OCS Report
MMS 2000-021

Incidents Associated with Oil and Gas Operations

Outer Continental Shelf 1998

U.S. Department of the Interior
Minerals Management Service
Engineering and Operations Division

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Abbreviations and Acronyms

AC	-Alternating current
bbl	-Barrel(s)
Bbbl	-Billion barrels
Bcf	-Billion cubic feet
BOP	-Blowout Preventer
BOPD	-Barrels of oil per day
BOPE	-Barrels of oil per day equivalent
BWPD	-Barrels of water per day
CFR	-Code of Federal Regulations
CT	-Coil tubing
CTM	-Coil tubing measurement
CO_2	-Carbon dioxide
ESD	-Emergency Shut Down
ft	-Foot (feet)
FTP	-Flowing tubing pressure
G/L	-Gas/Liquid
gal	-Gallon
GOM	-Gulf of Mexico
H_2S	-Hydrogen sulfide
HI	-High Island
in	-Inch
LEL	-Lower Exposure Limit
LSH	-Level Safety High
LSL	-Level Safety Low
MCC	-Master Control Center
MCFD	-Thousand cubic feet per day
MD	-Measured depth
MM	-Million
MMbbl	-million barrels
MMS	-Minerals Management Service
MOU	-Memorandum of Understanding
M/V	-Mobile vessel
NE.	-Northeast
NRC	-National Response Center
OCS	-Outer Continental Shelf
OCSLA	-Outer Continental Shelf Lands Act
POV	-Pressure operated valves
Ppg	-Pounds per gallon
PSE	-Pressure Safety Element
PSH	-Pressure Safety High
psi	-Pounds per square inch
PSL	-Pressure Safety Low
PSV	-Pressure Safety Valve
RTU	-Remote Terminal Unit

SCADA	-Supervisory Control and Data Acquisition
SCSSV	-Surface Controlled Subsurface Safety Valve
SITP	-Shut-in tubing pressure
SS	-Stainless steel
SSSV	-Subsurface safety valve
SW.	-Southwest
TD	-Total depth
TIMS	-Technical Information Management System
TLP	-Tension leg platform
TSE	-Temperature Safety Element (fusible material)
TSH	-Temperature Safety High
USCG	-U.S. Coast Guard
VRS	-Vapor Recovery System
VRU	-Vapor Recovery Unit
WHRU	-Waste Heat Recovery Unit

Foreword

The following is a compilation of incidents that occurred on the Outer Continental Shelf (OCS) during the year 1998. This report lists all of the incidents separately by Region and then by type of event. (Note: There is no section for the Alaska Region in this report because no incidents occurred there during the 1998 reporting period.) After the listing of the individual incidents, we have a section that presents the information graphically.

Data in this report have been compiled from the Technical Information Management System (TIMS) database for the Pacific and Gulf of Mexico OCS Regions. It was cross-checked by performing multiple analyses and by checking paper records on file in Minerals Management Service's (MMS's) headquarters office in Herndon, VA. TIMS is a database created by MMS for both internal and public use. In addition to containing information on OCS incidents, TIMS also includes data on the following items: platforms, number and type of wellbores, seismic analysis, leasing data, production rates, and royalty management.

One of the major concerns with the incident component of TIMS is data quality. Both MMS and industry are placing increased emphasis on operator performance and safety. With this increased attention to safety, the quality of the incident data in TIMS takes on additional importance. As both MMS and industry rely more and more on incident data and data analysis, the potential impact of the incident information contained in TIMS will also increase.

As shown in this report, there are a large number of incidents caused by human error. Because of the wide scope of this definition, MMS will be working in the future to narrow the definition of this field.

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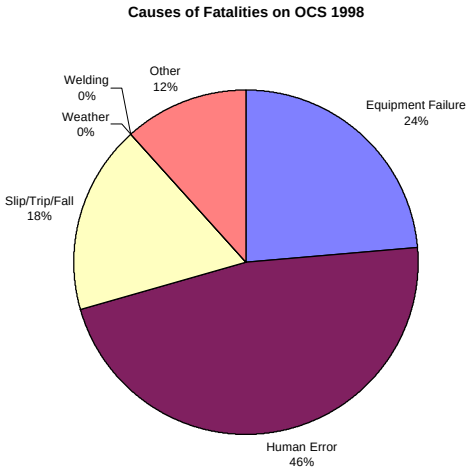
Executive Summary

This report presents OCS incident information for 1998. Incident data are based solely on MMS's TIMS database, a nationwide OCS information gathering system. Incident information included in this report has been categorized by region, year, and type, and sorted by date.

Overall, the main cause of incidents in 1998 was human error, followed by equipment failure. The majority of these incidents occurred during production operations. Fires were the most frequent type of incident reported to the MMS in 1998, followed by injuries. Both the number of fires and number of injuries recorded in TIMS tripled from 1995 to 1997 (Appendix A). Part of this increase may be a result of changes in Gulf of Mexico (GOM) record keeping requirements effective August 1996. The 1998 fires and injuries showed a return to the 1996 levels. The majority of the reported injuries were minor.

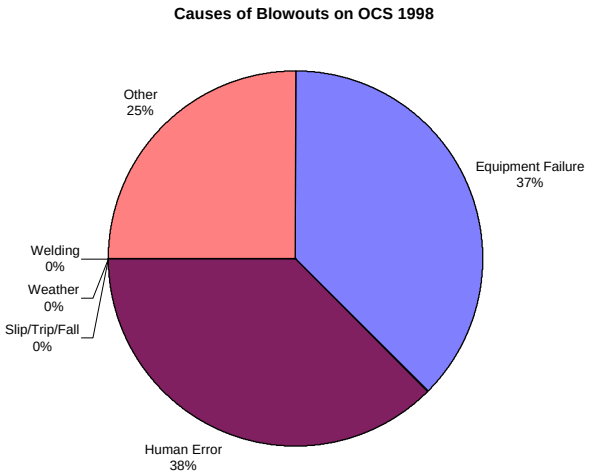


The primary cause of fatalities (14) was human error, followed by equipment failure. Most fatalities occurred during production operations, followed by drilling, then well completion, and finally welding operations.

Blowouts (7) were mainly a result of equipment failure and human error, resulting primarily from drilling operations, followed by well completion activities. Explosions mainly occurred during production activities and were caused by equipment failure and human error.

During 1998 there was an increase in activity in water depths greater than 1,000 feet, yet a decrease in the number of incidents occurring in those water depths.

Recently, an MMS workgroup completed a review of crane incidents that occurred between January 1995 and August 1998. The report discusses the workgroup's review and analysis of these accidents and makes recommendations for improving crane safety.



The workgroup reviewed 34 crane incidents that occurred from 1995 to August 1998, resulting in 7 fatalities and 20 injuries. The most significant finding of the review was that crane riggers appear to be at the greatest risk during crane operations. During this time, all 7 of the fatalities and most of the injuries involved crane riggers or other personnel working around cranes.

Introduction

I. Authority

The Outer Continental Shelf Lands Act (OCSLA) requires that either MMS or the U.S. Coast Guard (USCG) prepare within 30 days a public report for all deaths, serious injuries, major fires, and major oil spillages (>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.

II. 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.

III. 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 blowouts 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.

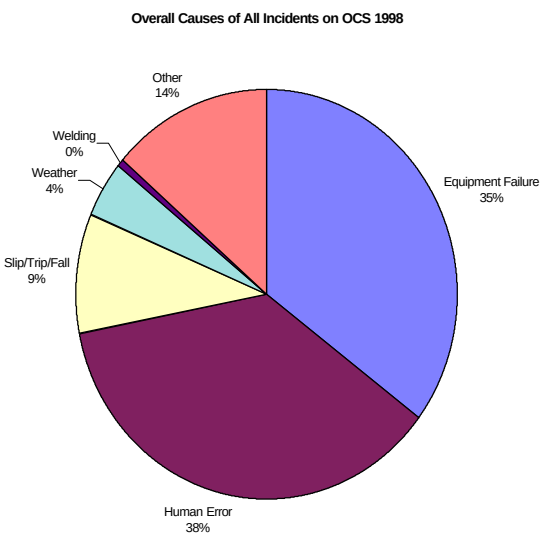
The MMS and the USCG are in the process of developing a joint accident reporting structure. This Subpart A revision will include a web-based initiative to allow joint reporting of MMS/ USCG incidents in one location on the web. A proposed rule will be published during the first half of 2000 requesting comment on this proposal.

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 blowouts. 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 involving a fatality or serious injury that causes substantial impairment of any bodily unit or function.

The regions followed this policy until August 1996, when the GOM Region began implementation of a more stringent policy. Since that date, the GOM Region investigates all fires and explosions, all blowouts, all spills greater than one barrel, all accident-related fatalities, all collisions involving structural damage to OCS facilities, and injuries and accidents requiring repairs on a case-by-case basis. The degree of investigation is still left to the discretion of the District Supervisor. The Pacific Region continues to follow the 1992 policy previously discussed. The MMS completes an Accident Investigation Report (Form 2010) for all accidents investigated and enters the information into TIMS.

IV. General Incident Trends

The following trends were found upon analyzing the data compiled for this report.



- The primary causes of fatalities (14) were human error (8) and equipment failure (4). The 14 deaths were the result of 11 individual incidents. Three of the 11 individual incidents resulted in multiple fatalities.

- Explosions (4) were a result of equipment failure (2) and human error (2), resulting primarily from production operations.

- Overall, the main cause of incidents in 1998 was human error (75), followed by equipment failure (72).

The following chart shows a comparison of offshore incidents over the last 4 years. Comparing

it to activity on the OCS normalizes the data. This activity is measured by total wells drilled and the oil and gas production on the OCS. The year 1998 has seen a decline in the upward trend that had been in place since the beginning of our analysis.

Year	**1995**	**1996**	**1997**	**1998**
Incidents	94	180	258	193
Development Wells	520	562	601	556
Exploration Wells	278	327	353	437
Wells Drilled	798	889	954	993
Oil Produced (MMbbl)	429	426	466	491
Gas Produced (Bcf)	5,015	5,066	5,222	5,115
Incidents per Well Total Drilled	.12	.20	.27	.19
Incidents per MMbbl Produced	.22	.42	.55	.39
Incidents per Bcf Produced	.02	.04	.05	.04

1998 Crane Incidents

There have been three very serious accidents involving cranes on the OCS in 1998. The first occurred on May 10 when a platform crane failed while offloading a rental crane and killed two workers. Ocean Energy is the operator of the platform. The early indication is that the crane was poorly maintained and that mechanical failure contributed to the accident.

The second serious accident occurred on June 2 and it too involved the offloading of a rental crane. This event differed from the first accident in that the operation of a crane did not factor into the accident. The apparent cause of this accident was the improper disassembly of the rental crane (human error - lack of proper training, preparation, and supervision). One worker was killed and three others were seriously injured. Amoco is the operator of the platform and Sundowner is the contractor that was offloading the crane.

On October 27, another serious crane accident occurred. The crane operator was killed when the crane broke from its pedestal while lifting a load on a Marathon platform.

