s):</b>	Injury(1)
<b>Area:</b>	Ship Shoal	<b>Operation:</b>	Production
<b>Block:</b>	145	<b>Cause:</b>	Weather-related
<b>Rig/Platform:</b>	B	<b>Water Depth:</b>	41 feet

**Remarks:** While offloading personnel, a wave surge caused the boat to rise. At this time, an employee fell off the personnel basket, injuring his knee.

## Injury No. 58

<b>Date:</b>	16-Nov-2000	<b>Operator:</b>	Apache Corporation
<b>MMS Investigation Report:</b>	No	<b>Activity:</b>	Exploration
<b>Lease:</b>	G01043	<b>Event(s):</b>	Injury(1)
<b>Area:</b>	Ship Shoal	<b>Operation:</b>	Workover
<b>Block:</b>	293	<b>Cause:</b>	Human Error
<b>Rig/Platform:</b>	B	<b>Water Depth:</b>	236 feet

**Remarks:** A representative was installing a stripper rubber unit. While climbing down the BOPs, he put his hand inside the ram guard when someone was opening the rams. Two fingers on his left hand were smashed.

## Injury No. 59

**(Crane-related)**

<b>Date:</b>	28-Nov-2000	<b>Operator:</b>	Chevron U.S.A., Inc.
<b>MMS Investigation Report:</b>	No	<b>Activity:</b>	Exploration
<b>Lease:</b>	G05911	<b>Event(s):</b>	Injury(1)
<b>Area:</b>	Green Canyon	<b>Operation:</b>	Drilling
<b>Block:</b>	205	<b>Cause:</b>	Human Error
<b>Rig/Platform:</b>	A (Genesis)	<b>Water Depth:</b>	2,590 feet

**Remarks:** An employee's right lower leg was pinned between a load being lifted and an I-beam. The injured employee was in the process of lifting a bundle of four sections of 9 5/8-inch casing from the north pipe rack to the boat. After he communicated with the crane operator via radio to begin the lift, he noticed that the load did not have a tag line. He attempted to contact the crane operator by radio to stop the lift but was unsuccessful in doing so. At this time, the injured employee was looking up at the crane main block. The load was approximately 2 feet above deck and it began to swing, pinning the employee's right lower leg between the load and an I-beam. The employee was taken to the hospital via helicopter.



## Injury No. 60

<b>Date:</b>	14-Dec-2000	<b>Operator:</b>	BP Amoco Corporation
<b>MMS Investigation Report:</b>	No	<b>Activity:</b>	Development/Production
<b>Lease:</b>	G04003	<b>Event(s):</b>	Injury(1)
<b>Area:</b>	Grand Isle	<b>Operation:</b>	Drilling
<b>Block:</b>	90	<b>Cause:</b>	Equipment Failure/Human Error
<b>Rig/Platform:</b>	Glomar Adriatic II	<b>Water Depth:</b>	267 feet

**Remarks:** A rig floorhand was struck when tongs backlashed. The rig was tripping drill pipe and encountered a tight drill pipe tool joint connection while attempting to break the connection. The connection broke suddenly and the breakout tongs backlashed. The tongs swung around, striking the floorhand in the left side.

## Injury No. 61

<b>Date:</b>	15-Dec-2000	<b>Operator:</b>	W & T Offshore, Inc.
<b>MMS Investigation Report:</b>	No	<b>Activity:</b>	Development/Production
<b>Lease:</b>	G06165	<b>Event(s):</b>	Injury(1)
<b>Area:</b>	High Island	<b>Operation:</b>	Production
<b>Block:</b>	177	<b>Cause:</b>	Slip/Trip/Fall
<b>Rig/Platform:</b>	A	<b>Water Depth:</b>	51 feet

**Remarks:** An employee's wrist popped as he pushed on a pipe wrench to tighten a pipe nipple. He was transported to shore by boat the next day for treatment.

## Injury No. 62

<b>Date:</b>	19-Dec-2000	<b>Operator:</b>	Chevron U.S.A., Inc.
<b>MMS Investigation Report:</b>	No	<b>Activity:</b>	Development/Production
<b>Lease:</b>	G02940	<b>Event(s):</b>	Injury(1)
<b>Area:</b>	South Pass	<b>Operation:</b>	Production
<b>Block:</b>	57	<b>Cause:</b>	Equipment Failure
<b>Rig/Platform:</b>	B	<b>Water Depth:</b>	194 feet

**Remarks:** An employee was injured while attempting to hot bolt a flange on the B-21 well casing valve in order to install a check valve. The 1-inch tubing gas lifeline blew apart at a 90 degree fitting on well B-21.

## GOM Losses of Well Control (8 total)

Loss of Well Control No. 1 (also listed as Fire No. 1)			
<b>Date:</b>	02-Jan-2000	<b>Operator:</b>	Callon Petroleum Operating Company
<b>MMS Investigation Report:</b>	Pending as of Feb. 28, 2002	<b>Activity:</b>	Development/Production
<b>Lease:</b>	G16337	<b>Event(s):</b>	Loss of well control/Fire
<b>Area:</b>	South Marsh Island	<b>Operation:</b>	Drilling
<b>Block:</b>	261	<b>Cause:</b>	Equipment Failure
<b>Rig/Platform:</b>	R&B Falcon 153	<b>Water Depth:</b>	33 feet
<b>Remarks:</b> Preliminary findings indicate that while on bottom drilling, the rig experienced a kick. The crew shut in the BOP's. The 10¾-inch casing head by 16-inch casing head spool began leaking and caught fire. Rig personnel were evacuated via escape capsules. On January 7, 2000, the well stopped flowing and was killed.			

Loss of Well Control No. 2			
<b>Date:</b>	05-Jan-2000	<b>Operator:</b>	Apache Corporation
<b>MMS Investigation Report:</b>	Completed	<b>Activity:</b>	Development/Production
<b>Lease:</b>	G05646	<b>Event(s):</b>	Loss of well control
<b>Area:</b>	South Timbalier	<b>Operation:</b>	Drilling
<b>Block:</b>	295	<b>Cause:</b>	Poor cement and wellhead design
<b>Rig/Platform:</b>	Noble Eddie Paul/A	<b>Water Depth:</b>	250 feet
<b>Remarks:</b> After cementing the 13 3/8-inch surface casing and nipping up the BOP's, the gas monitor detected a high gas concentration in the wellhead area where welding operations were being conducted. The welding was shut down. Later, gas and mud began flowing from the base of the wellhead through a gap in the base plate flange that connects the drive pipe to the surface casing. The flow was initially blowing mud and gas 25 feet above the wellhead; there was no way to shut the well in. The flow steadily diminished to a steady boil after 8 hours about 8 inches above the wellhead. The crew hot-tapped the 26-inch drive pipe at 15 feet above the waterline and installed a valve to divert the flow away from the wellhead areas. The flow continued for 16 hours through the +15 valve. After attempting to test the casing and repack around the packing bushing, the crew replaced the top joint of 13 3/8-inch casing and installed a new wellhead to stop the leak. They connected the new wellhead and re-installed the BOP's, successfully capping the well.			

### Loss of Well Control No. 3

<b>Date:</b>	12-Jan-2000	<b>Operator:</b>	Murphy Exploration & Development Co.
<b>MMS Investigation Report:</b>	Completed	<b>Activity:</b>	Exploration
<b>Lease:</b>	G15307	<b>Event(s):</b>	Loss of well control/Pollution/Other
<b>Area:</b>	Ship Shoal	<b>Operation:</b>	Drilling/Cementing casing
<b>Block:</b>	320	<b>Cause:</b>	Poor cement job
<b>Rig/Platform:</b>	Rowan Gilbert Rowe	<b>Water Depth:</b>	309 feet

**Remarks:** While drilling, the crew increased the mud weight because of increased background gas. The crew ran and set the 13 5/8-inch casing. The casing was not centralized and could not be worked during cementing. After cementing was complete, the crew's calculations indicated channeling. The annulus to mud line hanger was washed out with a 1 1/4-inch tubing string. While the crew pulled out of the hole, the well began flowing up the annulus. The pressure increased and the annular preventer began leaking gas. The crew monitored the well for 6 hours while waiting for the cement to set. When the shut-in pressure increased to 2,250 psi, the crew bled mud and gas through the choke at the rate of 5 barrels per 5 minutes, bleeding the well pressure to zero. Moments later, the well began flowing. The crew controlled the pressure by bleeding gas and pumping mud into the annulus. Noise and cement bond logs showed the cement was contaminated with mud. The crew continued bleeding the pressure through the choke, and when the annular preventer started leaking at 1,200 psi, all non-essential personnel were evacuated. While gas was being bled through the choke, the well began producing. Cudd Pressure Control rigged up a snubbing unit to enter the well, perforated the 13 5/8-inch casing, and squeezed over 1,500 sacks of cement with gas block additive. After 13 hours, the crew bled the annular pressure to 180 psi and recovered 12 barrels. The annular pressure was dead. The crew drilled ahead and set and cemented an 11 7/8-inch scab liner across the cement squeeze perforations. The liner top was tested to 2,500 psi and normal operations continued. About a half barrel of oil spilled into the Gulf during the pressure bleeding operations.

### Loss of Well Control No. 4 (also listed as Pollution Event No. 6 and Other Event No. 6) (Riser Disconnect)

<b>Date:</b>	28-Feb-2000	<b>Operator:</b>	Murphy Exploration & Production Co.
<b>MMS Investigation Report:</b>	Completed	<b>Activity:</b>	Exploration
<b>Lease:</b>	G16614	<b>Event(s):</b>	Loss of well control—Pollution
<b>Area:</b>	Mississippi Canyon	<b>Operation:</b>	Drilling
<b>Block:</b>	538	<b>Cause:</b>	Management System Failure
<b>Rig/Platform:</b>	Diamond Ocean Concord	<b>Water Depth:</b>	2,223 feet

**Remarks:** The *Ocean Concord* was running a liner on drill pipe when the lower marine riser package was inadvertently disconnected from the BOP stack. The disconnect resulted in the discharge to the sea of about 806 barrels of synthetic mud and 150–200 barrels of crude oil from the wellbore. For more details, see OCS Report MMS 2001-005 at [http://www.gomr.mms.gov/homepg/offshore/safety/acc\\_repo/01-005.pdf](http://www.gomr.mms.gov/homepg/offshore/safety/acc_repo/01-005.pdf).

## Loss of Well Control No. 5

<b>Date:</b>	22-Mar-2000	<b>Operator:</b>	Forcenergy, Inc.
<b>MMS Investigation Report:</b>	Pending as of Feb. 27, 2002	<b>Activity:</b>	N/A
<b>Lease:</b>	G16141	<b>Event(s):</b>	Loss of well control
<b>Area:</b>	West Cameron	<b>Operation:</b>	Drilling
<b>Block:</b>	317	<b>Cause:</b>	Equipment Failure/Human Error
<b>Rig/Platform:</b>	Pride Michigan	<b>Water Depth:</b>	60 feet

**Remarks:** Preliminary findings indicate the well started flowing through the 10 3/4-inch by 7 5/8-inch annulus when the crew, after running and cementing the 7 5/8-inch casing, picked up the BOP stack to cut the casing and install the tree. The crew attempted to reset the BOP stack, but a line parted and the stack fell and damaged the flange. After the crew lifted, reset, and bolted the stack and closed the rams, the flange began leaking and the rig was evacuated. When the well died, the crew re-entered the well and killed it.

## Loss of Well Control No. 6

<b>Date:</b>	07-Apr-2000	<b>Operator:</b>	Union Oil Company of California
<b>MMS Investigation Report:</b>	Completed	<b>Activity:</b>	Development/Production
<b>Lease:</b>	G02392	<b>Event(s):</b>	Loss of well control
<b>Area:</b>	High Island	<b>Operation:</b>	Drilling
<b>Block:</b>	A 572	<b>Cause:</b>	Human Error/Poor cement job
<b>Rig/Platform:</b>	Chiles Columbus/Platform C	<b>Water Depth:</b>	284 feet

**Remarks:** On April 6, 2000, the crew ran and cemented the 18 5/8 inch casing. After waiting on cement, the crew cut a hole in the 30-inch drive pipe to wash cement out of the annulus. After the cement was washed out of the annulus, the well began to flow saltwater. All personnel were put on alert and gathered to formulate and execute a plan to install a plate and valve over the hole. All non-essential personnel were evacuated while the remaining crew began well control operations. Investigation findings showed these probable causes: (1) Cutting a hole in the 30-inch casing caused a reduction in hydrostatic pressure. (2) The crew had no method to control well opening a hole in the 30-inch casing. (3) The crew did not wait on the cement long enough. (4) Communications were unclear between the office staff and the field supervisor on the routine task of cleaning out cement between surface and conductor casing. It was suspected that one or more of the 22 previous wells had a cement job that did not seal. A recent check of SCP on the platform showed that 9 of the 22 wells had pressure on the conductor casing. The MMS recommended that a method to wash out the cement in the annulus down to the wellhead area without lowering the hydraulic pressure needs to be in place. The integrity of the casing design should not be jeopardized by cutting the casing until certain the cement is set. In the cementing procedure, spell out the contingency to wash out the cement and the time needed to wait on cement.

## Loss of Well Control No. 7

<b>Date:</b>	15-Aug-2000	<b>Operator:</b>	The Houston Exploration Company
<b>MMS Investigation Report:</b>	Completed	<b>Activity:</b>	Exploration
<b>Lease:</b>	G20605	<b>Event(s):</b>	Loss of well control
<b>Area:</b>	Mustang Island	<b>Operation:</b>	Drilling/Other—Cementing casing
<b>Block:</b>	726	<b>Cause:</b>	Other—Poor cement job
<b>Rig/Platform:</b>	Diamond Ocean Tower	<b>Water Depth:</b>	84 feet

**Remarks:** The crew set 10 3/4-inch surface casing, bumped the plug, pumped cement, washed the mud line hanger, and were laying down tubing when the well blew out. All Non-essential personnel were evacuated. The remaining crew pumped cement and the well bridged over. They pumped 60 barrels of 14.4 ppg mud, and the well flowed at a trickle. The crew pumped another 125 bbl of 14.4 ppg mud, but the well unloaded all of the mud and flowed dry gas. At this time, all remaining personnel evacuated the rig. The well bridged over the next day and the crew reboarded and killed the well.