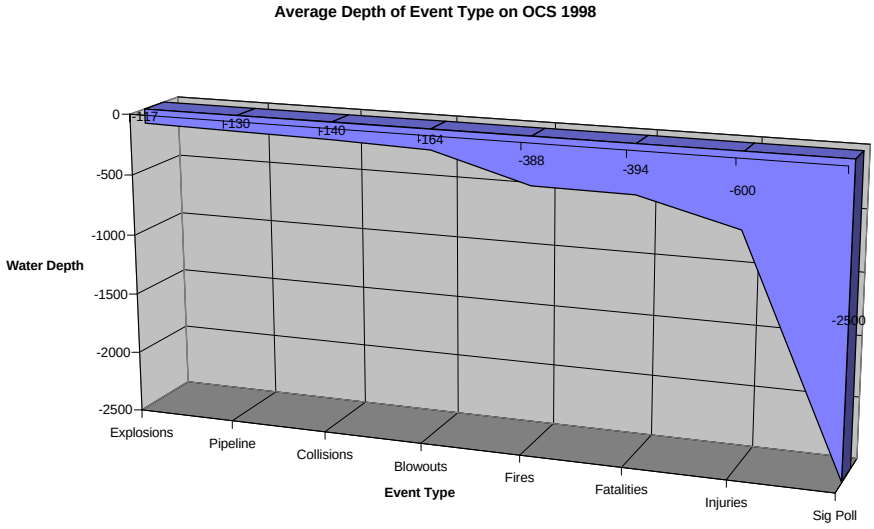
There have been at least six other minor incidents that involved crane operations in 1998. Three incidents caused significant damage to crane booms when equipment failed or the operator made an error. Two other incidents appear to have been caused by improper or poor techniques by "riggers" on supply boats. (For this report, riggers are personnel who attach or unhook loads or otherwise assist with crane operations.) One of these incidents resulted in a minor injury and the other caused the spillage of 400 gallons of motor oil. The last incident caused no damage or injuries when a fast line parted.

Another incident should be included with these 1998 crane incidents because it involves the hoisting of materials. This accident involved a hoist used to move a blowout preventer (BOP) stack and resulted in the year's first fatality (February 6). A roughneck was pinned between the BOP stack and a structural beam after one of the hoist's wire ropes failed. Apparently the wire rope had corroded, possibly leading to its failure.

1998 Deepwater (>1,000 ft) Incidents

There were at least 21 deepwater incidents in 1998 according to the Accident/Incident forms and the Accident Investigation Reports contained in our TIMS database. Incidents were mostly minor, involving personnel injuries and fires. There were eight injuries and eight fires. There were also four significant pollution events in deepwater with an average spill size of 100 bbl.

The chart below shows the average water depth of each of the types of incidents on the OCS. Most of the incident types occurred in water depths less than 1,000 feet. The only exception was significant pollution events. These greater than 50 bbl spills occurred at an average water depth of 2,500 feet, significantly deeper than the rest of the incidents.



Gulf of Mexico Region

Blowouts – 1998

Date:	06-Jan-1998	Operator:	Hall-Houston Oil Company
Investigation:	Complete	Activity:	Exploration
Lease:	G12886	Event(s):	Blowout
Area:	South Marsh Island	Operation:	Drilling
Block:	17	Cause:	Poor cement job on casing
Rig/Platform:	Marine XV	Water Depth:	80’

Remarks: The crew ran the 10-3/4 inch casing to a depth of 1,793 feet (MD) on Well No. 3, and cementing operations began. During cementing operations, the crew lost returns at the surface for approximately 5 minutes, and then they regained returns. After they completed cementing operations, the crew washed out cement down to the mud line hanger with a 1-1/4 inch line. They made a rough cut on the 10-3/4 inch casing, and laid down one joint of casing. They landed the diverter, and began to nipple down the diverter’s chains and cables. The well suddenly vented fluid from the 10-3/4 inch by 16 inch annulus. The crew began to nipple up the diverter by installing several bolts. They then noticed flow from the bell nipple, and closed the diverter. While the well was flowing on diverter, the crew began rigging up the Haliburton unit to kill the well. Gas began leaking around the seals of the 16 inch wellhead. They decided to evacuate the rig. All personnel were accounted for. They monitored the well from a workboat for the next three days. On 1/9/98 a crew boarded the rig, started the standby generator, rigged up fire hoses for a water curtain, removed the bell nipple, re-hung the Texas deck, and hung the 13-3/8 inch BOP stack. The flow had slowed considerably, and eventually stopped. On 1/11/98 the well was dead. The crew began securing the well and restarting the rig’s systems.

Date:	16-Jan-1998	Operator:	Chevron U.S.A. Inc.
Investigation:	Complete	Activity:	Development
Lease:	G00983	Event(s):	Blowout
Area:	Eugene Island	Operation:	Production
Block:	252	Cause:	Equipment failure
Rig/Platform:	Diamond Ocean Crusader	Water Depth:	150’

Remarks: On 1/16/98 gas was found bubbling around Platform B (unmanned). All but one well (B-7) had been plugged. B-7 was a low-volume gas well. Attempts to control the flow through surface intervention from the platform proved to be too hazardous and were abandoned. Fire boats and oil clean-up boats were on location. The decision was made to drill a relief well. The Diamond Ocean Crusader was onsite 1,000 feet away within 96 hours. On 2/14/98, the relief well intercepted well B-7, and heavy kill fluid followed by cement was pumped into B-7, which stopped the flow. Well B-7 was plugged and abandoned on 2/18/98. The operator determined that the SCSSV was cut out by gas/liquid/sand flow eroding holes in the 7 inch and 10-3/4 inch casings.

Date:	30-Apr-1998	Operator:	Vastar Resources, Inc.
Investigation:	Complete	Activity:	Development
Lease:	G02640	Event(s):	Blowout
Area:	Mississippi Canyon	Operation:	Drilling
Block:	148	Cause:	Human Error
Rig/Platform:	Nabors 78	Water Depth:	659’

Remarks: While attempting to come out of the hole on a wiper trip, the pipe began to stick. When the operator pulled 100,000 pounds over the drill weight with the bit at 4,024 feet, gumbo mud started to come over the kelly bushing. The pumps were turned off, and the hole began unloading, blowing the rotary bushing out of the rotary table. All personnel except the drillers evacuated the rig floor. The diverter system was engaged at the master control panel. The well started to blow gas and was diverted. The pumps were engaged, pumping 11.1 ppg mud in the hole. After 15 minutes, the well bridged over. They began mixing and pumping 12 ppg mud down the hole. When they were unable to get returns, the driller began pumping 12 ppg mud down the annulus to fill the hole. They were still unable to establish returns, so they backed the annulus pressure off and worked the drill pipe. The crew opened the diverter and found the diverter plugged above the diverter lines. The riser was then filled with mud and cleared of the gumbo that was plugging the diverter lines. They then filled the hole with 12 ppg mud through the casing valve at the wellhead, and regained control of the well.

Date:	08-Jul-1998	Operator:	Newfield Exploration Company
Investigation:	Complete	Activity:	Development
Lease:	00161	Event(s):	Blowout, Pollution and Injury
Area:	East Cameron	Operation:	Abandonment
Block:	67	Cause:	Equipment failure, leak
Rig/Platform:	B	Water Depth:	51’

Remarks: The operator was plugging and abandoning well B-7. At the time of the blowout they were performing sand-washing operations. They washed through a sand bridge at 8,750 feet and encountered high-pressure gas. When the high-pressure gas hit the surface equipment, it cut a hole in the gas buster allowing gas to escape into the atmosphere. The operator closed the upper and lower stripper rams and the 1-1/4 inch safety ram. The pressure on the pump manifold was 7,200 psi, and the operator closed the manual choke located on the inlet to the gas buster. The choke line piping failed and parted in four places. The failed choke line began whipping back and forth and damaged the hydraulic control lines to the BOP stack. An attempt to close the shear rams failed, and the operator decided to evacuate the facility. Eleven people evacuated the platform and were rescued (all personnel accounted for). A crew reboarded the facility on 7/9/98 and attempted unsuccessfully to close the well in by reattaching the hydraulic lines. On 7/10/98 the well was brought under control by bullheading a lost circulation pill ahead of 16.5 ppg mud. On 7/11/98, well control operations continued by circulating kill mud to ensure the well was free of migrating gas. An estimated 1.5 barrels of condensate was spilled into the water during the incident.

Date:	22-Nov-1998	Operator:	Ocean Energy, Inc
Investigation:	Complete	Activity:	Development
Lease:	G02596	Event(s):	Blowout
Area:	South Marsh Island	Operation:	Workover
Block:	244	Cause:	Human error
Rig/Platform:	A	Water Depth:	23’

Remarks: A coil tubing unit was being used to wash sand inside a 2-3/8 inch production tubing. The coil tubing operator encountered difficulty snubbing the tubing into the hole. The crew removed the stripper rubber in the pack-off. The drag on the tubing eventually freed and washing operations resumed. The coil tubing operator then observed water spewing from between the pack-off and and the injection head. Flow continued, eventually turning into a dry gas and water mixture. The operator initiated shut-in procedures by setting the slips on the coil tubing, then closing the cutter rams. An attempt to pull the coil tubing from the blind ram cavity failed (it was later learned that this step failed because the coil tubing pipe had parted above the pack-off assembly). The blind rams were closed on the tubing to reduce the flow. Both pipe rams were closed and successfully sealed the outside of the coil tubing. Flow continued out of the coil tubing. The crew attempted to shut off flow by closing a manual valve on top of the tree. Flow still continued. Personnel were evacuated from the facility. On 11/23/98 they removed the injector head and pack-off from the Bowen connection above the BOP’s to allow a valve and riser pipe to be stabbed over the broken stub. The valve was stabbed and a chicksan line was installed to vent gas into the choke manifold. The valve was closed and SITP measured at 200 psi. The well was killed by pumping 11.6 ppg calcium chloride down the coil tubing annulus and up the coil tubing. There were no injuries or pollution.

Date:	09-Dec-1998	Operator:	Petrobras America Inc.
Investigation:	Complete	Activity:	Development
Lease:	G12906	Event(s):	Blowout
Area:	Eugene Island	Operation:	Production
Block:	71	Cause:	Equipment Failure / Human error
Rig/Platform:	Falcon 77	Water Depth:	21’

Remarks: A coil tubing unit was being rigged up to jet-in Well A-1 with nitrogen at 1930 hours on 12/8/98. While attempting to stab the coil tubing injector head, the crew determined that the ram block retainer and piston on the No. 4 ram had stripped-out threads that could not be repaired on location. A new BOP stack for the coil tubing unit was ordered. While waiting on the replacement BOP’s, the crew removed the old BOP, and pickled the coil tubing with 15% hydrochloric acid. The crew installed the replacement stack and tested at 0800 on 12/9/98. Several attempts to shift a sliding sleeve at 13,773 feet with a wireline were unsuccessful. At approximately 1900 hours, the crew determined that the flowline segment was not equipped with a proper sampling valve. The crew decided to install a weld-o-let and 1-inch ball valve. Seventy feet of 3-1/16 inch riser extended from the crown valve on the well to the drill floor. The BOP stack was in place at the top of the riser with no coil tubing in the hole. The well was shut in by the vertical-run automatic surface safety valve, and the flowline was isolated with a closed manual block valve on the departing pipeline. The crown valve was open, and the riser and flowline were filled with 15% hydrochloric acid and water. During the process of opening the wing automatic valve to remove a fusible locking cap, one of the crew mistakenly or inadvertently opened the vertical-run automatic surface safety valve, subjecting the riser and BOP stack to a sudden surge of well pressure of 3,550 psi. The hammer effect of the sudden high pressure and the riser fluid column sheared the retainer ring inside the Bowen connection located just under the BOP stack. The uncontrolled well pressure blew the BOP stack off the riser and into the derrick approximately 40 to 50 feet. The BOP stack landed on the southwest corner of the heliport and fell into the water. The uncontrolled flow was immediately brought under control by the same crew member closing the vertical-run surface safety valve.

Gulf of Mexico Region

Fatalities – 1998

Date:	06-Feb-1998	Operator:	Chevron U.S.A. Inc.
Investigation:	Complete	Activity:	Exploration
Lease:	G02076	Event(s):	Fatality (1)
Area:	Vermilion	Operation:	Drilling
Block:	214	Cause:	Equipment Failure
Rig/Platform:	Noble Tom Jobe	Water Depth:	130’

Remarks: The BOP stack was hanging 30 inches above the casing head flange when the next crew came on tour. The personnel were in position to direct/guide the BOP riser bolts into the casing head flange. The driller was positioned at the BOP cable winch/hoist controls. As the driller engaged the hoist, one of the six ¾-inch steel cables attached to the BOP stack parted. The BOP stack and riser shifted from the vertical position and pinned one employee against a 6-inch channel beam. Prior to the cable parting, this employee was positioned to give lowering directions to the driller, who was positioned one deck level above at the winch controls.

Date:	22-Apr-1998	Operator:	Texaco Exploration and Production Inc.
Investigation:	Complete	Activity:	Development
Lease:	G15161	Event(s):	Fatality (1)
Area:	East Cameron	Operation:	Completion
Block:	381	Cause:	Human Error/Slip/Trip/Fall
Rig/Platform:	Ensco 29 / A	Water Depth:	446’

Remarks: An employee was repairing some equipment on the catwalk area located approximately 90 feet above the main drill deck. A second employee lost control of a stand of extra heavy drill pipe, causing it to strike the top drive traveling block. The noise is believed to have startled the first employee on the catwalk. He stepped into the open access hatch and fell 120 feet to the main production deck.

Date:	10-May-1998	Operator:	Ocean Energy, Inc
Investigation:	Complete	Activity:	Development
Lease:	G01967	Event(s):	Fatality (2) / Falling Object
Area:	Main Pass	Operation:	Production/Construction
Block:	153	Cause:	Equipment Failure / Human Error
Rig/Platform:	C	Water Depth:	275’

Remarks: While offloading a "Leap Frog" crane from the platform, the crane fell back onto the platform and pinned two employees. The two deceased personnel were employees of Fluid Crane.

Date:	02-Jun-1998	Operator:	Amoco Production Company
Investigation:	Complete	Activity:	Development
Lease:	00780	Event(s):	Injury (3), Fatality (1)
Area:	South Marsh Island	Operation:	Production / Completion
Block:	33	Cause:	Human Error
Rig/Platform:	Sundowner XVI / D	Water Depth:	92’

Remarks: Three Sundowner crew members were positioned on the rig crane power pack unit, removing the four holding pins. Other Sundowner crew members were in the process of laying the rig crane gantry section onto the platform top deck with the platform crane. Upon completion of laying down the gantry section, the crew prepared to hook the platform crane onto the rig crane power pack unit. The three crew members on the rig crane power pack unit removed the pins prematurely before the lifting slings were attached to the power pack unit. Once the pins were removed, the unsecured power pack unit tilted, rolled, and fell off the substructure approximately 28 feet to the platform’s top deck. The three personnel positioned on the power pack unit sustained severe injuries, and one was thrown from the platform into the Gulf. Another crew member sustained major injuries. The body of the person thrown overboard was recovered on June 16, 1998, in the Grand Isle Block 64 area.

Date:	09-Jul-1998	Operator:	Chevron U.S.A. Inc.
Investigation:	Complete	Activity:	Development
Lease:	G00983	Event(s):	Fatality (1)
Area:	Eugene Island	Operation:	Production
Block:	252	Cause:	Slip/Trip/Fall
Rig/Platform:	I	Water Depth:	162’

Remarks: An employee was retrieved from the water approximately three miles from the platform at 5:30 a.m. He was last seen on the platform at 2:00 p.m., the previous day. It was assumed that he was fishing and was wearing a PFD. Cause of death is unknown.

Date:	17-Jul-1998	Operator:	Ocean Energy, Inc
Investigation:	Complete	Activity:	Development
Lease:	G01967	Event(s):	Injury (11), fatality (3)
Area:	Main Pass	Operation:	Construction of rig
Block:	153	Cause:	Equipment failure
Rig/Platform:	B	Water Depth:	290’

Remarks: Nabor's Drilling was in the process of rigging-up Nabor's Rig 269 on the platform when the accident occurred. They had completed rigging-up the substructure and were skidding the substructure in preparation for lifting the derrick. The substructure failed catastrophically and the rig substructure separated. Part of the package toppled off the platform to the barge, and another part toppled to the seafloor. There were 3 fatalities, 1 serious injury, and 12 other injuries. The accident is under investigation by MMS.

Date:	20-Aug-1998	Operator:	Seagull Energy Corporation
Investigation:	Complete	Activity:	Exploration
Lease:	G18880	Event(s):	Fatality (1)
Area:	Mustang Island	Operation:	Drilling
Block:	A 51	Cause:	Slip/Trip/Fall, Unknown
Rig/Platform:	Marine 304	Water Depth:	203’

Remarks: The employee was working on the mud cleaner when one of the cones came loose and pushed him overboard into the Gulf. The body was not found. On 10/9/98 the USCG ended all search efforts and declared the employee dead. The accident is under investigation by MMS.

Date:	02-Sep-1998	Operator:	Anadarko Petroleum Corporation
Investigation:	Complete	Activity:	Development
Lease:	G02754	Event(s):	Fatality (1)
Area:	High Island	Operation:	Production
Block:	A376	Cause:	Human Error
Rig/Platform:	B	Water Depth:	341’

Remarks: Three employees boarded the platform for startup after evacuation for a hurricane. The electrician initiated the startup procedure by bringing on the diesel generator. During the megging operation on the buss bar on the natural gas generator, the electrician was electrocuted. There were no witnesses to the accident.

Date:	19-Oct-1998	Operator:	Shell Offshore Inc.
Investigation:	Complete	Activity:	Exploration
Lease:	G05954	Event(s):	Fatality (1)
Area:	North Padre Island	Operation:	Drilling
Block:	976	Cause:	Human Error
Rig/Platform:	Pride Alaska	Water Depth:	136’

Remarks: A welder was kneeling or sitting between the Texas deck and the 30-inch drive pipe welding a swedge on the drive pipe. At the same time, the diverter was being lifted off the stump on a deck above the Texas deck. The Texas deck partially sits on the lower deck, and more than half of it hangs over water. The Texas deck is held in place by four cables. Two cables actually come from two air tugger hoists, then split into four cables. Two hoists are used to lift or lower the diverter into place. Each hoist is operated individually by two operators. Apparently one of the two hoists lifting the diverter was raised more than the other, causing the diverter to swing, hitting one of the air tugger hoists holding the Texas deck in place. The brake mechanism came loose, which caused the cable on the spool holding the Texas deck in place to unwind, dropping or sliding the deck, and pinning the welder between the 30-inch drive pipe and the deck.

Date:	27-Oct-1998	Operator:	Marathon Oil Company
Investigation:	None	Activity:	Exploration
Lease:	G19104	Event(s):	Fatality(1), Injury(1)
Area:	Garden Banks	Operation:	Preparing anchors prior to move on location
Block:	329	Cause:	Human Error / Equipment Failure
Rig/Platform:	Diamond Ocean Lexington	Water Depth:	2,230’

Remarks: The accident occurred during an operation of lifting and transferring a chain chaser off the top deck of the rig onto a motor vessel. The crane operator experienced trouble controlling the crane boom with the load attached. He managed to regain control with the manual boom brake. The auxiliary/whip line began to unspool and free fall with the load attached. It stopped approximately 10 feet above the water. The crane started rocking from the effect of the downward force and boom angle. At least one of the roller bearings sheared. The crane separated from the pedestal and fell into the water with the operator still at the controls. Another employee was injured as he jumped from the crane as it began to fall. The crane operator’s body was recovered immediately. The accident is under investigation by the U.S. Coast Guard.

Date:	23-Dec-1998	Operator:	Union Pacific Resources Company
Investigation:	Complete, MMS 99-0067	Activity:	Development
Lease:	G03811	Event(s):	Fatality (1), Fire, Injury (2)
Area:	Eugene Island	Operation:	Production
Block:	108	Cause:	Unknown at this time
Rig/Platform:	3	Water Depth:	31’

Remarks: Two Grasso personnel were in the process of returning satellite well no. 3 to production when a large cloud of gas was released and then ignited. The two Grasso personnel and one Tech-Air helicopter pilot and the helicopter were on the satellite during the incident. All three victims were recovered from the water and transported to a facility located on Eugene Island 120. The helicopter pilot and one Grasso employee were treated for injuries. Attempts to resuscitate the other Grasso employee were unsuccessful and he was pronounced dead from apparent drowning. A nearby motor vessel extinguished the fire on the structure. The helicopter was determined to be airworthy and flown off the structure. The accident is under investigation by MMS.

Gulf of Mexico Region

Collisions – 1998

Date:	16-Feb-1998	Operator:	Walter Oil & Gas Corporation
Investigation:	Complete	Activity:	Development
Lease:	G08735	Event(s):	Collision, Fire
Area:	West Delta	Operation:	Production, Motor Vessel
Block:	106	Cause:	Weather Related / Human Error
Rig/Platform:	A	Water Depth:	252’

Remarks: The lay barge *Cherokee* was under tow by the motor vessel *Gulf Cajun*. 1,800 feet of tow line was laid out between the *Cherokee* and the *Gulf Cajun*. Seas were 8 to 10 feet. Visibility was limited because of fog. The *Gulf Cajun* could not be seen from the *Cherokee*. While under tow, the *Cherokee* struck the northwest corner of the platform. A 6-inch diameter pipe approximately 25 feet in length broke off the barge after penetrating the dry and wet compartments of the oil storage tank. The oil spilling from the oil storage tank ignited. The platform safety system shut in the platform. All personnel (7) were in their quarters at the time of the collision. Some personnel were knocked to the floor of the quarters. The survival capsule was engulfed in flames, making an attempt to abandon the platform by capsule impossible. The helicopter pilot and one other person managed to board the helicopter and flew in inclement weather to another platform. All other personnel used the escape ladder to the lower production deck. The operator made his way to the departing 8-inch gas pipeline and closed the manual shutdown valve to prevent the pipeline from fueling the fire. Personnel made an attempt to fight the fire and were successful at extinguishing several small fires; however, they could not extinguish the oil spilling from the oil storage tank. One 1,500-lb dry chemical unit, two 150-lb units, and several 30-lb handheld units were exhausted in fighting the fire. Personnel went to the +10 level of the platform and waited for help to arrive. After approximately 2-1/2 hours, a Marathon Oil Company boat arrived and picked up the personnel. The Marathon vessel extinguished the fire by using its fire monitor.

Date:	04-Mar-1998	Operator:	Chevron U.S.A. Inc.
Investigation:	None	Activity:	Development
Lease:	G02316	Event(s):	Collision
Area:	South Marsh Island	Operation:	Production
Block:	288	Cause:	Human Error
Rig/Platform:	A-PRD	Water Depth:	40’

Remarks: An unidentified boat hit a flare pile, causing it to collapse. The impact bent flare pile below water line.