## Loss of Well Control No. 8

<b>Date:</b>	18-Nov-2000	<b>Operator:</b>	The Houston Exploration Company
<b>MMS Investigation Report:</b>	Completed	<b>Activity:</b>	Exploration
<b>Lease:</b>	G20605	<b>Event(s):</b>	Loss of well control
<b>Area:</b>	Mustang Island	<b>Operation:</b>	Drilling
<b>Block:</b>	726	<b>Cause:</b>	Other—Poor cement job
<b>Rig/Platform:</b>	Diamond Ocean Tower	<b>Water Depth:</b>	80 feet

**Remarks:** While cementing the casing, the crew bumped the plug, and the well started flowing. All personnel were evacuated from the rig. The well was reported dead on November 19, 2000, and personnel returned to the rig. Investigation findings showed that there was a 25-minute delay on the cement job due to problems with the cementing equipment. Improper placement of foam cement during the job was a contributing factor. MMS recommended (1) checking that the rig cementing equipment is working properly prior to starting a job, (2) testing for static gel transition time, and (3) discussing job in detail with operating personnel. It was also recommended that the following be considered: (1) logging surface hole, (2) performing tack/horse collar cement jobs, (3) performing reverse cement jobs, (4) using DV tools, (5) testing pressure integrity on conductor casing shoe, and (6) varying foam injection rate to achieve uniform density.

## GOM Pipeline Events (7 total)

Pipeline Event No. 1 (also listed as Pollution Event No. 2 and Other Event No. 3) (1,800 barrels of oil)			
Date:	21-Jan-2000	Operator:	Equilon Pipeline Company LLC
MMS Investigation Report:	Completed	Activity:	Development/Production
Lease:	G04826	Event(s):	Pollution/Other—Marine riser disconnect
Area:	Ship Shoal	Operation:	Rig tow
Block:	332	Cause:	External Damage/Human Error
Rig/Platform:	A-Process	Water Depth:	435 feet
<b>Remarks:</b> The anchor of drilling rig that was being towed dragged the pipeline along the seafloor 650 feet from its original location. The pipeline ruptured and tore at the girth welds on the riser. The riser was also torn from the riser clamps. Side Scan Sonar survey information showed that the anchor was dragged from the rigs originating location about 20 miles to the point where it hooked the pipeline. The USCG was also investigating this incident.			

Pipeline Event No. 2 (also listed as Other Event No. 7) (Pipeline riser pinhole leak)			
Date:	06-Mar-2000	Operator:	Forcenergy, Inc.
MMS Investigation Report:	No	Activity:	Development/Production
Lease:	G02580	Event(s):	Other—Pinhole pipeline leak
Area:	Vermilion	Operation:	Drilling/Production
Block:	380	Cause:	Equipment Failure
Rig/Platform:	A	Water Depth:	340 feet
<b>Remarks:</b> A bi-directional pipeline rise equipped with a ¾-inch nipple and ball valve developed a pinhole leak. There was no way at the time to bleed down the pipeline. The drilling rig on location over the platform was evacuated as a precaution.			

Pipeline Event No. 3 (also listed as Other Event No. 10) (Pipeline riser pinhole leak)			
Date:	23-Mar-2000	Operator:	Barrett Resources Corporation
MMS Investigation Report:	No	Activity:	Development/Production
Lease:	G04258	Event(s):	Other—Pipeline riser leak
Area:	Brazos	Operation:	Production
Block:	436	Cause:	Other—Pipeline riser leak
Rig/Platform:	A	Water Depth:	75 feet
<b>Remarks:</b> There was an apparent leak from the riser. No slick or sheen was observed and no detectable reduction in gas sales volume was being reported by SCADA telemetry. The pinhole leak in the riser was not large enough to lower the pressure sufficiently for the PSH to shut in the structure. As a result of the incident, the necessary telemetry to remotely shut in the platform was installed.			

### Pipeline Event No. 4 (also listed as Other Event No. 21) (4.5—5.0 barrels of oil)

<b>Date:</b>	14-Aug-2000	<b>Operator:</b>	Exxon Mobil Corporation
<b>MMS Investigation Report:</b>	No	<b>Activity:</b>	Development/Production
<b>Lease:</b>	G03417	<b>Event(s):</b>	Other—Pipeline leak
<b>Area:</b>	Main Pass	<b>Operation:</b>	Production
<b>Block:</b>	72	<b>Cause:</b>	Equipment Failure
<b>Rig/Platform:</b>	C	<b>Water Depth:</b>	140 feet

**Remarks:** An 8-inch pipeline leak located about 2,000 feet from the platform released a spill of about 4.5 to 5 barrels of oil. The line was shut in for repair.

### Pipeline Event No. 5 (also listed as Other Event No. 23) (3 barrels of gas/condensate)

<b>Date:</b>	17-Aug-2000	<b>Operator:</b>	Natural Gas Pipeline Company of America
<b>MMS Investigation Report:</b>	No	<b>Activity:</b>	Development/Production
<b>Lease:</b>	G03235	<b>Event(s):</b>	Other—16-inch pipeline leak
<b>Area:</b>	High Island	<b>Operation:</b>	Production
<b>Block:</b>	139	<b>Cause:</b>	Equipment Failure
<b>Rig/Platform:</b>	Not applicable	<b>Water Depth:</b>	51 feet

**Remarks:** A 4-foot boil was seen coming from a gas leak that was reported earlier. A silvery sheen (112 gallons)(1/4 mile x 16-mile area) was spotted in the same area. Consequently, a 16-inch gas/condensate pipeline leading to the shoreline was shut in so that a repair clamp could be installed over the leak area.

### Pipeline Event No. 6 (also listed as Other Event No. 29) (<3 barrels of oil)

<b>Date:</b>	26-Sep-2000	<b>Operator:</b>	Chevron Pipe Line Company
<b>MMS Investigation Report:</b>	No	<b>Activity:</b>	Development/Production
<b>Lease:</b>	G01633	<b>Event(s):</b>	Other—Pipeline leak
<b>Area:</b>	Main Pass	<b>Operation:</b>	Production
<b>Block:</b>	133	<b>Cause:</b>	Equipment Failure
<b>Rig/Platform:</b>	Not applicable	<b>Water Depth:</b>	200 feet

**Remarks:** A pinhole leak developed in a 6-inch oil pipeline leading from Main Pass 133 A to Main Pass 144 A. About 132 gals of oil leaked out of the pipeline. All production was shut in. A dive crew was being sent to the site to repair the pipeline with a clamp.

**Pipeline Event No. 7** (also listed as Other Event No. 31)

<b>Date:</b>	31-Oct-2000	<b>Operator:</b>	Forest Oil Corporation
<b>MMS Investigation Report:</b>	Completed	<b>Activity:</b>	Development/Production
<b>Lease:</b>	G03393	<b>Event(s):</b>	Other—Pipeline leak
<b>Area:</b>	Vermilion	<b>Operation:</b>	Platform Abandonment
<b>Block:</b>	102	<b>Cause:</b>	Human Error
<b>Rig/Platform:</b>	B	<b>Water Depth:</b>	68 feet

**Remarks:** During platform removal operations, the removal contractor drilled a 3/8-inch hold into the riser. The pipeline was thought to be out of service and therefore no pressure. However, the line had 850 psi on because it was being fed by two other platforms. Divers were dispatched and the subsea pipeline tie-in valves were closed to isolate the faulty segment. The investigation findings showed that the hole was drilled into the pipeline by the contractor without permission prior to an inspection of the pipeline. The operator may not have investigated to see if other lines were tied into the pipeline before attempting to abandon it.



## GOM Significant Pollution Events >50 bbls (6 total)

Pollution Event No. 1 (also listed as Other Event No. 2) (2,400 barrels of synthetic-based mud)			
Date:	19-Jan-2000	Operator:	BP Amoco
MMS Investigation Report:	Completed	Activity:	Exploration
Lease:	G14658	Event(s):	Pollution/Other—marine riser disconnect
Area:	Mississippi Canyon	Operation:	Drilling
Block:	822	Cause:	Human Error
Rig/Platform:	TSF Discoverer Enterprise	Water Depth:	6,327 feet
<b>Remarks:</b> An engineer inadvertently pushed the wrong control buttons on the subsea control panel. Instead of testing the blind shear rams, he activated and disconnected the lower marine riser package (LMRP). This resulted in the release of 2,400 barrels of SBM into the Gulf. The investigation findings attribute the cause to (1) human error and (2) the control panel buttons for the LMRP did not have a safety mechanism to prevent activating the wrong function. The fact that the engineer was not wearing his prescription glasses at the time of the incident was a contributing factor. In addition, all functions on the control panel were labeled with the same color (red) and the lettering was small and difficult to read. Also, the LMRP control buttons were at the same height as the blind shear rams on the remote control panel in the subsea control room. Recommendations to prevent future occurrences included (1) use larger lettering on the panels, (2) use different background colors for the LMRP and wellhead connectors, (3) have two crew members present during routine BOP tests to assure the correct functions are operated, (4) add touch-screen prompts to a "failure safe function." The MMS issued an NTL on February 22, 2000 (see <a href="http://www.gomr.mms.gov/homepg/regulate/regs/ntls/ntl00-q07.html">http://www.gomr.mms.gov/homepg/regulate/regs/ntls/ntl00-q07.html</a> ).			

Pollution Event No. 2 (also listed as Pipeline Event No. 1 and Other Event No. 3) (1,800 barrels of oil)			
Date:	21-Jan-2000	Operator:	Equilon Pipeline Company LLC
MMS Investigation Report:	Completed	Activity:	Development/Production
Lease:	G04826	Event(s):	Pollution/Other—Marine riser disconnect
Area:	Ship Shoal	Operation:	Rig Tow
Block:	332	Cause:	External Damage/Human Error
Rig/Platform:	A-Process	Water Depth:	435 feet
<b>Remarks:</b> The anchor of drilling rig that was being towed dragged the pipeline along the seafloor 650 feet from its original location. The pipeline ruptured and tore at the girth welds on the riser. The riser was also torn from the riser clamps. Side Scan Sonar survey information showed that the anchor was dragged from the rig's originating location about 20 miles to the point where it hooked the pipeline. The USCG was also investigating this incident.			

Pollution Event No. 3 (276 barrels of synthetic-based mud) (Welding-related)			
Date:	25-Jan-2000	Operator:	Chevron U.S.A., Inc.
MMS Investigation Report:	Completed	Activity:	Exploration
Lease:	G13114	Event(s):	Pollution
Area:	Mississippi Canyon	Operation:	Drilling
Block:	248	Cause:	Equipment Failure/Overboard Drilling Fluid
Rig/Platform:	Diamond Ocean Quest	Water Depth:	3,290 feet
<b>Remarks:</b> While filling the mud pits with SBM to change the well over from water-base mud, the toolpusher discovered a leaky weld from the dump valve line on mud pit No. 1. Investigation findings show that during the process of displacing water based mud with synthetic mud, a 6-inch long crack in the weld had leaked 275 barrels of SBM had leaked into the Gulf of Mexico waters. Probable causes included (1) the contractor failed to inspect the welded areas properly before filling the mud pit with SBM; (2) the mud was transferred from the boat to mud pits at night when vision was restricted; and (3) the contractor failed to leave the dump valve in place with a plate welded on top. Welding over previous welds without grinding them down first was a contributing factor.			

Pollution Event No. 4 (80 barrels of synthetic-based mud)			
Date:	20-Feb-2000	Operator:	Murphy Exploration & Production Company
MMS Investigation Report:	Completed	Activity:	Exploration
Lease:	GC1167	Event(s):	Pollution
Area:	Mississippi Canyon	Operation:	Drilling
Block:	379	Cause:	Human Error
Rig/Platform:	Noble Amos Runner	Water Depth:	4,325 feet
<b>Remarks:</b> The Amos Runner accidentally spilled 80 barrels of SBM overboard while stirring it in pontoon tanks. When the stirring operations began, a vent line was inadvertently left open in another tank, which allow the tank to overfill and mud escaped out the vent line. A man on deck noticed and called for the pump to be shut down. No sheen was detected on the water. The investigation findings showed that the employee mixing the SBM failed to ensure all valves were secure before starting the mixing procedure. Poor planning and supervision was a contributing cause. There was no pre-planning analysis before beginning the task.			

Pollution Event No. 5 (190 barrels of synthetic-based mud)			
Date:	27-Feb-2000	Operator:	Chevron U.S.A., Inc.
MMS Investigation Report:	Completed	Activity:	Exploration
Lease:	00385	Event(s):	Pollution
Area:	West Delta	Operation:	Drilling
Block:	20	Cause:	Equipment Failure
Rig/Platform:	ENSCO 94	Water Depth:	35 feet
<b>Remarks:</b> The dump valve in the exit dump line was not seated properly after the slugging was cleaned out. The operator attempted to fill up the slugging pit with synthetic mud and lost 190 barrels overboard before he realized that the exit dump line was not seated properly. The alignment cage for the dump valve in the slugging pit had completely broken off, causing the dump valve to seat improperly when the valve was closed. Also, the master valve was found in the open position. Investigation findings showed that (1) there was no standard for inspection or maintenance of the guide cage in the mud pits and (2) the driller did not acknowledge the initial PVT alarm. The MMS recommended that the operator (1) develop a maintenance schedule and procedures to ensure regular inspections of valves and cages, (2) incorporate a new fleet-wide procedure for usage of the master dump valve wherein the valve in the closed position will be chained and locked with the key kept by the rig offshore installation manager, and (3) issue a fleet-wide simultaneous operation memo to ensure that a competent person watches pit volume totals during all fluid transfers.			