Date:	23-May-1998	Operator:	Pennzoil Exploration and Production
Investigation:	None	Activity:	Development
Lease:	G02882	Event(s):	Collision
Area:	South Marsh Island	Operation:	Production, motor vessel
Block:	125	Cause:	Human Error
Rig/Platform:	D	Water Depth:	210’

Remarks: None

Date:	02-Jun-1998	Operator:	Unocal Exploration Corporation
Investigation:	Complete	Activity:	Development
Lease:	00297	Event(s):	Collision
Area:	Vermilion	Operation:	Production, motor vessel, pipeline seg #4224
Block:	26	Cause:	Human Error
Rig/Platform:	53	Water Depth:	28’

Remarks: Navigation on the part of the shrimp trawler captain.

Date:	17-Sep-1998	Operator:	Apache Corporation
Investigation:	Complete	Activity:	Development
Lease:	G02951	Event(s):	Collision, Pollution
Area:	Main Pass	Operation:	Production
Block:	151	Cause:	Tow line broke
Rig/Platform:	A	Water Depth:	170’

Remarks: The tow line broke because it was not strong enough to pull the supply boat while pulling against medium high winds and seas. The brisk wind, tide direction, and height of the wave action were contributing factors in causing the accident.

Gulf of Mexico Region

Explosions – 1998

Date:	26-Apr-1998	Operator:	Unocal Exploration Corporation
Investigation:	Complete	Activity:	Development
Lease:	00204	Event(s):	Explosion, Fire
Area:	Vermilion	Operation:	Drilling
Block:	38	Cause:	Equipment Failure
Rig/Platform:	Cliff Drilling 100	Water Depth:	23’

Remarks: Hot refined oil from the No. 4 engine base came in contact with surfaces on the No. 2 engine turbocharger and exhaust system, which were operating at temperatures that exceeded the flash point of the refined oil, causing a fire and explosion.

Date:	14-Jun-1998	Operator:	Unocal Exploration Corporation
Investigation:	Complete	Activity:	Exploration
Lease:	00297	Event(s):	Fire, Explosion
Area:	Vermilion	Operation:	Drilling
Block:	26	Cause:	Equipment Failure, Human Error
Rig/Platform:	Falcon 85	Water Depth:	26’

Remarks: Hydrogen gas accumulation in the mud-logging unit wall cavities and electrical installations because of a system leak or leaks resulting in ignition from an electrical source in the unit. Inadequate written procedure for leak detection contributed to the resulting fire and explosion. There was no ambient air gas detection system installed in the unit, which would have detected a leak. There was no flow-sensing device that could have detected a leak and shut in the gas at the bottle. There was no flame failure shutoff device on the individual FID nor THA instruments. Wall and ceiling panels had unsealed penetrations and the panel edges were not sealed airtight. All of this contributed to allowing permeation with the hydrogen gas. Electrical boxes became saturated with hydrogen gas because of open enclosures. The electrical classification was non-explosive, since the mud-logging unit was internally protected from an external contamination of a combustible atmosphere by a positive pressure purge system bringing clean air into the unit from a safe area. The positive air purge system did not protect against internal releases of combustible gases. The positive pressure air purge system contributed to the buildup of hydrogen gas in the areas of permeation and saturation by not allowing air flow to sweep the areas and dissipate the gas. The positive air purge system did not include a combustible gas detection system. The electrical installation within the mud-logging unit was not classified weatherproof or explosion-proof, because it had been installed in a positively purged building. Because of this, electrical boxes were allowed to become saturated with hydrogen gas to the point where ignition was allowed to take place. Ignition of the hydrogen gas is believed to have occurred either because of; a) the making or breaking of an electrical contact or switch. Or b) a hot electrical connection. The full bottle of hydrogen gas that continued to flow into the mud-logging unit supported the continuing fire.

Date:	22-Jul-1998	Operator:	Chevron U.S.A. Inc.
Investigation:	None	Activity:	Development
Lease:	G02177	Event(s):	Explosion
Area:	South Pass	Operation:	Production
Block:	49	Cause:	Human Error, Welding on top deck
Rig/Platform:	A	Water Depth:	410’

Remarks: The platform was shut in when welding operations were started on the grating on the top deck, according to the welding plan. A spark fell on to the Wemco unit, causing an explosion, which blew two doors off the unit. No injuries.

Date:	06-Dec-1998	Operator:	Tennessee Gas Pipeline Company
Investigation:	None	Activity:	Unknown
Lease:	GO3186	Event(s):	Explosion, Fire
Area:	West Delta	Operation:	Pipeline segment 5156
Block:	61	Cause:	Unknown at this time
Rig/Platform:	A	Water Depth:	10’

Remarks: A 30" gas pipeline from WD 61 to shore ruptured on 12/6/98 and subsequently caught fire. The rupture occurred 2.5 miles from shore (state waters). Tennesse Gas reported that divers investigated the ruptured pipe and found that the line was 80 feet apart. Cause of the incident is unknown. On 12/14/98, Tennessee Gas informed MMS that the 80 foot pipeline section could not be found.

Gulf of Mexico Region

Fires – 1998

Date:	08-Jan-1998	Operator:	Shell Offshore Inc.
Investigation:	None	Activity:	Development
Lease:	G02015	Event(s):	Fire
Area:	West Cameron	Operation:	Production
Block:	565	Cause:	Equipment Failure
Rig/Platform:	A	Water Depth:	178’

Remarks: Operator responded to an alarm in the compressor building and found a fire in progress on the left bank air intake filter and carburetor. The engine had a backfire through the carburetor and caused the air filter to protrude, allowing raw fuel to escape and ignite. Damage was to the air filter and cover, and a new carburetor. The compressor was repaired and back on line at 1900 hrs.

Date:	09-Jan-1998	Operator:	SOCO Offshore, Inc.
Investigation:	Complete	Activity:	Development
Lease:	G02319	Event(s):	Fire
Area:	Eugene Island	Operation:	Production
Block:	342	Cause:	Weather Related
Rig/Platform:	C	Water Depth:	287’

Remarks: Static electricty ignited escaping condensate vapors from the surge tank. The level in the glycol/condensate separator was low, just above the LSL shutdown switch. A hole found in the reboiler insulation on the top of the reboiler shell may have allowed oxygen in the vessel while it was in a static condition.

Date:	09-Jan-1998	Operator:	Walter Oil & Gas Corporation
Investigation:	Complete	Activity:	Development
Lease:	G12845	Event(s):	Fire
Area:	East Cameron	Operation:	Production
Block:	276	Cause:	Equipment Failure / Other
Rig/Platform:	A	Water Depth:	181’

Remarks: The glycol reboiler apparently malfunctioned and shut down on burner safety low. The well remained on production for an extended period allowing the circulating cool glycol to become saturated with fluids. Glycol reboiler startup operations were extremely accelerated. The onsite platform operator apparently failed to monitor the glycol reboiler and regeneration process for a period sufficiently to ensure proper operation before leaving the platform.

Date:	13-Jan-1998	Operator:	Chevron U.S.A. Production Company
Investigation:	None	Activity:	Unknown
Lease:	G02940	Event(s):	Fire
Area:	South Pass	Operation:	Drilling
Block:	57	Cause:	Equipment Failure
Rig/Platform:	B	Water Depth:	178’

Remarks: Operator responded to an alarm in the compressor building, and found a fire in progress on the left bank air intake filter and carburetor. The engine had a back fire through the carburetor and caused the air filter to protrude allowing raw fuel to escape and ignite. Damage was to the air filter and cover, and a new carburetor. The compressor was repaired and back on line at 1900 hrs. 9-Jan 1998.

Date:	17-Jan-1998	Operator:	Vastar Resources, Inc.
Investigation:	Complete	Activity:	Development
Lease:	G02640	Event(s):	Fire
Area:	Mississippi Canyon	Operation:	Production / Drilling
Block:	148	Cause:	Leak
Rig/Platform:	A	Water Depth:	651’

Remarks: The probable cause of the accident was that the packing around the valve stem for the wing valve on Well A-5 leaked gas into the atmosphere. The hot slag created the ignition source to start the fire on Well A-5.

Date:	22-Jan-1998	Operator:	ORYX Energy Company
Investigation:	Complete	Activity:	Development
Lease:	G02063	Event(s):	Fire
Area:	East Cameron	Operation:	Production
Block:	338	Cause:	Human Error
Rig/Platform:	A	Water Depth:	270’

Remarks: Condensate accumulated in the deck drain and was ignited from a hot weld shot spark. The instrument technician was not aware of the small accumulation of condensate in the deck drain.

Date:	30-Jan-1998	Operator:	Chevron U.S.A. Production Company
Investigation:	Complete	Activity:	Development
Lease:	00392	Event(s):	Fire
Area:	Grand Isle	Operation:	Other
Block:	37	Cause:	Human Error
Rig/Platform:	Z	Water Depth:	60’

Remarks: Conducting cutting torch operations, over an open grating above an unprotected acetylene bottle. They did not position the acetylene bottle in an area safe from falling slag and did not cover the acetylene bottle with a protective barrier, such as a wetted tarp. Pre-hot work planning was incomplete and did not take into consideration the possible effects of falling slag.

Date:	31-Jan-1998	Operator:	Union Oil Company of California
Investigation:	Complete	Activity:	Development
Lease:	G01031	Event(s):	Fire
Area:	Ship Shoal	Operation:	Production
Block:	253	Cause:	Equipment Failure
Rig/Platform:	D	Water Depth:	175’

Remarks: This compressor had become a high-maintenance item, and metal fatigue in the rocker arm bolts may have occurred, resulting in the fire. The rocker arm or push rod caused a hole in the valve cover, allowing crankcase oil to escape through this hole onto the exhaust manifold.

Date:	01-Feb-1998	Operator:	Texaco Exploration and Production Inc.
Investigation:	None	Activity:	Development
Lease:	G02868	Event(s):	Fire
Area:	Vermilion	Operation:	Production
Block:	31	Cause:	Human Error
Rig/Platform:	A	Water Depth:	28’

Remarks: Trace of free-standing condensate was ignited with cutting and/or welding slag. Extinguished immediately. No injuries and no pollution.

Date:	02-Feb-1998	Operator:	ORYX Energy Company
Investigation:	None	Activity:	Development
Lease:	G03316	Event(s):	Fire
Area:	High Island	Operation:	Production
Block:	A384	Cause:	Other
Rig/Platform:	A	Water Depth:	286’

Remarks: A small fire occurred when lightning struck the flare boom during a storm and it ignited. The small fire was immediately extinguished by platform personnel. There were no injuries or damage associated with this incident.

Date:	03-Feb-1998	Operator:	Total Minatome Corporation
Investigation:	None	Activity:	Development
Lease:	G01216	Event(s):	Fire
Area:	South Marsh Island	Operation:	Production
Block:	142	Cause:	Human Error
Rig/Platform:	A	Water Depth:	239’

Remarks: A contract welder was making a torch cut on an old deck penetration from the top deck. Hot cutting slag apparently fell onto a standard canvas tarp that had been placed over an electrical wiring cable tray, resulting in a small fire.

Date:	08-Feb-1998	Operator:	Forcenergy Inc
Investigation:	Complete	Activity:	Development
Lease:	G04261	Event(s):	Fire
Area:	Vermilion	Operation:	Production
Block:	330	Cause:	Equipment Failure / Leak
Rig/Platform:	A	Water Depth:	217’

Remarks: A faulty fan blade assembly exposed hot exhaust surfaces from the generator's exhaust system. Hot exhaust was saturated with turbine oil and there was no equipment integrity inspection in place.

Date:	09-Feb-1998	Operator:	Union Oil Company of California
Investigation:	Complete	Activity:	Development
Lease:	00827	Event(s):	Fire
Area:	Ship Shoal	Operation:	Production
Block:	209	Cause:	Equipment Failure
Rig/Platform:	A	Water Depth:	100’

Remarks: Compressor vibration caused the fuel line to become disconnected and/or the fitting may have not been sufficiently tightened when last disconnected.

Date:	16-Feb-1998	Operator:	Walter Oil & Gas Corporation
Investigation:	Complete	Activity:	Development
Lease:	G08735	Event(s):	Fire / Collision
Area:	West Delta	Operation:	Production / Motor Vessel
Block:	106	Cause:	Human Error / Other
Rig/Platform:	A	Water Depth:	252’

Remarks: The lay barge *Cherokee* was under tow by the motor vessel *Gulf Cajun*. 1,800 feet of tow line was laid out between the *Cherokee* and the *Gulf Cajun*. Seas were 8 to 10 feet. Visibility was limited because of fog. The *Gulf Cajun* could not be seen from the *Cherokee*. While under tow, the *Cherokee* struck the northwest corner of the platform. A 6-inch diameter pipe approximately 25 feet in length broke off the barge after penetrating the dry and wet compartments of the oil storage tank. The oil spilling from the oil storage tank ignited. The platform safety system shut in the platform. All personnel (7) were in their quarters at the time of the collision. Some personnel were knocked to the floor of the quarters. The survival capsule was engulfed in flames, making an attempt to abandon the platform by capsule impossible. The helicopter pilot and one other person managed to board the helicopter and flew in inclement weather to another platform. All other personnel used the escape ladder to the lower production deck. The operator made his way to the departing 8-inch gas pipeline and closed the manual shutdown valve to prevent the pipeline from fueling the fire. Personnel made an attempt to fight the fire and were successful at extinguishing several small fires; however, they could not extinguish the oil spilling from the oil storage tank. One 1,500-lb dry chemical unit, two 150-lb units, and several 30-lb handheld units were exhausted in fighting the fire. Personnel went to the +10 level of the platform and waited for help to arrive. After approximately 2-1/2 hours, a Marathon Oil Company boat arrived and picked up the personnel. The Marathon vessel extinguished the fire, using its fire monitor.

Date:	19-Feb-1998	Operator:	Pennzoil Oil & Gas, Inc.
Investigation:	None	Activity:	Exploration
Lease:	G13367	Event(s):	Fire
Area:	Garden Banks	Operation:	Drilling
Block:	161	Cause:	Human Error
Rig/Platform:	Sedco Laffit Pincay	Water Depth:	693’

Remarks: Towels that had been used to clean up cooking oil were washed and dried at a high temperature. The retained heat, combustibility of the cooking oil, and a mix of vented air apparently ignited the towels. The fire was extinguished.

Date:	20-Feb-1998	Operator:	Vastar Resources, Inc.
Investigation:	Complete	Activity:	Exploration
Lease:	G08852	Event(s):	Fire
Area:	South Marsh Island	Operation:	Drilling
Block:	33	Cause:	Equipment Failure
Rig/Platform:	Diamond Ocean Victory	Water Depth:	3273’

Remarks: Located in the port aft corner of the engine room, the Alpha Laval model MMB 304S-11-60 fuel oil centrifuge drive belt broke. With no drive belt, the centrifuge feed pump, which is motor driven, continued to pump fuel through the centrifuge bowl and into the overflow sump. There was no float switch installed in the overflow sump to kill the supply pump and activate an audio/visual alarm. We may never be able to absolutely determine the ignition source for the fire, because of the extensive damage sustained. However, the No. 3 engine Amot valve regulating jacket water to the watermakers from the No. 3 engine is highly suspect, based on visual evidence that the area around this valve is "ground zero" for the fire. The Amot valve has an electric motor actuator automatically operated on the basis of water temperature with contactors enclosed in the plastic housing on the Amot valve. The contactors do generate a small spark when actuated. The combination of high heat in the bilge (approximately 175 degrees F) and the solid deck plating created an environment for fuel vapors to collect. The right air/fuel ratio and a spark from electrical equipment (again, probably an Amot electric actuator) started the fire. Once begun, secondary fuel sources from the engines themselves fed the fire until it was extinguished.

Date:	20-Feb-1998	Operator:	Exxon Company, U.S.A.
Investigation:	None	Activity:	Development
Lease:	G06093	Event(s):	Fire
Area:	Galveston	Operation:	Production
Block:	209	Cause:	Equipment Failure
Rig/Platform:	B	Water Depth:	53’

Remarks: Small fire on insulation inside an 8"x8" enclosure at the above facility. A short in the emergency lighting circuit caused a high amp load, melting insulation, and starting a small fire inside the enclosure; the fire was extinguished using a handheld fire extinguisher. There were no injuries associated with this fire and damages of less than $500 were limited to the enclosure. It was determined that a broken conduit box was the cause of the short in the emergency lighting circut. MMS visited the facility on Feb. 23, 1998, and Exxon's incident report and root cause analysis were provided to MMS.

Date:	20-Feb-1998	Operator:	Vastar Resources, Inc.
Investigation:	Complete	Activity:	Development
Lease:	00780	Event(s):	Fire
Area:	South Marsh Island	Operation:	Production
Block:	33	Cause:	Weather Related
Rig/Platform:	E	Water Depth:	89’

Remarks: It is believed that some type of flammable fluid was discharged from the drilling rig during simultaneous operations. A change in wind direction caused rig fluids to be discharged onto the exhaust piping of the generator.

Date:	25-Feb-1998	Operator:	Exxon Company, U.S.A.
Investigation:	None	Activity:	Development
Lease:	G06093	Event(s):	Fire
Area:	Galveston	Operation:	Production
Block:	209	Cause:	Equipment Failure
Rig/Platform:	B	Water Depth:	53’

Remarks: A fire was caused on the exhaust manifold of the No. 1 pipeline pump, caused by a failure of the pump engine's exhaust manifold which allowed hot exhaust to heat the burn shield material and ignite unburned fuel gas contained in the exhaust. The engine was shut down and the fire extinguished using a hand held dry chemical fire extinguisher. Damages were limited to the pump engine. There were no injuries.

Date:	03-Mar-1998	Operator:	Marathon Oil Company
Investigation:	None	Activity:	Development
Lease:	G01874	Event(s):	Fire
Area:	West Delta	Operation:	Production
Block:	33	Cause:	Weather Related
Rig/Platform:	D	Water Depth:	89’

Remarks: A small fire occurred on the No. 12 cylinder of the No. 2 field generator near the control panel. The fire lasted 2 to 3 minutes and was extinguished using one 30-lb. dry chemical extinguisher. The TSH on the cylinder shut down the engine. It appears that the gas leaked from the gas jumper line to the cylinder. Ignition source unknown.

Date:	04-Mar-1998	Operator:	CNG Producing Company
Investigation:	Complete	Activity:	Development
Lease:	G06655	Event(s):	Fire
Area:	East Cameron	Operation:	Production
Block:	346	Cause:	Equipment Failure
Rig/Platform:	A	Water Depth:	313’

Remarks: A 3/8 x 2 inch pipe nipple on the No. 2 generator diesel fuel system cracked, releasing diesel fuel onto the hot surfaces of the engine. Engine vibration over-torqued the pipe nipple during installation/repairs twisting.

Date:	09-Mar-1998	Operator:	Apache Corporation
Investigation:	None	Activity:	Development
Lease:	G09508	Event(s):	Fire
Area:	Vermilion	Operation:	Production
Block:	284	Cause:	Equipment Failure
Rig/Platform:	A	Water Depth:	186’

Remarks: A small flame was observed coming from the flame arrester of the chem-electric heater treater. The cause of the fire has been determined to be a collapsed fire tube. The fire was extinguished immediately and there were no injuries or pollution.

Date:	09-Mar-1998	Operator:	Vastar Resources, Inc.
Investigation:	Complete	Activity:	Development
Lease:	00438	Event(s):	Fire
Area:	Eugene Island	Operation:	Production
Block:	175	Cause:	Human Error
Rig/Platform:	C-PRD	Water Depth:	87’

Remarks: A small flash fire occurred during compressor checkout. A small exhaust line was not connected and gas escaped from this line. The gas was probably ignited when it came in contact with a 24-volt open electrical box that was near the open line. One fire extinguisher was used to put out the fire and no equipment or personnel were damaged or injured. The fire lasted about 5 seconds.

Date:	11-Mar-1998	Operator:	Stone Energy Corporation
Investigation:	Complete	Activity:	Development
Lease:	G01238	Event(s):	Fire / Injury (1)
Area:	South Pelto	Operation:	Production
Block:	23	Cause:	Human Error
Rig/Platform:	D	Water Depth:	61’

Remarks: Welding slag was burning through polyflow tubing and contacting natural gas. The master panel was not covered with protective material. The panel door opened while the ignition source was in the area.

Date:	15-Mar-1998	Operator:	Enron Oil & Gas Company
Investigation:	None	Activity:	Development
Lease:	G07846	Event(s):	Fire
Area:	Mobile	Operation:	Production
Block:	914	Cause:	Human Error
Rig/Platform:	A	Water Depth:	59’

Remarks: A 4-inch block of wood was used for brace on a compressor muffler. The wood caught fire. The fire was put out with a 30-lb extinguisher.

Date:	15-Mar-1998	Operator:	Oryx Energy Company
Investigation:	None	Activity:	Development
Lease:	G13808	Event(s):	Fire
Area:	High Island	Operation:	Production
Block:	A379	Cause:	Human Error
Rig/Platform:	B	Water Depth:	312’

Remarks: Personnel on the subject platform placed some ashes from their barbecue pit into a trash bag, which started to smolder. They immediately extinguished the fire with water and a fire extinguisher. No injuries or damages occurred because of the fire. The ashes that were placed in the trash bag were from March 14, 1998, and were felt to be suitable for disposal. Oryx instructed their personnel mix all trashes and coals with water prior to disposing of them in order to prevent future fires such as this.

Date:	15-Mar-1998	Operator:	Enserch Exploration, Inc.
Investigation:	None	Activity:	Exploration
Lease:	G10350	Event(s):	Fire
Area:	Garden Banks	Operation:	Drilling
Block:	386	Cause:	Human Error
Rig/Platform:	Sedco Omega	Water Depth:	2,097’

Remarks: Welding operations were in progress to increase the capacity of the drip pan below the rotary table by raising the lip on the existing drip pan. Welding slag ignited a rag, resulting in a small fire that caused minor damage to an out-of-service wiring harness. The fire was extinguished immediately and there were no injuries or pollution.

Date:	20-Mar-1998	Operator:	Union Pacific Resources Company
Investigation:	Complete	Activity:	Development
Lease:	G01524	Event(s):	Fire / Injury (1)
Area:	Ship Shoal	Operation:	Production
Block:	216	Cause:	Human Error
Rig/Platform:	C	Water Depth:	102’

Remarks: Gas fumes contacted a flaming torch. The gas being used to operate a starter and the exhausted fumes were not piped to a safe area.