**Pollution Event No. 6** (also listed as Loss of Well Control No. 5 and Other Event No. 6) **(Riser disconnect)**

<b>Date:</b>	28-Feb-2000	<b>Operator:</b>	Murphy Exploration & Production Co.
<b>MMS Investigation Report:</b>	Completed	<b>Activity:</b>	Exploration
<b>Lease:</b>	G16614	<b>Event(s):</b>	Loss of well control – Pollution
<b>Area:</b>	Mississippi Canyon	<b>Operation:</b>	Drilling
<b>Block:</b>	538	<b>Cause:</b>	Management System Failure
<b>Rig/Platform:</b>	Diamond Ocean Concord	<b>Water Depth:</b>	2,223 feet

**Remarks:** The *Ocean Concord* was running a liner on drill pipe when the lower marine riser package was inadvertently disconnected from the blowout preventer stack. The disconnection resulted in the discharge to the sea of about 806 barrels of synthetic mud and 150–200 barrels of crude oil from the wellbore. For more details, see OCS Report MMS 2001-005 at [http://www.gomr.mms.gov/homepg/offshore/safety/acc\\_repo/01-005.pdf](http://www.gomr.mms.gov/homepg/offshore/safety/acc_repo/01-005.pdf).

## GOM Other Events (35 total)

Other Event No. 1 <span style="float: right;">(Near miss)</span>			
Date:	19-Jan-2000	Operator:	BP Amoco Corporation
MMS Investigation Report:	Completed	Activity:	Exploration
Lease:	G14658	Event(s):	Other—Near miss
Area:	Mississippi Canyon	Operation:	Drilling
Block:	822	Cause:	Equipment Failure/Human Error
Rig/Platform:	TSF Discoverer Enterprise	Water Depth:	6,327 feet
<b>Remarks:</b> While the driller attempted to manually secure drill collars with rope, the drill ship moved causing the collars to break connections and fall out of the finger boards to the rig floor. One collar struck the forward portion of the driller's doghouse; the other penetrated the roof just behind the forward driller's console. The MMS investigation findings showed that a computer programming error was detected in the Varco pipe racking system, which caused the latch/unlatch modes to work improperly. While correcting the problem, the driller selected the wrong finger pipe rack. A contributing factor in the cause was that the rig personnel did not completely understand the complex pipe racking system.			

Other Event No. 2 <span style="float: right;">(also listed as Pollution Event No. 1) (2,400 barrels of synthetic mud spilled/Riser disconnect)</span>			
Date:	19-Jan-2000	Operator:	BP Amoco
MMS Investigation Report:	Completed	Activity:	Exploration
Lease:	G14658	Event(s):	Pollution/Other—Marine riser disconnect
Area:	Mississippi Canyon	Operation:	Drilling
Block:	822	Cause:	Human Error
Rig/Platform:	TSF Discoverer Enterprise	Water Depth:	6,327 feet
<b>Remarks:</b> An engineer inadvertently pushed the wrong control buttons on the subsea control panel. Instead of testing the blind shear rams, he activated and disconnected the lower marine riser package (LMRP). This resulted in the release of 2,400 barrels of SBM into the Gulf. The investigation found the cause to be human error and the lack of a safety mechanism on the control panel buttons to prevent activating the wrong function. The fact that the engineer was not wearing his prescription glasses at the time of the incident was also a contributing factor. In addition, all functions on the control panel were labeled with the same color (red) and the lettering was small and difficult to read. Also, the LMRP control buttons were at the same height as the blind shear rams on the remote control panel in the subsea control room. Recommendations to prevent future occurrences included (1) use larger lettering on the panels, (2) use different background colors for the LMRP and wellhead connectors, (3) have two crew members present during routine BOP tests to assure the correct functions are operated, (4) add touch-screen prompts to a "failure safe function." The MMS issued an NTL on February 22, 2000 (see <a href="http://www.gomr.mms.gov/homepg/regulate/regs/ntls/ntl00-g07.html">http://www.gomr.mms.gov/homepg/regulate/regs/ntls/ntl00-g07.html</a> ).			

Other Event No. 3 <span style="float: right;">(1,800 barrels of oil spilled/Riser disconnect)</span>			
(also listed as Pollution Event No. 2 and Pipeline Event No. 1)			
Date:	21-Jan-2000	Operator:	Equilon Pipeline Company, LLC
MMS Investigation Report:	Completed	Activity:	Development/Production
Lease:	G04826	Event(s):	Pollution/Other—Marine riser disconnect
Area:	Ship Shoal	Operation:	Rig Tow
Block:	332	Cause:	External Damage/Human Error
Rig/Platform:	A-Process	Water Depth:	435 feet
<b>Remarks:</b> The anchor of a drilling rig that was being towed dragged the pipeline along the seafloor 650 feet from its original location. The pipeline ruptured and tore at the girth welds on the riser. The riser was also torn from the riser clamps. Side Scan Sonar survey information showed that the anchor was dragged about 20 miles to the point where it hooked the pipeline. The USCG is investigating also.			

Other Event No. 4		(Crane incident)	
Date:	26-Jan-2000	Operator:	BP Amoco Corporation
MMS Investigation Report:	Completed	Activity:	Development/Production
Lease:	G01085	Event(s):	Other—Crane failure
Area:	West Delta	Operation:	Production
Block:	75	Cause:	Human Error
Rig/Platform:	F	Water Depth:	110 feet
<b>Remarks:</b> While lifting a load of cement weighing more than 14,000 pounds, the crane broke off from the structure and went overboard. The crane operator jumped out. He was rescued and transported to the hospital. The investigation findings showed that three tanks to be lifted were similar in appearance. The crane operator and riggers were unaware that one of the tanks was full of 11.6 ppg calcium chloride. The rigger did not identify the load weight of the full tank as he hooked it up. The boom angle, which was set at 52 degrees to pick up an empty tank, exceeded the dynamic lift capacity of the crane when lifting the full tank. The following factors also contributed to the incident: (1) The load weights of each tank were not properly marked and in plain view of the riggers. (2) The communication between the riggers and the crane operator was poor. (3) The material manifest of the equipment to be offloaded from the boat to the platform was not sent from the boat to the platform before offloading began. As a result of their OCS violations, the operating company is implementing changes in all their offshore operations related to cargo load weights, lift team communications, crane capacities, weight indicators, and deck layout.			

Other Event No. 5		(Annular gas flow)	
Date:	05-Feb-2000	Operator:	Amerada Hess Corporation
MMS Investigation Report:	No	Activity:	Exploration
Lease:	G05224	Event(s):	Other—Annular gas flow
Area:	South Timbalier	Operation:	Drilling/Other—Cementing the 13 3/8-inch casing
Block:	225	Cause:	Other—Poor cement job
Rig/Platform:	Pride North Dakota	Water Depth:	177 feet
<b>Remarks:</b> Amerada Hess ran and cemented the 13 3/8-inch x 20-inch surface casing and after a 7-hour wait, the annulus began flowing gas and was shut in with the Hydriil diverter system. The annular pressure was bled off through the gas buster and the well pressure was killed with heavy mud.			

Other Event No. 6

(also listed as Loss of Well Control No. 5 and Pollution Event No. 6)

(806 barrels of synthetic mud and 150-200 barrels of oil spilled/Riser disconnect)

Date:	28-Feb-2000	Operator:	Murphy Exploration & Production Co.
MMS Investigation Report:	Completed	Activity:	Exploration
Lease:	G16614	Event(s):	Loss of well control/Other--Pollution/Riser disconnect
Area:	Mississippi Canyon	Operation:	Drilling
Block:	538	Cause:	Management System Failure
Rig/Platform:	Diamond Ocean Concord	Water Depth:	2,223 feet
Remarks: The <i>Ocean Concord</i> was running a liner on drill pipe when the lower marine riser package was inadvertently disconnected from the BOP stack. The disconnect resulted in the discharge to the sea of about 806 barrels of synthetic mud and 150–200 barrels of crude oil from the well bore. For more details, see OCS Report MMS 2001-005 at <a href="http://www.gomr.mms.gov/homepg/offshore/safety/acc_repo/01-005.pdf">http://www.gomr.mms.gov/homepg/offshore/safety/acc_repo/01-005.pdf</a> .			

## Other Event No. 7 (also listed as Pipeline Event No. 2) (Rig evacuation/Pipeline leak)

<b>Date:</b>	06-Mar-2000	<b>Operator:</b>	Forcenergy, Inc.
<b>MMS Investigation Report:</b>	No	<b>Activity:</b>	Development/Production
<b>Lease:</b>	G02580	<b>Event(s):</b>	Other—Rig evacuation/Pipeline leak
<b>Area:</b>	Vermilion	<b>Operation:</b>	Drilling/Production
<b>Block:</b>	380	<b>Cause:</b>	Equipment Failure
<b>Rig/Platform:</b>	A	<b>Water Depth:</b>	340 feet

**Remarks:** A bi-directional pipeline rise equipped with a ¾-inch nipple and ball valve developed a pinhole leak. There was no way at the time to bleed down the pipeline. The drilling rig on location over the platform was evacuated as a precaution.

## Other Event No. 8 (also listed as Injury No. 16) (Crane incident)

<b>Date:</b>	21-Mar-2000	<b>Operator:</b>	LLECO Holdings, Inc.
<b>MMS Investigation Report:</b>	Completed	<b>Activity:</b>	Development/Production
<b>Lease:</b>	G01569	<b>Event(s):</b>	Injury/Other—Crane incident
<b>Area:</b>	South Timbalier	<b>Operation:</b>	Production/Workover
<b>Block:</b>	185	<b>Cause:</b>	Equipment Failure/Human Error
<b>Rig/Platform:</b>	A	<b>Water Depth:</b>	180 feet

**Remarks:** While moving a 25-barrel tank of calcium bromide on the deck of the vessel, the crane snapped at the pedestal and fell onto the vessel below. The crane operator was injured. Sea conditions at the time were 3 to 5 feet seas. The investigation findings showed that the crane operator had minimal experience and operated the crane outside of the designed limitations of the crane by picking up weight outside the crane's safe load limitations. Also, the on-site supervisor failed to recognize hazards or ignored them. Underlying causes included personnel factors, capability, knowledge and skill, stress, improper motivation, job factors, organizational structure, management and supervision. It was recommended that MMS issue a safety alert to heighten awareness of API Specification 2C, specifically the current recommended ball ring design criteria and those cranes manufactured under different design criteria. For more details, see OCS Report MMS 2001-010 at [http://www.gomr.mms.gov/homepg/offshore/safety/acc\\_repo/01-010.pdf](http://www.gomr.mms.gov/homepg/offshore/safety/acc_repo/01-010.pdf).

## Other Event No. 9 (Equipment overboard)

<b>Date:</b>	22-Mar-2000	<b>Operator:</b>	Burlington Resources Offshore, Inc.
<b>MMS Investigation Report:</b>	No	<b>Activity:</b>	Development/Production
<b>Lease:</b>	00495	<b>Event(s):</b>	Other—Equipment overboard
<b>Area:</b>	Vermilion	<b>Operation:</b>	Other—Coil tubing
<b>Block:</b>	124	<b>Cause:</b>	Human Error/Other--Unknown
<b>Rig/Platform:</b>	E	<b>Water Depth:</b>	71 feet

**Remarks:** When the operator unchained the coil tubing injector head and goose-neck unit, it fell into the handrail and into the jack-up boat and then was lost overboard. The coil-tubing employee on the jack-up boat cranked up the unit to loosen the chains. Employee saw the injector head tilt and go overboard. Apparently, the unit was in gear and pulled the unit overboard before anyone could stop it.

## Other Event No. 10 (also listed as Pipeline Event No. 3) (Flowline/Pipeline riser leak)

<b>Date:</b>	23-Mar-2000	<b>Operator:</b>	Barrett Resources Corporation
<b>MMS Investigation Report:</b>	No	<b>Activity:</b>	Development/Production
<b>Lease:</b>	G04258	<b>Event(s):</b>	Other—Flowline/Pipeline riser leak
<b>Area:</b>	Brazos	<b>Operation:</b>	Production
<b>Block:</b>	436	<b>Cause:</b>	Other—Flowline/Pipeline riser leak
<b>Rig/Platform:</b>	A	<b>Water Depth:</b>	75 feet

**Remarks:** There was an apparent leak from the riser. No slick or sheen was observed and no detectable reduction in gas sales volume was being reported by SCADA telemetry. The pinhole leak in the riser was not large enough to lower the pressure sufficiently for the PSH to shut in the structure. As a result of the incident, the necessary telemetry to remotely shut in the platform was installed.

## Other Event No. 11 (Crane incident/Equipment overboard)

<b>Date:</b>	29-Mar-2000	<b>Operator:</b>	Newfield Exploration Company
<b>MMS Investigation Report:</b>	Completed	<b>Activity:</b>	Development/Production
<b>Lease:</b>	G01014	<b>Event(s):</b>	Other—Crane/Equipment overboard
<b>Area:</b>	Ship Shoal	<b>Operation:</b>	Production
<b>Block:</b>	145	<b>Cause:</b>	Equipment Failure/Human Error
<b>Rig/Platform:</b>	D	<b>Water Depth:</b>	45 feet

**Remarks:** A 5-foot x 8-foot aluminum grocery box containing two 12-volt batteries and some empty water bottles was lost overboard as it was being loaded onto the boat via a crane. The fast line parted about 10 feet above the ball dropping the grocery box along with the ball and slings overboard. The load struck the boat's generator package and handrail. The investigation findings showed that while booming down, the ball was pulled into the sheave and caused the wire rope to be pulled out of the swedge on the ball. It appears the incident was caused by operator error and may have been exacerbated by a possible Anti-Two Block device failure. The operator failed to maintain enough slack in the fast line to account for the booming down operation. Based on the configuration of the crane and platform, the operator may not have seen the boom tip while booming down. MMS recommended that (1) the platform operator be sent to operator training school, (2) the crane operator be more careful and cautious during crane operation, and (3) the crane operator always be provided with a person to give signals.