Date:	28-Mar-1998	Operator:	Pennzoil E&P Company
Investigation:	Complete	Activity:	Development
Lease:	G03157	Event(s):	Fire / Other
Area:	Eugene Island	Operation:	Production
Block:	365	Cause:	Human Error
Rig/Platform:	A	Water Depth:	329’

Remarks: The probable cause of the fire was that gas residue at the controller flashed when the sparks made contact.

Date:	03-Apr-1998	Operator:	Shell Offshore Inc.
Investigation:	None	Activity:	Development
Lease:	G02280	Event(s):	Fire
Area:	South Marsh Island	Operation:	Production
Block:	130	Cause:	Human Error
Rig/Platform:	A	Water Depth:	216’

Remarks: Sixteen (16) gauge wiring, one main motor contractor, and two 15 amp/600 vac heater fuses were burned when 480 volts were inadvertently back-fed through the 32-volt heater coil contact and wiring. The 480 volts hit the 32 volt when a motor starter was manually closed. There were no injuries or pollution.

Date:	05-Apr-1998	Operator:	Samedan Oil Corporation
Investigation:	None	Activity:	Exploration
Lease:	G05438	Event(s):	Fire
Area:	Vermilion	Operation:	Drilling
Block:	314	Cause:	Production
Rig/Platform:	Rowan-Alaska	Water Depth:	212’

Remarks: The drilling rig *Rowan Alaska No.1* generator caught fire as a result of a winding failure. The fire was extinguished immediately. Estimated damage was $10,000. There were no injuries and no pollution.

Date:	24-Apr-1998	Operator:	Chevron U.S.A. Inc.
Investigation:	None	Activity:	Development
Lease:	G02184	Event(s):	Fire
Area:	South Pass	Operation:	Production
Block:	77	Cause:	Other
Rig/Platform:	C	Water Depth:	229’

Remarks: A fire occurred during welding operations on the platform. Sparks from the welding activity ignited gas from a leaking packing gland. A welding crew noticed the fire and the fire watch extinguished the fire immediately.

Date:	24-Apr-1998	Operator:	Newfield Exploration Company
Investigation:	Complete	Activity:	Development
Lease:	G05803	Event(s):	Fire
Area:	Ewing Bank	Operation:	Production
Block:	947	Cause:	Equipment Failure
Rig/Platform:	A	Water Depth:	477’

Remarks: A plugged stack arrestor caused a back draft, forcing the flame in the firing chamber out of the flame arrestor. A lock nut on the burner air adjusting wheel was loose and apparently the air intake wheel vibrated closed. This caused an improper mixing of air and fuel, thus producing soot that plugged the stack arrestor.

Date:	25-Apr-1998	Operator:	Mobil Oil E&P Southeast Inc.
Investigation:	None	Activity:	Development
Lease:	G02722	Event(s):	Fire
Area:	High Island	Operation:	Production
Block:	A596	Cause:	Equipment Failure
Rig/Platform:	E	Water Depth:	406’

Remarks: An internal fire in the generator exhaust occurred because of the failure of the Kenco oil float level controller.

Date:	26-Apr-1998	Operator:	Forcenergy Inc
Investigation:	None	Activity:	Development
Lease:	G03328	Event(s):	Fire
Area:	Vermilion	Operation:	Production
Block:	261	Cause:	Equipment Failure
Rig/Platform:	A	Water Depth:	153’

Remarks: A small fire occurred on the exhaust of the No. 1 pipeline pump because of oil spraying from a small crack on a stainless steel line on the No. 2 pipeline pump. Heat from the exhaust ignited the oil-soaked insulation. The fire was extinguished immediately with one portable dry chemical extinguisher. Damage was approximately $210. There were no injuries or pollution.

Date:	26-Apr-1998	Operator:	Unocal Exploration Corporation
Investigation:	Complete	Activity:	Development
Lease:	00204	Event(s):	Fire, Explosion
Area:	Vermilion	Operation:	Drilling
Block:	38	Cause:	Equipment Failure
Rig/Platform:	A (JOLLIET)	Water Depth:	23’

Remarks: Hot refined oil from the No. 4 engine base came in contact with surfaces on the No. 2 engine turbocharger and exhaust system, which were operating at temperatures that exceeded the flash point of the refined oil.

Date:	18-May-1998	Operator:	Newfield Exploration Company
Investigation:	Complete	Activity:	Development
Lease:	G15312	Event(s):	Fire
Area:	Ship Shoal	Operation:	Drilling
Block:	354	Cause:	Equipment Failure
Rig/Platform:	A	Water Depth:	464’

Remarks: The fire came from a leaking control line. The slag created from the welding of the drive pipe on the drill deck fell to the production deck. There were no tarps in place to isolate the production deck, but the distance between the welding and the control line was greater than 35 feet.

Date:	19-May-1998	Operator:	Chevron U.S.A. Inc.
Investigation:	Complete	Activity:	Development
Lease:	G00983	Event(s):	Fire
Area:	Eugene Island	Operation:	Production
Block:	252	Cause:	Equipment Failure
Rig/Platform:	I	Water Depth:	168’

Remarks: The probable cause of the fire was the WEMCO's blanket gas migrating past worn-out bushings around a rotating shaft and this same gas igniting because of an electrical short. After the fire an investigation turned up multiple shorts in the wiring of the WEMCO unit. Signs of arcing were found on the Agitator No. 3 motor. When the SCADA electrician, operations supervisor and day gauger changed out a motor on the No. 2 Agitator, there was arcing in two different places. Sparks shot from the electrical tape on the wires that were taped together inside the junction box, which was open, and also from the top of the motor. A wire that was on the No. 2 Agitator motor was bare in spots and some strands were broken. All of this wire was inside the conduit.

Date:	21-May-1998	Operator:	Conoco Inc.
Investigation:	Complete	Activity:	Development
Lease:	G04518	Event(s):	Fire
Area:	Green Canyon	Operation:	Production
Block:	184	Cause:	Equipment Failure
Rig/Platform:	A (JOLLIET)	Water Depth:	1,528’

Remarks: An investigation revealed that the insulation blanket had been soaked with oil. The high temperature at the outer shell of the exhaust collector ignited the oil on the blanket. Upon further investigation, the source of the oil was determined to have come from a 3/8" stainless steel seal oil supply line. The stainless steel line is approximately 1-1/2" long with Parker tubing fittings on each end. The line had a slight bend in it and a crack was discovered in the area of the bend. During normal operation of the compressor this line maintains a pressure of approximately 1,300 psi. Compressor vibration, along with the stress the bend was exerting on the tubing line, may have caused the line to crack.

Date:	22-May-1998	Operator:	Mariner Energy, Inc.
Investigation:	None	Activity:	Unknown
Lease:	G15740	Event(s):	Fire
Area:	Galveston	Operation:	Drilling
Block:	151	Cause:	Other
Rig/Platform:	Rowan-Alaska	Water Depth:	48’

Remarks: A tarp caught fire and burned some gauges as well as a horn.

Date:	30-May-1998	Operator:	Texaco Exploration and Production Inc.
Investigation:	Complete	Activity:	Development
Lease:	G02608	Event(s):	Fire
Area:	Eugene Island	Operation:	Production
Block:	313	Cause:	Equipment Failure
Rig/Platform:	B	Water Depth:	234’

Remarks: Holes in the exhaust system allowed direct heat and possibly some hydrocarbons to reach the insulation covering the exhaust. The contributing causes of the fire were the corrosive gases and particles being expelled in the exhaust as well as age and rust on the piping. These items created the holes in the exhaust system.

Date:	07-Jun-1998	Operator:	Chevron U.S.A. Inc.
Investigation:	Complete	Activity:	Development
Lease:	G00983	Event(s):	Fire
Area:	Eugene Island	Operation:	Production
Block:	252	Cause:	Equipment Failure
Rig/Platform:	I	Water Depth:	162’

Remarks: The cause of the fire was a clutch failure possibly because of magnetic pickups and sensors that did not allow the clutch to fully engage. This partial engagement caused excessive heat to build up because of slipping, causing the rubber and other material in the pneumatic clutch assembly to ignite and burn.

Date:	14-Jun-1998	Operator:	Chevron U.S.A. Inc.
Investigation:	None	Activity:	Unknown
Lease:	00385	Event(s):	Fire
Area:	West Delta	Operation:	Unknown
Block:	29	Cause:	Human Error
Rig/Platform:	E	Water Depth:	36’

Remarks: A trash basket on the lift boat, *Gulf Island III*, caught fire. Construction crew used water to extinguish the fire, which lasted 2 minutes and resulted in no damage.

Date:	14-Jun-1998	Operator:	Unocal Exploration Corporation
Investigation:	Complete	Activity:	Exploration
Lease:	00297	Event(s):	Fire / Explosion
Area:	Vermilion	Operation:	Drilling
Block:	26	Cause:	Equipment Failure / Human Error
Rig/Platform:	Falcon 85	Water Depth:	26’

Remarks: Hydrogen gas accumulation in the mud-logging unit wall cavities and electrical installations because of a system leak or leaks, resulting in ignition from an electrical source in the unit. Inadequate written procedure for leak detection contributed to the resulting fire and explosion. There was no ambient air gas detection system installed in the unit, which would have detected a leak. There was no flow-sensing device that could have detected a leak and shut in the gas at the bottle. There was no flame failure shutoff device on the individual FID or THA instruments. Wall and ceiling panels had unsealed penetrations and the panel edges were not sealed airtight. All of this contributed to allowing permeation with the hydrogen gas. Electrical boxes became saturated with hydrogen gas because of open enclosures. The electrical classification was non-explosive, since the mud-logging unit was internally protected from an external contamination of a combustible atmosphere by a positive pressure purge system bringing clean air into the unit from a safe area. The positive air purge system did not protect against internal releases of combustible gases. The positive pressure air purge system contributed to the buildup of hydrogen gas in the areas of permeation and saturation by not allowing air flow to sweep the areas and dissipate the gas. The positive air purge system did not include a combustible gas detection system. The electrical installation within the mud-logging unit was not classified weatherproof or explosion-proof, because it was installed in a positively purged building. Because of this, electrical boxes were allowed to become saturated with hydrogen gas to the point where ignition was allowed to take place. Ignition of the hydrogen gas is believed to have occurred due to the making or breaking of an electrical contact or switch or because of a hot electrical connection. The full bottle of hydrogen gas that continued to flow into the mud-logging unit supported the continuing fire.

Date:	20-Jun-1998	Operator:	Conoco Inc.
Investigation:	None	Activity:	Development
Lease:	00175	Event(s):	Fire
Area:	Grand Isle	Operation:	Production
Block:	43	Cause:	Equipment Error
Rig/Platform:	AA-PRD	Water Depth:	105’

Remarks: Pipeline Pump A ignited and caught on fire. The fire was extinguished with 30 lbs of dry chemical. The fire kept re-igniting and was cooled down with water. The cause was the failure of the Pipeline Pump A motor cooler, which was then replaced.

Date:	20-Jun-1998	Operator:	Conoco Inc.
Investigation:	Complete	Activity:	Development
Lease:	00838	Event(s):	Fire
Area:	West Delta	Operation:	Other (welding)
Block:	71	Cause:	Other (Slag and sparks falling)
Rig/Platform:	E	Water Depth:	120’

Remarks: The slag and sparks were hotter than the maximum heat tolerance of the tarp. The exceptionally hot and dry weather conditions contributed to the ignition. In addition, the tarp was new and not watered down. It appears to have been windy because the sump and tarp were located 40 feet below and 20 feet away from the area where they were welding.

Date:	25-Jun-1998	Operator:	Callon Petroleum
Investigation:	Complete	Activity:	Development
Lease:	G05705	Event(s):	Fire
Area:	Main Pass	Operation:	Production
Block:	165	Cause:	Equipment Failure
Rig/Platform:	A	Water Depth:	90’

Remarks: The oil turbocharger bearing lubrication line broke and leaked oil onto the exterior of the turbocharger and the oil ignited. Vibration of the compressor caused the lubrication line to break.

Date:	26-Jun-1998	Operator:	Norcen Explorer, Inc.
Investigation:	Complete	Activity:	Development
Lease:	G10726	Event(s):	Fire
Area:	Eugene Island	Operation:	Production
Block:	142	Cause:	Equipment Failure
Rig/Platform:	A	Water Depth:	47’

Remarks: The probable cause of the accident was the breakdown of the insulating compound used on the generator's armature.

Date:	27-Jun-1998	Operator:	Sonat Exploration GOM Inc.
Investigation:	None	Activity:	Development
Lease:	00253	Event(s):	Fire / Injury (1)
Area:	West Cameron	Operation:	Production
Block:	149	Cause:	Other
Rig/Platform:	A	Water Depth:	40’

Remarks: During heavy thunderstorms a diesel generator began surging. The operator went to start a gas generator and during the startup a flash fire occurred. This resulted in the operator receiving 1st degree burns. The probable cause of the accident was a design defect in the control circuit that would allow the starter transformer to remain engaged indefinitely if a current-sensing relay was not satisfied. A contributing cause of the accident was the wrong setting being used on a current-sensing relay. This relay was in place to keep the starter transformer engaged until the motor current fell below the relay setting. This relay was set below the normal current rate; thus, it never released the transformer.

Date:	27-Jun-1998	Operator:	Shell Offshore Inc.
Investigation:	Complete	Activity:	Development
Lease:	G05889	Event(s):	Fire
Area:	Green Canyon	Operation:	Production
Block:	65	Cause:	Equipment Failure
Rig/Platform:	A (BULLWINKLE)	Water Depth:	1160’

Remarks: During heavy thunderstorms a diesel generator began surging. The operator went to start the gas generator, and during startup a flash fire occurred and caused 1st degree burns to the operator.

Date:	08-Jul-1998	Operator:	Texaco Exploration and Production Inc.
Investigation:	Complete	Activity:	Development
Lease:	G02318	Event(s):	Fire
Area:	Eugene Island	Operation:	Production
Block:	339	Cause:	Human Error
Rig/Platform:	B	Water Depth:	268’

Remarks: During welding on a heliport, slag fell in back of the protective tarps and ignited gas escaping from a gas fuel line through a loose connection. The fire was extinguished by the fire watch. The fire was an 8-inch high flame and was put out with a 20-lb hand held unit.

Date:	10-Jul-1998	Operator:	Vastar Resources, Inc.
Investigation:	None	Activity:	Development
Lease:	G01608	Event(s):	Fire
Area:	South Pass	Operation:	Production
Block:	60	Cause:	Equipment Failure / Weather Related
Rig/Platform:	C	Water Depth:	200’

Remarks: Lightning struck the top of the dry oil tank and a fire ignited. The fire was quickly extinguished with a 150 lb. Ansul wheel unit. A subsequent investigation revealed a pressure/vacuum relief valve on top of the tank was leaking gas to the atmosphere. The valve was repaired. The company sent out a Safety Alert to equip all atmospheric vessels and tanks with a blanket gas system and make sure they are grounded.

Date:	11-Jul-1998	Operator:	Pennzoil E&P Company
Investigation:	None	Activity:	Development
Lease:	00778	Event(s):	Fire
Area:	South Marsh Island	Operation:	Production
Block:	23	Cause:	Equipment Failure
Rig/Platform:	G	Water Depth:	80’

Remarks: An upset in the heater treater caused a shutdown of the low-pressure system, which caused the compressor to backfire and shutdown. Excess fuel flame extending out of the compressor exhaust was extinguished immediately. There were no injuries, no pollution, and no damage to the compressor.

Date:	16-Jul-1998	Operator:	Murphy Exploration & Production Company
Investigation:	Complete	Activity:	Development
Lease:	G01023	Event(s):	Fire
Area:	Ship Shoal	Operation:	Production
Block:	224	Cause:	Equipment Failure
Rig/Platform:	A	Water Depth:	150’

Remarks: The Kenco engine oil level controller apparently failed to close after automatically adding oil to the engine crankcase. As the level of oil increased in the crankcase, the PCV valve began pulling oil into the engine air intake. Since all of this excess oil could not be combusted in the cylinder, it flowed out into the exhaust piping, continued to absorb heat, and ignited.

Date:	18-Jul-1998	Operator:	Chevron U.S.A. Inc.
Investigation:	Complete	Activity:	Development
Lease:	G04231	Event(s):	Fire
Area:	Ship Shoal	Operation:	Production
Block:	181	Cause:	Equipment Failure
Rig/Platform:	B	Water Depth:	70’

Remarks: Heat tape on the control valve overheated or electrically shorted, igniting the fire. Gas escaping from the utility gas scrubber provided a continuous fuel source. The bottom drain on the gas scrubber was not fully closed, allowing a small and continuos flow of gas to feed the fire.

Date:	20-Jul-1998	Operator:	Shell Offshore Inc.
Investigation:	Complete	Activity:	Development
Lease:	G05889	Event(s):	Fire
Area:	Green Canyon	Operation:	Production
Block:	65	Cause:	Equipment Failure /Leak
Rig/Platform:	A (BULLWINKLE)	Water Depth:	1,425’

Remarks: Insufficent torquing of the nuts on the flanges to ensure the seal ring is properly compressed.

Date:	20-Jul-1998	Operator:	Pioneer Natural Resources USA, Inc.
Investigation:	Complete	Activity:	Development
Lease:	G03171	Event(s):	Fire
Area:	South Pelto	Operation:	Production
Block:	13	Cause:	Equipment Failure
Rig/Platform:	S	Water Depth:	35’

Remarks: A loose exhaust bypass valve breather mount caused a spark igniting the escaping gas. The bolt holes on the breather were wallowed out, probably due to time and vibration.

Date:	27-Jul-1998	Operator:	Pennzoil E&P Company
Investigation:	None	Activity:	Development
Lease:	G02439	Event(s):	Fire
Area:	East Cameron	Operation:	Production
Block:	335	Cause:	Weather Related
Rig/Platform:	A	Water Depth:	275’

Remarks: A small building (paint locker) on the top deck containing paint and thinner caught fire from spontaneous combustion. The fire was extinguished immediately with one dry chemical unit. No major damage, no injuries, and no pollution.

Date:	31-Jul-1998	Operator:	Shell Offshore Inc.
Investigation:	Complete	Activity:	Development
Lease:	G11455	Event(s):	Fire
Area:	Garden Banks	Operation:	Production
Block:	128	Cause:	Equipment Failure / Leak
Rig/Platform:	A	Water Depth:	705’

Remarks: A pipeline pump PAX-6040-B lubrication oil seal failed, resulting in a loss of lubricating oil and excessive temperature due to friction, causing the fire.

Date:	04-Aug-1998	Operator:	Conoco Inc.
Investigation:	None	Activity:	Development
Lease:	00133	Event(s):	Fire
Area:	Grand Isle	Operation:	Production
Block:	47	Cause:	Human Error
Rig/Platform:	C	Water Depth:	88’

Remarks: During welding in the production area, a piece of hot slag fell on a 3/8-inch piece of vinyl tubing containing supply gas, causing a fire. The gas was shut off and the flame was extinguished with 30-lb Ansul unit.

Date:	16-Aug-1998	Operator:	Mariner Energy, Inc.
Investigation:	None	Activity:	Unknown
Lease:	G15740	Event(s):	Fire
Area:	Galveston	Operation:	Drilling
Block:	151	Cause:	Equipment Failure
Rig/Platform:	A	Water Depth:	48’

Remarks: A generator burned up and the crew immediately extinguished the fire. No injuries and no other damage done.

Date:	17-Aug-1998	Operator:	Chevron U.S.A. Production Company
Investigation:	None	Activity:	Development
Lease:	G02076	Event(s):	Fire
Area:	Vermilion	Operation:	Production
Block:	214	Cause:	Equipment Failure / Human Error
Rig/Platform:	C-SATELLITE	Water Depth:	126’

Remarks: A construction crew was in the process of cutting grating to install a 3" x 3" angle iron support for tubing trays. Burning slag apparently migrated to the IP separator PSV pilot vent, resulting in a small fire, although the operator had implemented the required precautions prior to initiating the hot work. The small flame was extinguished immediately by the fire watch with one 30-lb. dry chemical extinguisher. There were no injuries, no pollution, and no equipment damage.

Date:	17-Aug-1998	Operator:	Samedan Oil Corporation
Investigation:	None	Activity:	Exploration
Lease:	G14418	Event(s):	Fire
Area:	Vermilion	Operation:	Drilling
Block:	335	Cause:	Equipment Failure
Rig/Platform:	ENSCO 55	Water Depth:	227’

Remarks: A minor fire occurred in the rig mud room. An Ensco roustabout observed smoke exiting the blower vent on the traction motor of the mud pump. The cause of the fire was a leak in the seal between the motor and drive train, which allowed oil to enter the motor case. The fire was extinguished immediately with one CO_2 unit. There were no injuries and no pollution. Final report.

Date:	21-Aug-1998	Operator:	Shell Offshore Inc.
Investigation:	None	Activity:	Unknown
Lease:	G06896	Event(s):	Fire
Area:	Viosca Knoll	Operation:	Drilling
Block:	956	Cause:	Equipment Failure
Rig/Platform:	A (RAM-POWELL)	Water Depth:	3,204’

Remarks: A small fire on EMD No. 1 was caused by oil leaking from a damaged gasket on the exhaust piping. The heat from the exhaust ignited the oil. The motorman extinguished the fire with a fire extinguisher.

Date:	12-Sep-1998	Operator:	Newfield Exploration Company
Investigation:	None	Activity:	Development
Lease:	G05599	Event(s):	Fire
Area:	South Timbalier	Operation:	Production
Block:	100	Cause:	Equipment Failure
Rig/Platform:	A	Water Depth:	56’

Remarks: Oil leak on the lubricator line dripped oil onto the exhaust and it flashed. The fire lasted only a few minutes and damage was under $500.

Date:	24-Sep-1998	Operator:	Callon Petroleum Company
Investigation:	None	Activity:	Development
Lease:	G05705	Event(s):	Fire
Area:	Main Pass	Operation:	Production
Block:	165	Cause:	Equipment Failure
Rig/Platform:	A	Water Depth:	122’

Remarks: Upon the start of a diesel-powered generator, a fire developed, which was extinguished using a 30-lb. dry chemical extinguisher. Damage was confined to the internal part of the generator. There was no other damage.

Date:	01-Oct-1998	Operator:	Mobil Exploration & Production SE, Inc.
Investigation:	None	Activity:	Unknown
Lease:	G05057	Event(s):	Fire
Area:	Mobile	Operation:	Other
Block:	823	Cause:	Equipment Failure
Rig/Platform:	A	Water Depth:	47’

Remarks: While work was being done on the cellar deck, smoke was observed coming out of a rental welding machine not in use. Workers lifted the side panel up and noticed the wiring harness on fire. A short in the wiring is suspected as being the cause of the fire.