## Other Event No. 12 (Crane incident)

<b>Date:</b>	09-Apr-2000	<b>Operator:</b>	Chevron U.S.A., Inc.
<b>MMS Investigation Report:</b>	Completed	<b>Activity:</b>	Development/Production
<b>Lease:</b>	G03206	<b>Event(s):</b>	Other—Crane incident
<b>Area:</b>	Mississippi Canyon	<b>Operation:</b>	Workover
<b>Block:</b>	63	<b>Cause:</b>	Equipment Failure/Human Error
<b>Rig/Platform:</b>	ISS No. 7/Platform B	<b>Water Depth:</b>	450 feet

**Remarks:** A 40-ton rental crane was offloading a 30,000-lb basket off the deck of the motor vessel *Miss Kathryn*. The crane had lifted the 36-foot-long cargo basket 10 feet up off the boat deck when the boat skipper started to move the boat from under the basket. As the boat moved from under the basket, the boom angle of the crane began to fall, which caused the basket to get hung up on the bulwarks and the rail on the port side of the boat deck. When the boat moved from under the basket, the boom angle of the crane went to 0 degrees as the cylinders bottomed out. The basket was lowered into GOM waters where it was later retrieved by the crane winch line cable. The cable had remained hooked to the basket throughout the mishap. The MMS investigation showed that the operator failed to perform a pre-job safety analysis considering all the aspects of this task before offloading the tool basket. The crane operator made this lift without having a material manifest on the platform that listed the total weight of the tool basket. The crane operator failed to recognize and honor the rating of the rental crane. The counter balance valve on the crane failed during this lift, just as it had failed 2 weeks prior to this incident. When the first attempt to lift the tool basket was unsuccessful, the task should have been reassessed. Damage was estimated at \$5,000. The operator was found in violation of MMS regulations. The MMS recommended that a Safety Alert be issued to all Lessees.

**Other Event No. 13****(Crane incident/Equipment overboard)**

<b>Date:</b>	27-Apr-2000	<b>Operator:</b>	Murphy Exploration & Production Company
<b>MMS Investigation Report:</b>	Completed	<b>Activity:</b>	Development/Production
<b>Lease:</b>	00599	<b>Event(s):</b>	Other—Crane slings parted
<b>Area:</b>	South Timbalier	<b>Operation:</b>	Production/Other—Installing auxillary platform
<b>Block:</b>	63	<b>Cause:</b>	Equipment Failure
<b>Rig/Platform:</b>	CA	<b>Water Depth:</b>	91 feet

**Remarks:** During a lift operation, the slings parted, dropping the load into the Gulf. The investigation showed that the wire sing ropes were in poor condition, showing signs of corrosion and mechanical damage. The slings should have been sufficiently inspected prior to use. It was recommended that those in charge of inspecting and approving wire rope devices should be familiar with relevant wire rope damage appearance and that users of wire rope devices should be aware of the proper use, handling, and storage of wire rope.

**Other Event No. 14****(H<sub>2</sub>S release)**

<b>Date:</b>	22-May-2000	<b>Operator:</b>	Murphy Exploration & Production Company
<b>MMS Investigation Report:</b>	Completed	<b>Activity:</b>	Development/Production
<b>Lease:</b>	00605	<b>Event(s):</b>	Other—Release of H <sub>2</sub> S
<b>Area:</b>	South Timbalier	<b>Operation:</b>	Production
<b>Block:</b>	86	<b>Cause:</b>	Equipment Failure
<b>Rig/Platform:</b>	E	<b>Water Depth:</b>	92 feet

**Remarks:** The platform was shut in when sensors detected sufficient levels of H<sub>2</sub>S. The gasket material around the valve stem of the back pressure valve for the reflux accumulator failed. The investigation findings showed that the gasket material failed because of age and wear. It was recommended that the stem packing be replaced periodically.

**Other Event No. 15****(Crane incident)**

<b>Date:</b>	18-Jun-2000	<b>Operator:</b>	Newfield Exploration Company
<b>MMS Investigation Report:</b>	No	<b>Activity:</b>	Exploration
<b>Lease:</b>	G15431	<b>Event(s):</b>	Other—Crane boom collapsed
<b>Area:</b>	Viosca Knoll	<b>Operation:</b>	Drilling
<b>Block:</b>	738	<b>Cause:</b>	Equipment Failure
<b>Rig/Platform:</b>	Diamond Ocean Voyager	<b>Water Depth:</b>	809 feet

**Remarks:** While lifting a “toolbox,” the clutch or torque converter failed and lowered the crane boom. The boom, with its load, came to rest on the side of the rig. There were no injuries.



**Other Event No. 16****(Riser disconnect)**

<b>Date:</b>	28-Jun-2000	<b>Operator:</b>	BHP Petroleum (GOM) Inc.
<b>MMS Investigation Report:</b>	Completed	<b>Activity:</b>	Exploration
<b>Lease:</b>	G15607	<b>Event(s):</b>	Other—Inadvertent riser disconnect
<b>Area:</b>	Green Canyon	<b>Operation:</b>	Drilling/Other—running wire line logging tools
<b>Block:</b>	743	<b>Cause:</b>	Equipment Failure
<b>Rig/Platform:</b>	Glomar C.R. Luigs	<b>Water Depth:</b>	6,700 feet

**Remarks:** While running wire line logging tools, a short circuit in the Driller's Control Panel (DCP) caused the riser to inadvertently disconnect, which caused the shear rams to close, cutting the wire line and shutting in the well. The MMS investigation showed the cause of the incident to be failure of a program card in one of the two Programmed Logic Controllers (PLC) in the Driller's Control Panel of the BOP control system. In other words, the cause was an electrical short in a control card. High operating temperature in the Driller's Control Panel PLC enclosure may have contributed to the failure of the PLC card. Estimated property damage was \$1,000,000. There were no OCS violations in relation to this incident. As a temporary corrective action, the MMS recommended that the remote Driller's Control Console, which caused the short, be removed until an improved console is designed and installed.

**Other Event No. 17****(Crane incident)**

<b>Date:</b>	18-Jul-2000	<b>Operator:</b>	Chevron U.S.A., Inc.
<b>MMS Investigation Report:</b>	Completed	<b>Activity:</b>	Development/Production
<b>Lease:</b>	G04481	<b>Event(s):</b>	Other—Crane/Equipment overboard
<b>Area:</b>	Main Pass	<b>Operation:</b>	Production
<b>Block:</b>	77	<b>Cause:</b>	Equipment Failure
<b>Rig/Platform:</b>	A	<b>Water Depth:</b>	130 feet

**Remarks:** The operator was offloading a portable building from the platform to a boat below. The crane had lowered the building halfway to the boat and had stopped to wait for the boat to back under the load when the crane's load cable parted. The building was dropped into Gulf waters. The investigation showed that the operator had not inspected the crane on a timely basis and the crane inspection program did not include inspection of the crane load cable. The MMS recommended the following four actions: (1) Issue a safety alert to increase awareness of interload cable corrosion. (2) Lubricate all crane cables exposed to drilling and completion fluids frequently during the exposure period and changed out afterwards. (3) Conduct heavy lift inspections prior to performing lifts in excess of 75 percent of the crane's capacity. (4) Replace all cables if proper documentation is not on file.

**Other Event No. 18****(H<sub>2</sub>S release)**

<b>Date:</b>	26-Jul-2000	<b>Operator:</b>	Murphy Exploration & Production Company
<b>MMS Investigation Report:</b>	Completed	<b>Activity:</b>	Development/Production
<b>Lease:</b>	00605	<b>Event(s):</b>	Other—Release of H <sub>2</sub> S
<b>Area:</b>	South Timbalier	<b>Operation:</b>	Production
<b>Block:</b>	86	<b>Cause:</b>	Equipment Failure
<b>Rig/Platform:</b>	E	<b>Water Depth:</b>	92 feet

**Remarks:** The platform was shut in when sensors detected H<sub>2</sub>S. After inspection, it was determined that the No. 5 sensor was tripped and there were leaks on the Wika gauge, the needle valve on the LSH on the test separator, and the LSH Fisher 2100 series located on the flare scrubber. The investigations findings showed that the leaks were probably caused by fatigue, vibration, and environmental conditions. It was recommended that visual inspections be made during each visit to the platform.

## Other Event No. 19 (Crane-Related/Equipment overboard)

<b>Date:</b>	08-Aug-2000	<b>Operator:</b>	Murphy Exploration & Production Company
<b>MMS Investigation Report:</b>	No	<b>Activity:</b>	Development/Production
<b>Lease:</b>	G01526	<b>Event(s):</b>	Other—Wireline Unit Dropped Overboard
<b>Area:</b>	Ship Shoal	<b>Operation:</b>	Production
<b>Block:</b>	223	<b>Cause:</b>	Equipment Failure/Other--Pad Eye Broke
<b>Rig/Platform:</b>	B	<b>Water Depth:</b>	150 feet

**Remarks:** The crane operator was swinging the load off the platform to the field boat when the pad eye on the cable parted and dropped the slings and wireline unit overboard.

## Other Event No. 20 (Fluorescent light lens melted)

<b>Date:</b>	13-Aug-2000	<b>Operator:</b>	Chevron U.S.A., Inc.
<b>MMS Investigation Report:</b>	No	<b>Activity:</b>	Exploration
<b>Lease:</b>	G05911	<b>Event(s):</b>	Other—Overheated lens melted
<b>Area:</b>	Green Canyon	<b>Operation:</b>	Production/Drilling
<b>Block:</b>	205	<b>Cause:</b>	Equipment Failure
<b>Rig/Platform:</b>	Nabors 85 (Mayronne 162)/ A (Genesis)	<b>Water Depth:</b>	2,600 feet

**Remarks:** The lens of the fluorescent light near the day material storage tanks was found to have melted.

## Other Event No. 21 (also listed as Pipeline Event No. 4) (Pipeline leak--4.5—5.0 barrels of oil)

<b>Date:</b>	14-Aug-2000	<b>Operator:</b>	Exxon Mobil Corporation
<b>MMS Investigation Report:</b>	No	<b>Activity:</b>	Development/Production
<b>Lease:</b>	G03417	<b>Event(s):</b>	Other—Pipeline leak
<b>Area:</b>	Main Pass	<b>Operation:</b>	Production
<b>Block:</b>	72	<b>Cause:</b>	Equipment Failure
<b>Rig/Platform:</b>	C	<b>Water Depth:</b>	140 feet

**Remarks:** An 8-inch pipeline located about 2,000 feet from the platform released a spill of about 4.5 to 5 barrels of oil. The line was shut in for repair.

**Other Event No. 22****(Workboat tilted/Equipment and men overboard)**

<b>Date:</b>	16-Aug-2000	<b>Operator:</b>	Matrix Oil & Gas, Inc.
<b>MMS Investigation Report:</b>	No	<b>Activity:</b>	Not listed
<b>Lease:</b>	00190	<b>Event(s):</b>	Other—Jackup workboat tilted
<b>Area:</b>	West Cameron	<b>Operation:</b>	Production
<b>Block:</b>	192	<b>Cause:</b>	Equipment Failure
<b>Rig/Platform:</b>	A	<b>Water Depth:</b>	56 feet

**Remarks:** A jackup liftboat was preloading when a gearbox was spun off and the boat tilted and fell over on the port side. Eight fell overboard and swam to the platform.

**Other Event No. 23****(also listed as Pipeline Event No. 5)****(Pipeline leak--3 barrels of gas/condensate)**

<b>Date:</b>	17-Aug-2000	<b>Operator:</b>	Natural Gas Pipeline Company of America
<b>MMS Investigation Report:</b>	No	<b>Activity:</b>	Development/Production
<b>Lease:</b>	G03235	<b>Event(s):</b>	Other—Pipeline leak
<b>Area:</b>	High Island	<b>Operation:</b>	Production
<b>Block:</b>	139	<b>Cause:</b>	Equipment Failure
<b>Rig/Platform:</b>	Not applicable	<b>Water Depth:</b>	51 feet

**Remarks:** A 4-foot boil was seen coming from a gas leak that was reported earlier. A silvery sheen (112 gallons)(1/4 mile x 16-mile area) was spotted in the same area. Consequently, a 16-inch gas/condensate pipeline leading to the shoreline was shut in so that a repair clamp could be installed over the leak area.

**Other Event No. 24****(also listed as Injury No. 44)****(Crane-related)**

<b>Date:</b>	22-Aug-2000	<b>Operator:</b>	Union Oil Company of California
<b>MMS Investigation Report:</b>	No	<b>Activity:</b>	Development/Production
<b>Lease:</b>	G02689	<b>Event(s):</b>	Injury/Other--Crane-related
<b>Area:</b>	High Island	<b>Operation:</b>	Drilling
<b>Block:</b>	A 469	<b>Cause:</b>	Human Error
<b>Rig/Platform:</b>	Pride 1502E/A	<b>Water Depth:</b>	203 feet

**Remarks:** A worker was performing a lift using the platform crane, and a roustabout was operating a fuel valve on the upper deck of the platform crane. The crane rotated and caught the roustabout between the stairs and the handrail, fracturing his shoulder blade and two ribs.

**Other Event No. 25****(Near miss)**

<b>Date:</b>	23-Aug-2000	<b>Operator:</b>	Chevron U.S.A., Inc.
<b>MMS Investigation Report:</b>	No	<b>Activity:</b>	Development/Production
<b>Lease:</b>	G01372	<b>Event(s):</b>	Other—Near miss
<b>Area:</b>	Breton Sound	<b>Operation:</b>	Drilling
<b>Block:</b>	55	<b>Cause:</b>	Equipment Failure/Human Error
<b>Rig/Platform:</b>	Marine 200	<b>Water Depth:</b>	40 feet

**Remarks:** The derrickhand in the derrick was holding the top of the bottomhole assembly back toward the monkey board with a rope. The rig top drive apparently caught the lift sub for the bottom hold assembly and lifted the assembly off the rig floor. The assembly dropped through the rig floor and production deck to the seafloor. The assembly was recovered.

**Other Event No. 26****(Crane-related/Equipment overboard)**

<b>Date:</b>	01-Sep-2000	<b>Operator:</b>	Coastal Oil and Gas
<b>MMS Investigation Report:</b>	No	<b>Activity:</b>	Development/Production
<b>Lease:</b>	G15102	<b>Event(s):</b>	Other—Equipment overboard
<b>Area:</b>	West Cameron	<b>Operation:</b>	Drilling
<b>Block:</b>	515	<b>Cause:</b>	Equipment Failure
<b>Rig/Platform:</b>	Glomar High Island I/Platform A	<b>Water Depth:</b>	164 feet

**Remarks:** While lifting three 55-gallon drums off the motor vessel by the rig crane, the pallet bumped the rail of the boat and two of the drums fell into the water. One drum was recovered and one was not.

**Other Event No. 27****(Near miss)**

<b>Date:</b>	09-Sep-2000	<b>Operator:</b>	BP Amoco Corporation
<b>MMS Investigation Report:</b>	No	<b>Activity:</b>	Exploration
<b>Lease:</b>	G15611	<b>Event(s):</b>	Other—Near miss
<b>Area:</b>	Green Canyon	<b>Operation:</b>	Drilling
<b>Block:</b>	783	<b>Cause:</b>	Human Error
<b>Rig/Platform:</b>	Diamond Ocean Victory	<b>Water Depth:</b>	4,317 feet

**Remarks:** A joint of 16-inch casing fell over the wind wall at the front of the rig floor. The joint jumped the connection because of cross threading while backing out. The pick-up sling at the stabbing board level was not in place prior to backing out the connection. Casing tongs attached at the pin end kept the joint from falling off the rig floor.

**Other Event No. 28****(Equipment overboard)**

<b>Date:</b>	20-Sep-2000	<b>Operator:</b>	Transworld Exploration & Production, Inc.
<b>MMS Investigation Report:</b>	No	<b>Activity:</b>	Development/Production
<b>Lease:</b>	00541	<b>Event(s):</b>	Other—Equipment overboard
<b>Area:</b>	East Cameron	<b>Operation:</b>	Completion
<b>Block:</b>	160	<b>Cause:</b>	Equipment Failure
<b>Rig/Platform:</b>	Rowan New Orleans	<b>Water Depth:</b>	85 feet

**Remarks:** The boat mooring rope was being removed from the port leg when the pick-up line broke and the assembly was lost overboard. The mooring assembly consisted of a 55-foot braided rope, one aircraft tire and one length of 15-foot logging chain with 1¼-inch shackles. The rig had just finished completion operations and was preparing to jack down. The mooring assembly was unrecoverable.

**Other Event No. 29****(also listed as Pipeline Event No. 6)****(Pipeline leak—about 3 barrels of oil)**

<b>Date:</b>	26-Sep-2000	<b>Operator:</b>	Chevron Pipe Line Company
<b>MMS Investigation Report:</b>	No	<b>Activity:</b>	Development/Production
<b>Lease:</b>	G01633	<b>Event(s):</b>	Other—Pipeline leak
<b>Area:</b>	Main Pass	<b>Operation:</b>	Production
<b>Block:</b>	133	<b>Cause:</b>	Equipment Failure
<b>Rig/Platform:</b>	Not applicable	<b>Water Depth:</b>	200 feet

**Remarks:** A pinhole leak developed in a 6-inch oil pipeline leading from Main Pass 133 A to Main Pass 144 A. About 132 gals of oil leaked out of the pipeline. All production was shut in. A dive crew was being sent to the site to repair the pipeline with a clamp.

**Other Event No. 30****(Crane incident)**

<b>Date:</b>	02-Oct-2000	<b>Operator:</b>	El Paso Production Company
<b>MMS Investigation Report:</b>	USCG jurisdiction	<b>Activity:</b>	Exploration
<b>Lease:</b>	G16432	<b>Event(s):</b>	Other—Crane boom fell
<b>Area:</b>	South Timbalier	<b>Operation:</b>	Drilling
<b>Block:</b>	204	<b>Cause:</b>	Equipment Failure
<b>Rig/Platform:</b>	Main Pass I	<b>Water Depth:</b>	155 feet

**Remarks:** While booming up during normal off-loading operations, the crane operator attempted to stop the crane from booming up further. When the crane did not respond, the operator attempted to shut down the crane, but could not stop the crane in time. The boom broke near the bottom and fell over the port side of the rig. This incident is under U.S. Coast Guard jurisdiction.

## Other Event No. 31 (also listed as Pipeline Event No. 7) (Cut into live pipeline)

<b>Date:</b>	31-Oct-2000	<b>Operator:</b>	Forest Oil Corporation
<b>MMS Investigation Report:</b>	Completed	<b>Activity:</b>	Development/Production
<b>Lease:</b>	G03393	<b>Event(s):</b>	Other—Pipeline leak
<b>Area:</b>	Vermilion	<b>Operation:</b>	Platform Abandonment
<b>Block:</b>	102	<b>Cause:</b>	Human Error
<b>Rig/Platform:</b>	B	<b>Water Depth:</b>	68 feet

**Remarks:** During platform removal operations, the removal contractor drilled a 3/8-inch hold into the riser. The pipeline was thought to be out of service and therefore no pressure. However, the line had 850 psi on because it was being fed by two other platforms. Divers were dispatched and the subsea pipeline tie-in valves were closed to isolate the faulty segment. The investigation findings showed that the hole was drilled into the pipeline by the contractor without permission prior to an inspection of the pipeline. The operator may not have investigated to see if other lines were tied into the pipeline before attempting to abandon it.

## Other Event No. 32 (Smoldering wire)

<b>Date:</b>	01-Nov-2000	<b>Operator:</b>	Ocean Energy, Inc.
<b>MMS Investigation Report:</b>	No	<b>Activity:</b>	Exploration
<b>Lease:</b>	G15815	<b>Event(s):</b>	Other—Smoldering wire
<b>Area:</b>	High Island	<b>Operation:</b>	Drilling
<b>Block:</b>	A 329	<b>Cause:</b>	Equipment Failure
<b>Rig/Platform:</b>	Rowan Louisiana	<b>Water Depth:</b>	215 feet

**Remarks:** When the driller switched on the power to the draw works, a contactor on the SCR did not disengage properly, causing the contactor to arc and weld itself closed. The insulation on a wire near the contactor began to smolder. The smoke alarm sounded and the electrician switched off the breaker to the draw works.

## Other Event No. 33 (Boat sank)

<b>Date:</b>	06-Nov-2000	<b>Operator:</b>	Apache Corporation
<b>MMS Investigation Report:</b>	USCG jurisdiction	<b>Activity:</b>	Not applicable
<b>Lease:</b>	G1072	<b>Event(s):</b>	Other—Boat sank
<b>Area:</b>	Eugene Island	<b>Operation:</b>	Workover
<b>Block:</b>	354	<b>Cause:</b>	Weather-related
<b>Rig/Platform:</b>	Nabors P-10	<b>Water Depth:</b>	280 feet

**Remarks:** A motor vessel that was tied to a mooring buoy capsized. The vessel, which was the designated cargo transport for the Nabors P-10 platform drilling rig, was 3 ½-miles from the rig when it capsized. The incident is under USCG jurisdiction because it capsized outside the 500-foot radius of the facility.

**Other Event No. 34****(Ballast tank collapse)**

<b>Date:</b>	20-Nov-2000	<b>Operator:</b>	British-Borneo Offshore, Inc.
<b>MMS Investigation Report:</b>	No	<b>Activity:</b>	Exploration
<b>Lease:</b>	G10605	<b>Event(s):</b>	Other—Ballast tank collapse
<b>Area:</b>	East Cameron	<b>Operation:</b>	Drilling
<b>Block:</b>	2	<b>Cause:</b>	Equipment Failure/Human Error
<b>Rig/Platform:</b>	Atwood Richmond	<b>Water Depth:</b>	30 feet

**Remarks:** The internal staff collapsed in the ballast tank while filling with seawater. A possible cause of the collapse was a plugged vent or tank overfill.

**Other Event No. 35****(Equipment overboard)**

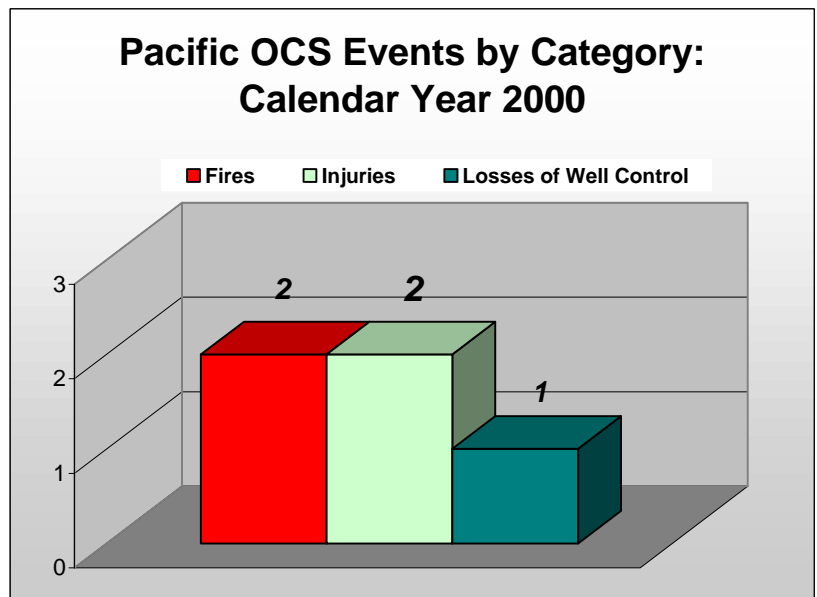
<b>Date:</b>	18-Dec-2000	<b>Operator:</b>	Texaco Exploration & Production Inc.
<b>MMS Investigation Report:</b>	No	<b>Activity:</b>	Development/Production
<b>Lease:</b>	G00974	<b>Event(s):</b>	Other—Equipment overboard
<b>Area:</b>	East Cameron	<b>Operation:</b>	Production
<b>Block:</b>	278	<b>Cause:</b>	Weather-related
<b>Rig/Platform:</b>	C	<b>Water Depth:</b>	145 feet

**Remarks:** The satellite dish blew off of the southwest corner of the platform into the water. The estimated cost of the satellite was \$1,500-\$2,000.

# Pacific OCS Region Incidents: Calendar Year 2000

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The Pacific OCS Region currently manages 79 leases, all of which are off the coast of southern California, and more than 339 miles of pipeline. Of the 79 leases, 43 are active today with 23 platforms producing about 97,000 barrels of oil and 206 million cubic feet of gas per day. The region had a relatively safe year with only two fires, two injuries, and one loss of well control.





## PAC Fires (2 total)

### Fire No. 1

<b>Date:</b>	11-Feb-2000	<b>Operator:</b>	Arguello, Inc.
<b>MMS Investigation Report:</b>	Completed	<b>Activity:</b>	Development/Production
<b>Lease:</b>	P00316	<b>Event(s):</b>	Fire
<b>Area:</b>	6A	<b>Operation:</b>	Production
<b>Block:</b>	5584	<b>Cause:</b>	Other--Leaking Flange
<b>Rig/Platform:</b>	Hermosa	<b>Water Depth:</b>	603 feet

**Remarks:** A line containing heat medium leaked at a loose flange onto the turbine exhaust. The heat of the exhaust ignited the heat medium, creating a small fire. The fire was quickly extinguished with a fire extinguisher. The investigation findings showed that the turbine and heat package had been out of service for about 9 months. It was recommended that the bolts on the flange and other heat packages be tightened. The investigation also showed that the operator committed an OCS violation by not notifying the District Supervisor of the occurrence in a timely manner.

### Fire No. 2

<b>Date:</b>	7-Jul-2000	<b>Operator:</b>	Arguello, Inc.
<b>MMS Investigation Report:</b>	No	<b>Activity:</b>	Development/Production
<b>Lease:</b>	P00315	<b>Event(s):</b>	Fire
<b>Area:</b>	6A	<b>Operation:</b>	Production
<b>Block:</b>	5585	<b>Cause:</b>	Equipment Failure
<b>Rig/Platform:</b>	Harvest	<b>Water Depth:</b>	675 feet

**Remarks:** A small fire occurred at the exhaust of the turbine at sales gas compressor "C." Lube oil leaked at a tubing fitting, resulting in oil soaked insulation, which came in contact with the hot turbine exhaust and caused a small fire. The fire was extinguished immediately.

## PAC Injuries (2 total)

Injury No. 1 <span style="float: right;">(Crane-related)</span>			
<b>Date:</b>	30-Mar-2000	<b>Operator:</b>	Nuevo Operating Company
<b>MMS Investigation Report:</b>	Completed	<b>Activity:</b>	Development/Production
<b>Lease:</b>	P00240	<b>Event(s):</b>	Injury(1)
<b>Area:</b>	6B	<b>Operation:</b>	Workover
<b>Block:</b>	5164	<b>Cause:</b>	Human Error
<b>Rig/Platform:</b>	Hillhouse/Sun Rig B	<b>Water Depth:</b>	189 feet
<p><b>Remarks:</b> During well workover operations, the operator sustained serious physical damage to this knee, hip, and left arm as he was struck by an electrical submersible pump cable spool. While tubing was being hoisted, there was a loud popping sound from the bails and the tubing elevators fell towards the rig floor. As the tubing unspooled, it fell into the well pulling the attached chemical line with it and subsequently jerked the spool from its base. The loose spool spun across the rig floor and struck the crane operator. Investigation findings showed that the spool that the chemical line was being spooled onto did not have caps and bolts in place to secure the spool to the cradle. Also, bolts were not in place to secure the elevator. All employees had not read or followed the Job Safety Analysis (JSA) for this well workover operation. The MMS made the following recommendations: (1) Employees should always read and follow the procedures outlined in the JSA for the task. (2) Retainer caps should always be put in place and properly tightened to prevent the spool from jumping out of the spooler base. (3) The driller should always confirm that the bolts on the elevators are inserted and tightened before pulling the well. The operator was issued INC G-110 (30 CFR 250.120(a)) for unsafe operations.</p>			

Injury No. 2			
<b>Date:</b>	26-Dec-2000	<b>Operator:</b>	Exxon Mobil Corporation
<b>MMS Investigation Report:</b>	Completed	<b>Activity:</b>	Development/Production
<b>Lease:</b>	P00182	<b>Event(s):</b>	Injury(1)
<b>Area:</b>	6A	<b>Operation:</b>	Other—Pre-drill operations
<b>Block:</b>	5277	<b>Cause:</b>	Human Error/Other—Lack of equipment maintenance
<b>Rig/Platform:</b>	Heritage	<b>Water Depth:</b>	1,075
<p><b>Remarks:</b> The Schlumberger slickline operator completed running plugs in existing wells in proximity of the well to be spudded and was using an air tugger to rig tow the lubricator assembly. The operator was on board adjacent to the air tugger when he stumbled forward, placing his right hand on the wire rope drum while his left hand inadvertently actuated the control lever, causing the air tugger to reel in. His right hand was caught between the wire rope and the drum of the air tugger crushed and severed portions of his middle and index fingers. The investigation showed that there were no guards on the wire rope drum and the control lever was not maintained, which caused it to stay in the reel-in position. Also contributing to the incident was the fact that the air tugger also had not been properly maintained and was positioned on the deck about knee-level to the operator. It was recommended that (1) only properly maintained equipment with all appropriate guards in place be operated and (2) that whenever possible, equipment should be positioned relative to the operator according to ergonomic considerations. The operator was found to be in violation of 30 CFR 250.107—failure to maintain equipment in a safe condition—and was issued INC No. G-111, component shut-in.</p>			

## PAC Losses of Well Control (1 Total)

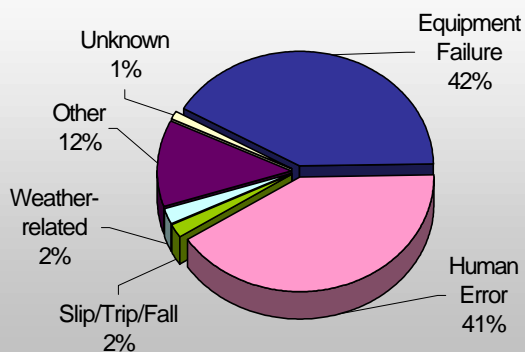
Loss of Well Control No. 1			
<b>Date:</b>	19-Nov-2000	<b>Operator:</b>	Venoco, Inc.
<b>MMS Investigation Report:</b>	Completed	<b>Activity:</b>	Development/Production
<b>Lease:</b>	P00205	<b>Event(s):</b>	Loss of Well Control
<b>Area:</b>	6B	<b>Operation:</b>	Workover
<b>Block:</b>	4661	<b>Cause:</b>	Human Error
<b>Rig/Platform:</b>	Gail	<b>Water Depth:</b>	739 feet
<p><b>Remarks:</b> After completion of workover operations on well E-9, preparations were being made to test the BOP prior to running the completion string. Efforts to get a good seal on the test plug failed. A bridge plug was run and set in the 9-5/8 casing. After the BOP was successfully tested, the bridge plug was released and the well blew about 25 barrels of oil and water onto the upper and lower decks with an undetermined amount of spray going over the side of the platform. The well was shut in within 20 seconds. Investigation findings showed that two completion zones were open in the well at the same time. The lower zone acted as a thief zone taking wellbore fluids and reducing the hydrostatic pressure in the well. The reduction in hydrostatic pressure may have allowed formation fluids from the upper zone to enter the wellbore as a kick and migrate up to the bridge plug. When the bridge plug was released, the kick came to the surface. Two INC's were issued. The MMS made the following recommendations: (1) involve the MMS earlier in the process for approval to postpone BOP testing until the well is completely under control; (2) determine why the BOP test plug would not seal and repair or replace, as necessary; (3) in the absence of a functioning test plug, use a bridge plug or similar tool that allows for full pressure equalization above and below the tool prior to release; and (4) if a bridge plug or packer is used in lieu of a test plug, set the tool deep enough to allow fluids above the tool to exert sufficient hydrostatic pressure to counteract pressure forming below the tool.</p>			

# Appendix: Graphical Summary of OCS Incidents in 2000

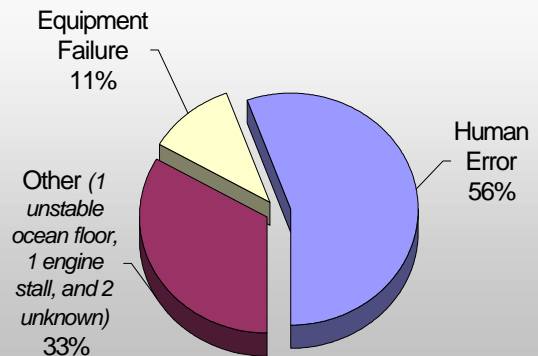
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## Overview of Causes

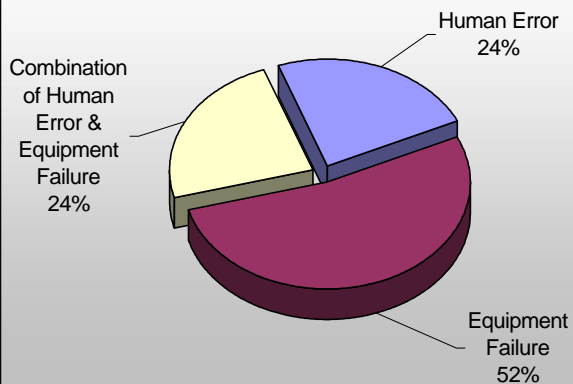
**Overall Causes of OCS Incidents in 2000**



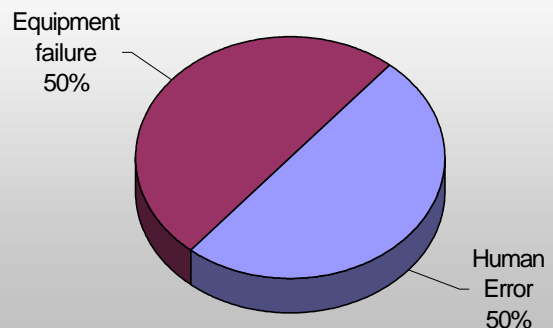
**Causes of OCS Collisions in 2000**



**Causes of OCS Crane-related Incidents in 2000**

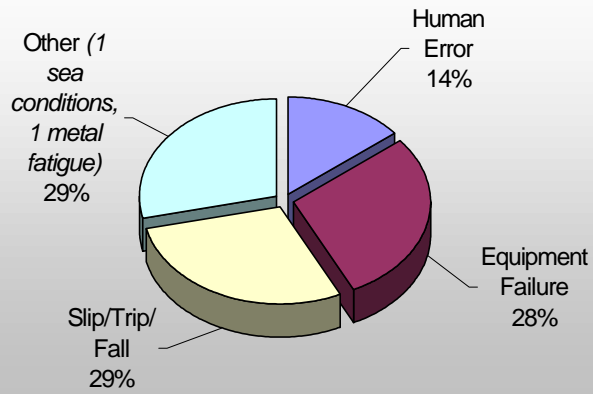


**Causes of Explosions in 2000**

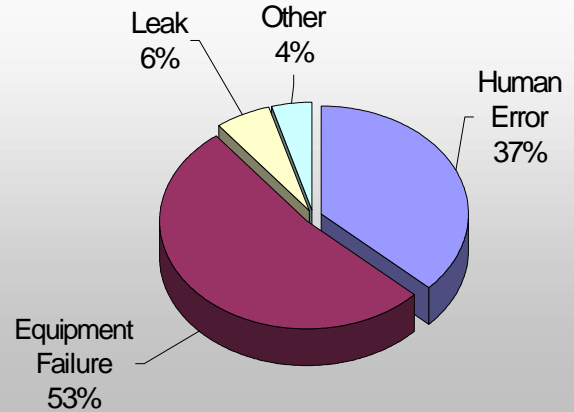


## nOverview of Causes--continued

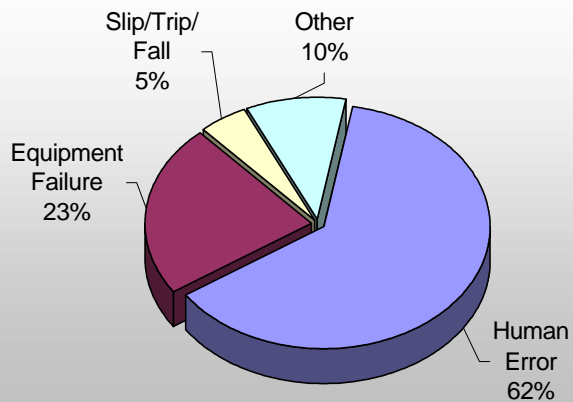
**Causes of Fatalities in 2000**



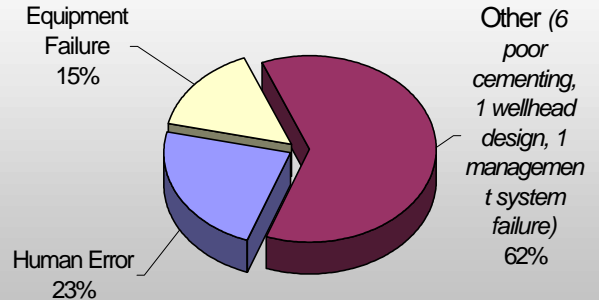
**Causes of Fires in 2000**



**Causes of Injuries in 2000**

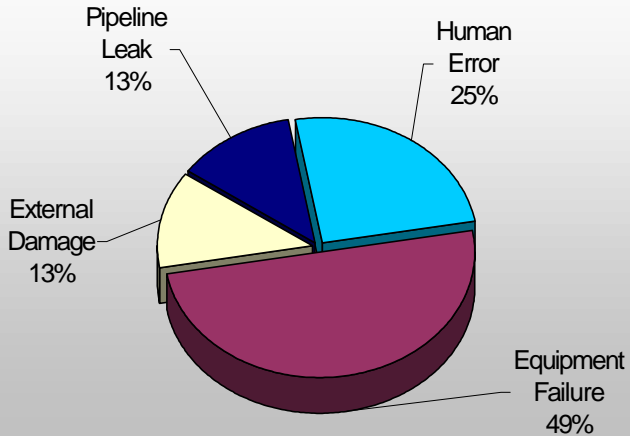


**Causes of Losses of Well Control in 2000**

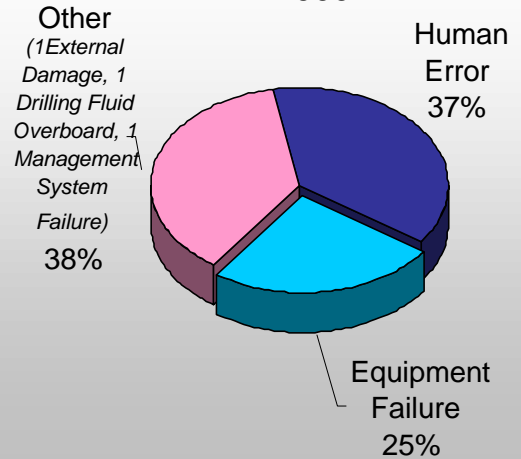


## nOverview of Causes--continued

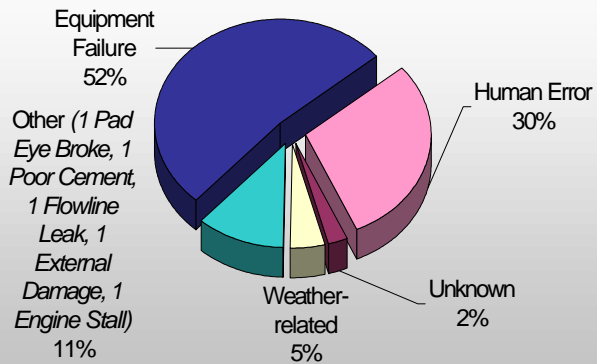
**Causes of Pipeline Incidents in 2000**



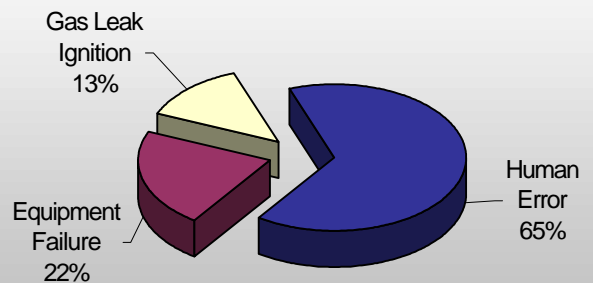
**Causes of Pollution >50 in 2000**



**Causes of Other Events in 2000**

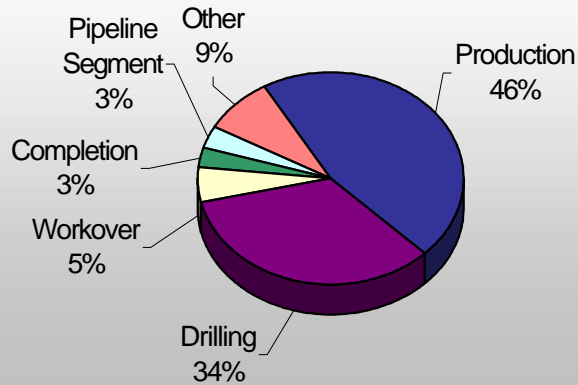


**Causes of Welding-Related Incidents in 2000**

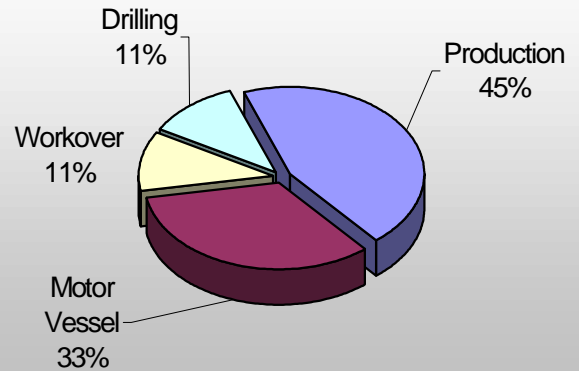


## nOverview of Operations

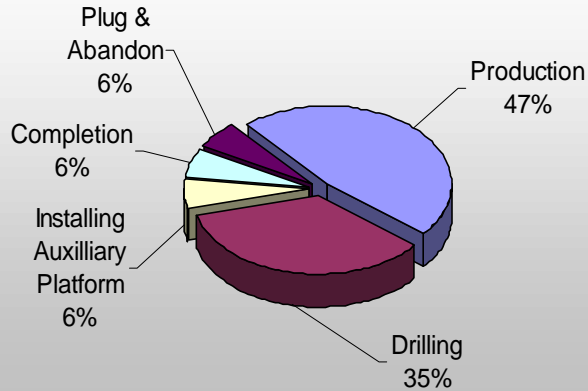
**Overall Operations at Time of  
OCS Incidents in 2000**



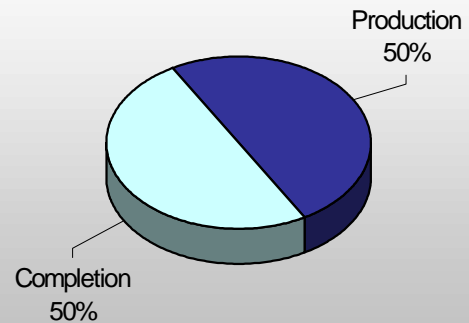
**OCS Operations at Time of  
Collisions in 2000**



**OCS Operations at Time of Crane-  
Related Incidents in 2000**

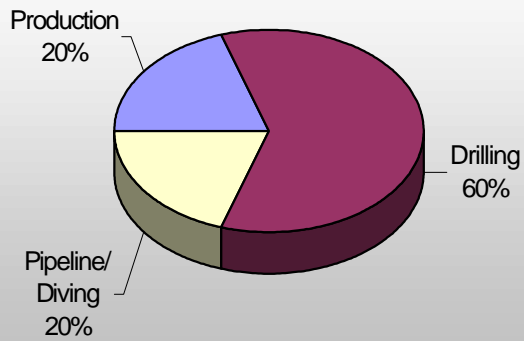


**OCS Operations at Time of  
Explosions in 2000**

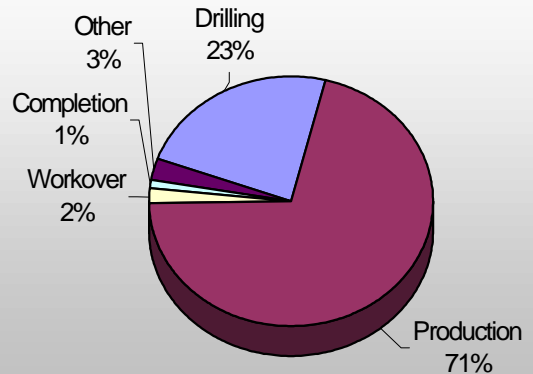


## nOverview of Operations--continued

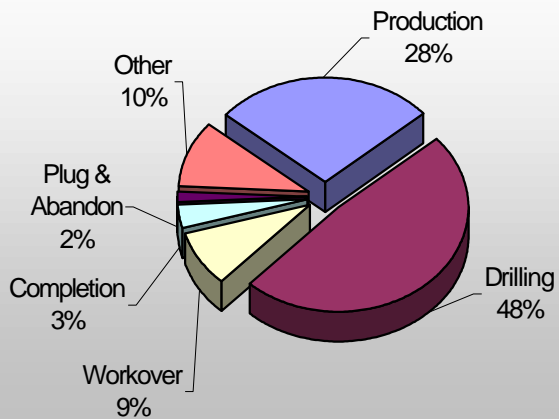
**OCS Operations at Time of Fatalities in 2000**



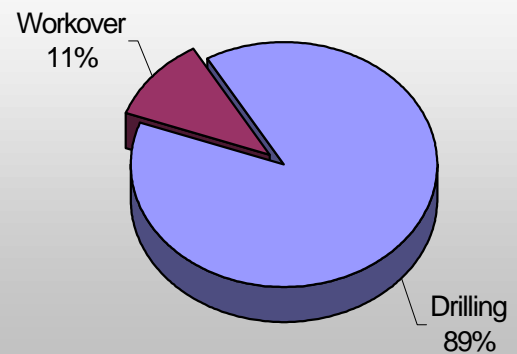
**OCS Operations at Time of Fires in 2000**



**OCS Operations at Time of Injuries in 2000**



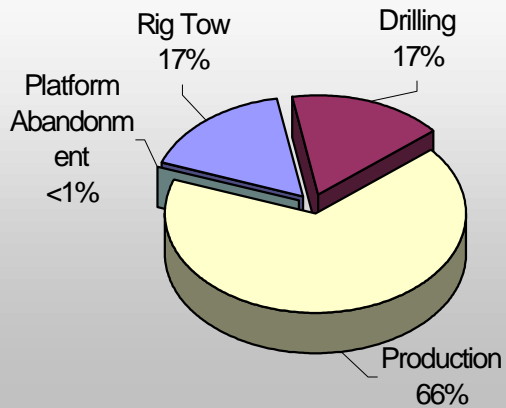
**OCS Operations at Time of Losses of Well Control in 2000**



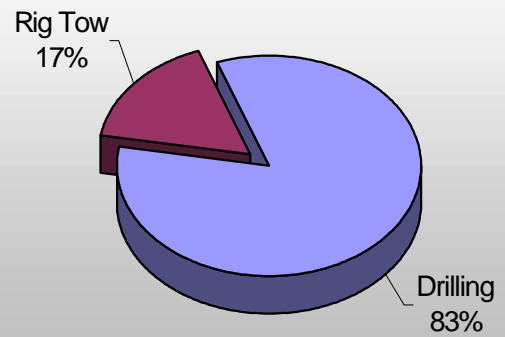


## nOverview of Operations--continued

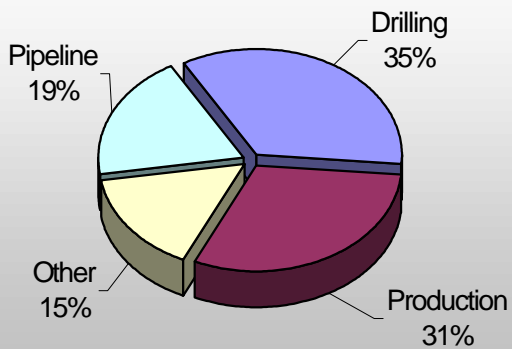
**OCS Operations at Time of Pipeline Events in 2000**



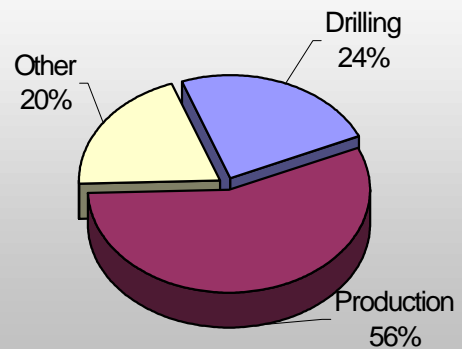
**OCS Operations at Time of Pollution Events**



**OCS Operations at Time of Other Events in 2000**

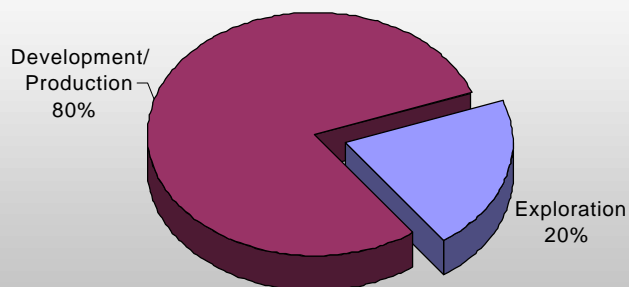


**OCS Operations at Time of Welding-Related Events in 2000**

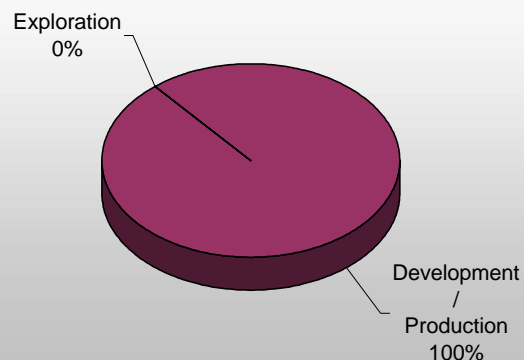


## nOverview of Activities

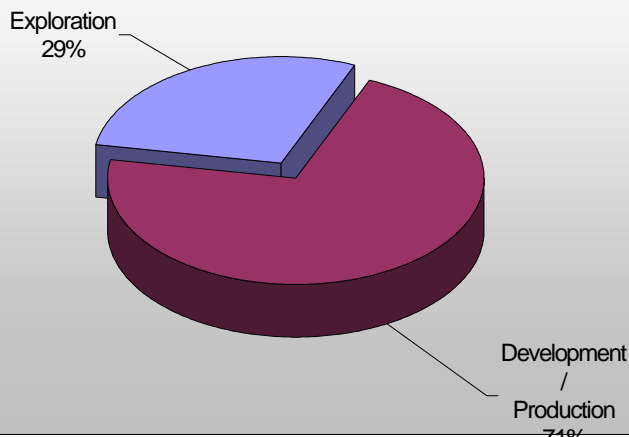
**OCS Activity at Time of Incidents in 2000**



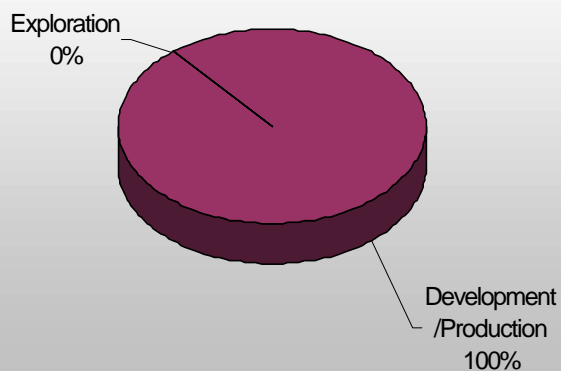
**Activity at Time of Collisions in 2000**



**OCS Activity at Time of Crane Incidents in 2000**

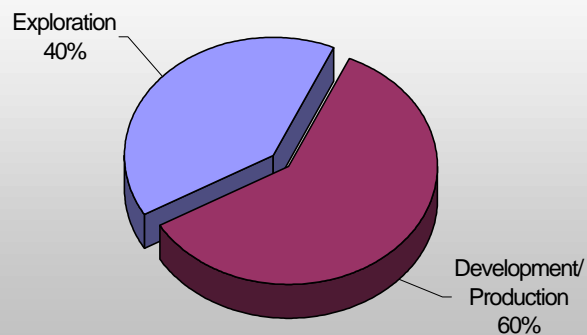


**OCS Activity at Time of Explosions in 2000**

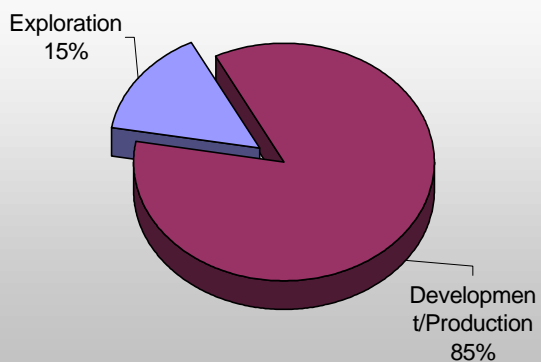


## Overview of Activities –continued

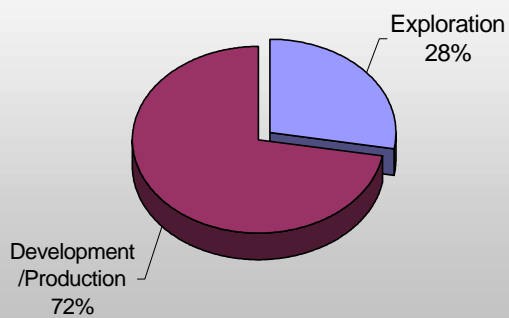
**OCS Activity at Time of Fatalities in 2000**



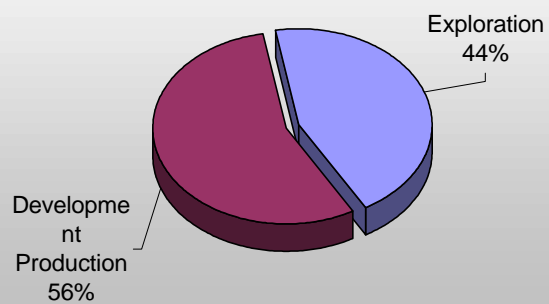
**OCS Activity at Time of Fires in 2000**



**OCS Activity at Time of Injuries in 2000**

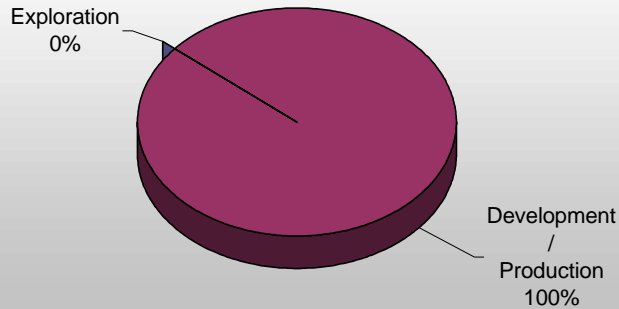


**OCS Activity at Time of Losses of Well Control in 2000**

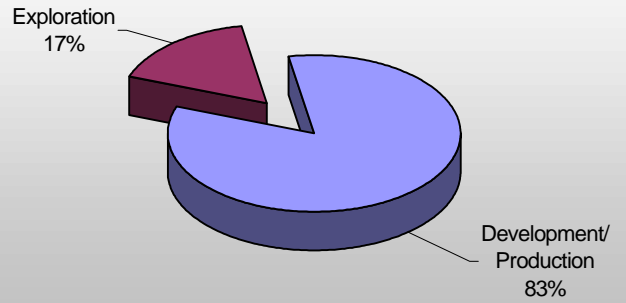


## nOverview of Activities –continued

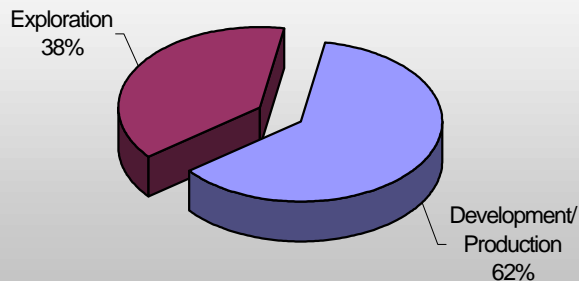
**OCS Activity at Time of Pipeline Incidents in 2000**



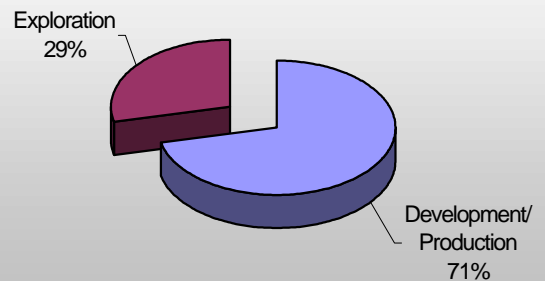
**OCS Activity at Time of Pollution Incidents >50 Barrels in 2000**



**OCS Activity at Time of "Other" Incidents in 2000**

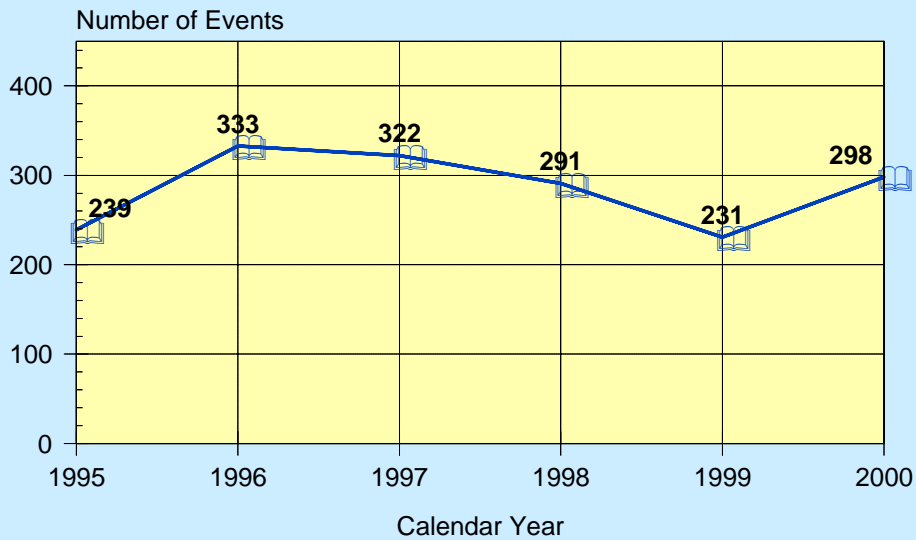


**OCS Activity at Time of Welding-Related Incidents in 2000**



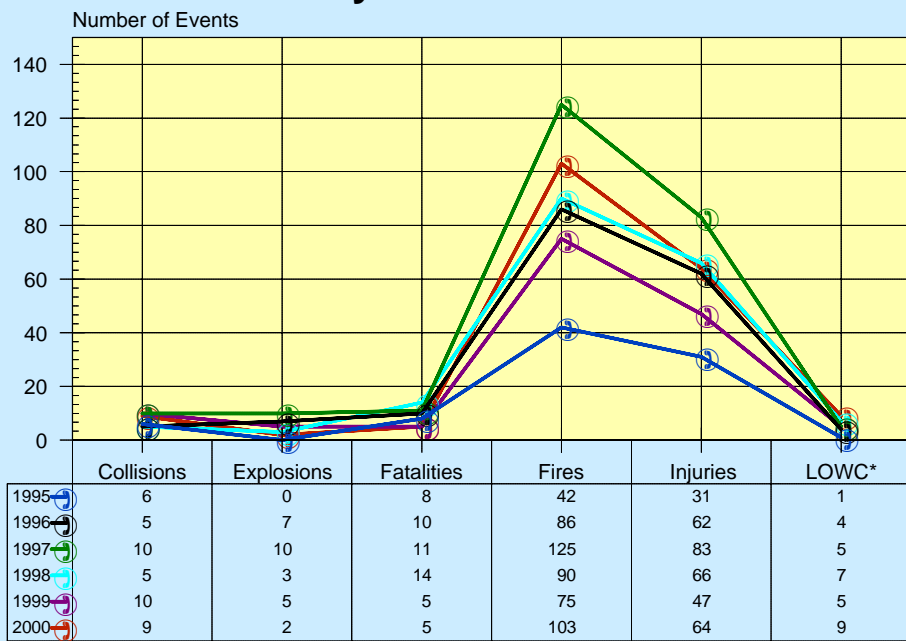
## nOverview of Incidents: 1995-2000

### Total Number of OCS Events: 1995-2000



Note: Some events result in multiple incidents (e.g., one event may involve two or more injuries).

### OCS Incidents by Calendar Year: 1995-2000

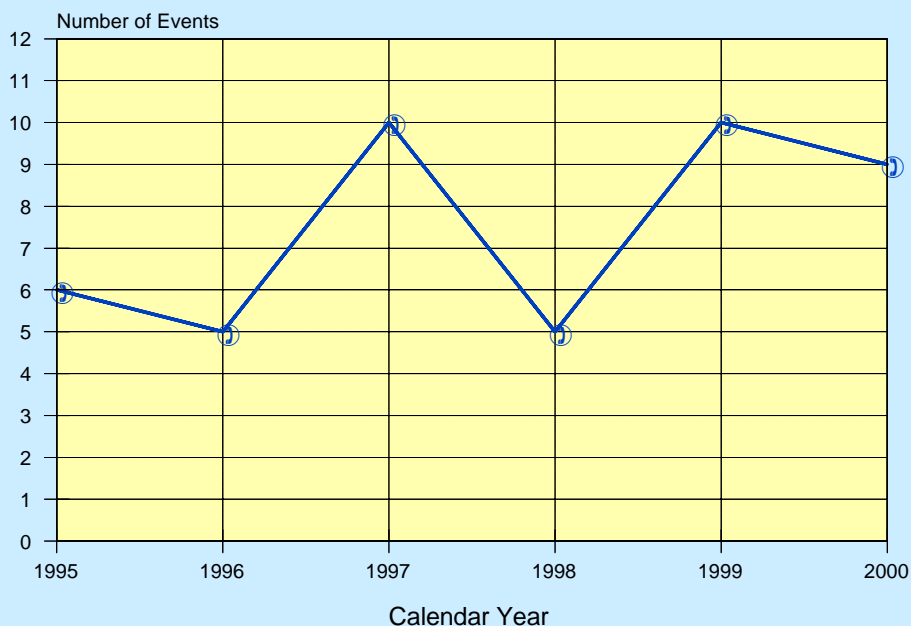


\*LOWC = Loss of Well Control

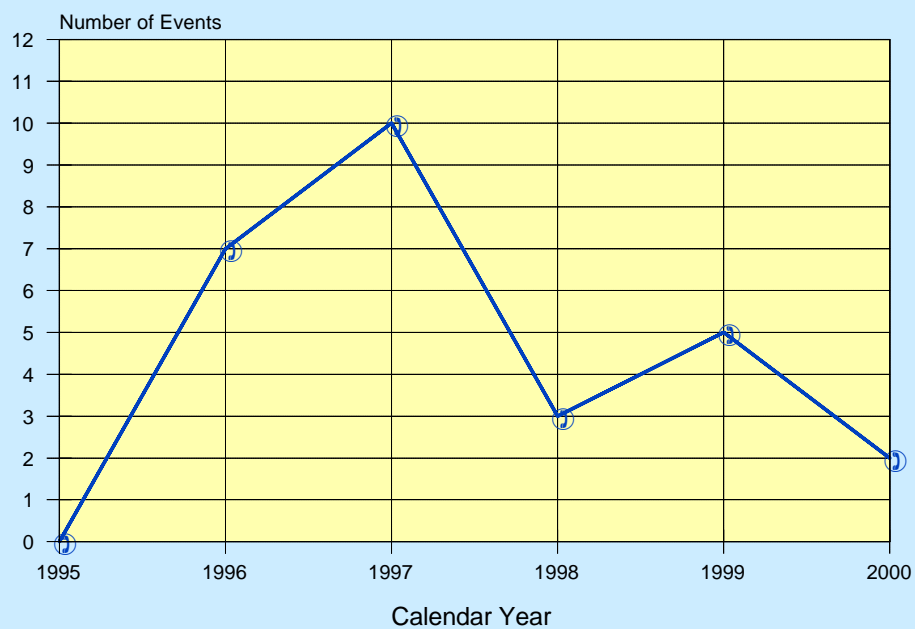
Calendar Year

## nOverview of Incidents: 1995-2000--continued

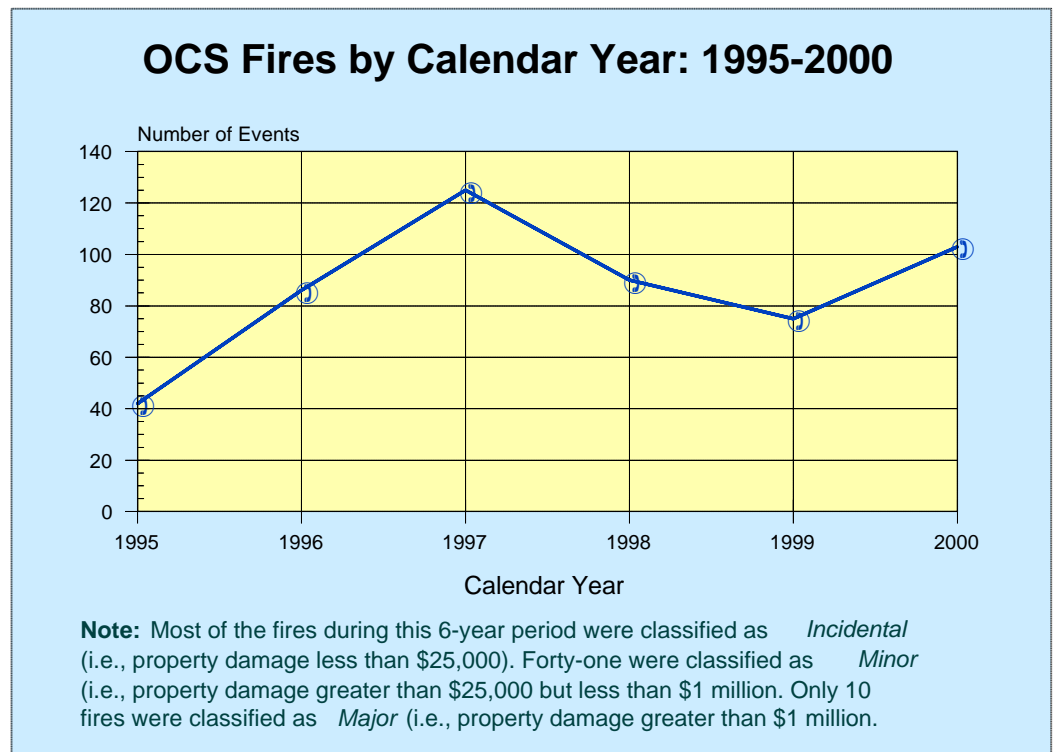
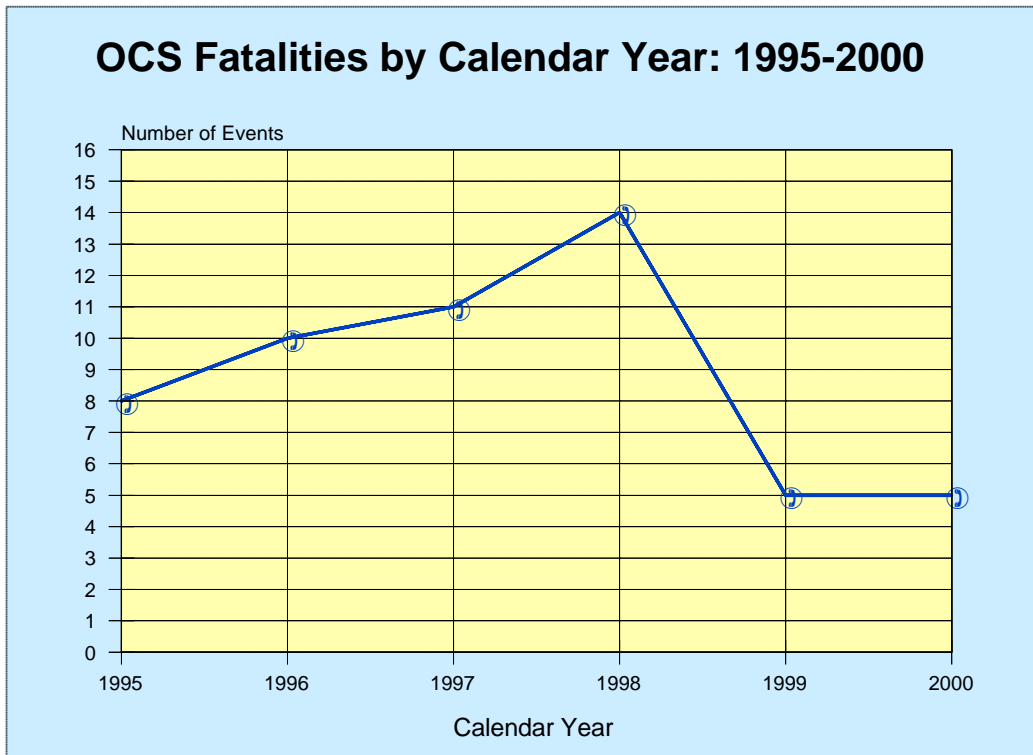
### OCS Collisions by Calendar Year: 1995-2000



### OCS Explosions by Calendar Year: 1995-2000



## nOverview of Incidents: 1995-2000--continued



## nOverview of Incidents: 1995-2000--continued