Date:	10-Oct-1998	Operator:	Mobil E&P Southeast Inc.
Investigation:	Complete	Activity:	Development
Lease:	G04940	Event(s):	Fire
Area:	Green Canyon	Operation:	Production
Block:	18	Cause:	Other
Rig/Platform:	A	Water Depth:	700’

Remarks: A fire was started by slag from a welding operation falling to a lower deck and igniting vapors exiting a tank vent.

Date:	10-Oct-1998	Operator:	Amerada Hess Corporation
Investigation:	None	Activity:	Development
Lease:	G07462	Event(s):	Fire
Area:	Garden Banks	Operation:	Production
Block:	260	Cause:	Human Error
Rig/Platform:	A (BALDPATE)	Water Depth:	1,648’

Remarks: Filter material had been left on top of the solar generator. When the generator was started the temperature built up and ignited the filter material. The fire was extinguished immediately. Damage to the compressor was minor. There were no injuries or pollution reported.

Date:	22-Oct-1998	Operator:	Leviathan Gas Pipeline Company
Investigation:	Complete	Activity:	Development
Lease:	G04826	Event(s):	Fire
Area:	Ship Shoal	Operation:	Production
Block:	332	Cause:	Human Error
Rig/Platform:	A	Water Depth:	442’

Remarks: High winds.

Date:	23-Oct-1998	Operator:	Chevron U.S.A. Inc.
Investigation:	Complete	Activity:	Development
Lease:	G05911	Event(s):	Fire
Area:	Green Canyon	Operation:	Production
Block:	205	Cause:	Human Error
Rig/Platform:	A (GENESIS)	Water Depth:	2,628’

Remarks: A contract employee did not communicate his intentions or follow correct welding and burning procedures. He did not request a permit to work sheet from the on-site supervisor or sufficiently inspect the welding area to ensure that the area did not contain flammable material.

Date:	29-Oct-1998	Operator:	Conoco Inc.
Investigation:	None	Activity:	Development
Lease:	G01498	Event(s):	Fire
Area:	West Delta	Operation:	Production
Block:	96	Cause:	Human Error
Rig/Platform:	R	Water Depth:	138’

Remarks: A small fire occurred on WD 96-R when hot slag from welding operations on the subcellar deck (+35 level) landed on and melted through the plastic cover on the Fisher 2100 Level Safety High switch on the sump caisson. The instrument gas venting from the switch was ignited, resulting in a small fire approximately 1/2" in height.

Date:	01-Nov-1998	Operator:	Chevron U.S.A. Inc.
Investigation:	Complete	Activity:	Development
Lease:	00463	Event(s):	Fire
Area:	South Timbalier	Operation:	Production
Block:	151	Cause:	Equipment Failure
Rig/Platform:	G	Water Depth:	117’

Remarks: The fire was caused by a lack of prestartup procedure and occasional checks of the compressor components. A contributing factor was the lack of a prestartup procedure review between the operator and the mechanic.

Date:	13-Nov-1998	Operator:	Exxon Corporation
Investigation:	None	Activity:	Unknown
Lease:	00026	Event(s):	Fire
Area:	West Delta	Operation:	Other
Block:	30	Cause:	Human Error
Rig/Platform:	J	Water Depth:	45’

Remarks: Welding was being conducted on the Dolphin Platform deck at the +10 ft level. The welder cut into the 72" caisson under the Dolphin Platform, where gas had accumulated inside the caisson. A small fire started. It self-extinguished immediately. The operator will use a gas sniffer in the future.

Date:	15-Nov-1998	Operator:	Chevron U.S.A. Inc.
Investigation:	Complete	Activity:	Development
Lease:	G01019	Event(s):	Fire
Area:	Ship Shoal	Operation:	Production
Block:	182	Cause:	Human Error / Weather Related
Rig/Platform:	E	Water Depth:	65’

Remarks: The weather conditions during the repair required workers use a tarp. The fire resulted from their not removing the tarp from the compressor upon completion.

Date:	19-Nov-1998	Operator:	Conoco Inc.
Investigation:	Complete	Activity:	Development
Lease:	00175	Event(s):	Fire
Area:	Grand Isle	Operation:	Production
Block:	43	Cause:	Equipment Failure
Rig/Platform:	AA-CMP	Water Depth:	100’

Remarks: The female end of the compressor interconnect shaft failed under load at rated speed. The resulting imbalance caused the broken shaft to oscillate, striking the retractable tunnel which, in turn, struck the lube oil supply connection to the compressor, dislodging it and allowing turbine oil to spray into the building. The oil contacted the engine exhaust and ignited, resulting in an open fire.

Date:	30-Nov-1998	Operator:	Vastar Resources, Inc.
Investigation:	None	Activity:	Development
Lease:	G01608	Event(s):	Fire
Area:	South Pass	Operation:	Production
Block:	60	Cause:	Equipment Failure
Rig/Platform:	B	Water Depth:	172’

Remarks: A Solar Centaur engine exhaust collector caught on fire. An operator's representative was in the process of starting the engine when he observed a small flame on the engine. He shut the engine down and extinguished the fire with a 30-lb. chemical handheld unit. The operator is searching for different types of gasket and sealing material for future use.

Date:	03-Dec-1998	Operator:	Newfield Exploration Company
Investigation:	None	Activity:	Exploration
Lease:	G05499	Event(s):	Fire
Area:	Eugene Island	Operation:	Drilling
Block:	202	Cause:	Equipment Failure
Rig/Platform:	Ensco 51	Water Depth:	105’

Remarks: Spraying of oil on a hot turbo caused a flash fire because of engine temperature. The fire was immediately extinguished. There were no injuries or pollution reported. Damage was estimated at under $100.

Date:	05-Dec-1998	Operator:	Newfield Exploration Company
Investigation:	None	Activity:	Development
Lease:	G02697	Event(s):	Fire
Area:	High Island	Operation:	Production
Block:	A536	Cause:	Human Error
Rig/Platform:	C	Water Depth:	200’

Remarks: A waste oil tank from another platform in the area was brought onboard and was hoisted above the slop oil tank by the platform crane. The drain valve on the waste oil tank had a nipple with a ninety-degree elbow pointing down (20' approx.), which was stationed directly over the opening of the slop oil tank. The waste oil tank emptied into the slop oil tank, through the grated deck, and onto the roof of the generator building below. From the roof, it moved onto a short section of generator engine exhaust that was not insulated, which then flashed. An electrician working nearby saw the fire and notified the production operator, who then put the fire out. There were no injuries, no pollution, and no damages.

Date:	06-Dec-1998	Operator:	Tennessee Gas Pipeline Company
Investigation:	None	Activity:	Unknown
Lease:	G03186	Event(s):	Fire / Explosion
Area:	West Delta	Operation:	Pipeline Segment
Block:	61	Cause:	Other
Rig/Platform:	A	Water Depth:	10’

Remarks: A 30" gas pipeline from WD 61 to shore ruptured on 12/6/98 and subsequently caught fire. The rupture occurred 2.5 miles from shore (state waters). Tennessee Gas reported that divers investigated the ruptured pipe and found that the line was 80 feet apart. Cause of the incident is unknown. On 12/14/98, Tennessee Gas informed MMS that the 80-foot pipeline section could not be found.

Date:	09-Dec-1998	Operator:	Marathon Oil Company
Investigation:	Complete	Activity:	Development
Lease:	G12136	Event(s):	Fire
Area:	Ewing Bank	Operation:	Production
Block:	873	Cause:	Human Error
Rig/Platform:	A	Water Depth:	773’

Remarks: The probable cause of this incident was the loose connection on the line side of the feeder breaker for the glycol heater. This connection may have not been sufficiently tightened during installation**.**

Date:	12-Dec-1998	Operator:	Vastar Resources, Inc.
Investigation:	None	Activity:	Development
Lease:	G01608	Event(s):	Fire
Area:	South Pass	Operation:	Production
Block:	60	Cause:	Equipment Failure
Rig/Platform:	D	Water Depth:	210’

Remarks: There was a small fire at the base of the glycol reboiler. It was extinguished with water a few minutes after the fire was detected. The reflux coils in the reboiler had a leak that allowed condensate-rich glycol and gas into the reboiler. The still column had a leak also. The still column and the reflux coil were replaced, and a new reboiler unit was ordered.

Date:	16-Dec-1998	Operator:	Shell Offshore Inc.
Investigation:	Complete	Activity:	Development
Lease:	G15540	Event(s):	Fire
Area:	Green Canyon	Operation:	Production / Drilling
Block:	89	Cause:	Equipment Failure
Rig/Platform:	A	Water Depth:	671’

Remarks: The probable cause of this fire was corrosion and subsequent vibration, which caused a fitting to become loose at the main power connection cable to the motor lug. This condition caused excessive heating of the electrical connection, melting the rubber insulation boot over the connection.

Date:	19-Dec-1998	Operator:	Vastar Resources, Inc.
Investigation:	None	Activity:	Development
Lease:	G05475	Event(s):	Fire
Area:	South Marsh Island	Operation:	Production
Block:	205	Cause:	Equipment Failure
Rig/Platform:	A	Water Depth:	457’

Remarks: The lubricating oil bearing and lambryth seal failed on the exhaust end of the generator turbine, causing a fire. The platform operator was in the process of starting the generator when the incident occurred. The small fire was immediately extinguished with water by the platform operator and mechanic. No injuries, pollution, or damage were reported.

Date:	23-Dec-1998	Operator:	Union Pacific Resources Company
Investigation:	Complete, MMS 99-0067	Activity:	Development
Lease:	G03811	Event(s):	Fire/ Injury(2) / Fatality (1)
Area:	Eugene Island	Operation:	Production
Block:	108	Cause:	Human Error
Rig/Platform:	3	Water Depth:	31’

Remarks: Two Grasso personnel were in the process of returning satellite well No. 3 to production when a large cloud of gas was released and then ignited. The two Grasso personnel and one Tech-Air helicopter pilot and the helicopter were on the satellite during the incident. All three victims were recovered from the water and transported to a facility located on Eugene Island 120. The helicopter pilot and one Grasso employee were treated for injuries. Attempts to resuscitate the other Grasso employee were unsuccessful and he was pronounced dead from apparent drowning. A nearby motor vessel extinguished the fire on the structure. The helicopter was determined to be airworthy and flown off the structure.

Date:	26-Dec-1998	Operator:	Shell Offshore Inc.
Investigation:	Complete	Activity:	Exploration
Lease:	G15540	Event(s):	Fire
Area:	Green Canyon	Operation:	Production
Block:	89	Cause:	Equipment Failure
Rig/Platform:	A	Water Depth:	668’

Remarks: A steel fitting on top of a hydraulic pump failed, spraying hydraulic oil onto the turbocharger, causing the fire. It is believed a manufacturer’s defect may have caused the fitting to wear prematurely, causing leakage and the subsequent combustion. Gravity and the location of engine exhaust in relation to the hydraulic oil leak saturated the engine exhaust, which contributed to the combustion.

Date:	27-Dec-1998	Operator:	Newfield Exploration Company
Investigation:	None	Activity:	Development
Lease:	G01604	Event(s):	Fire / Injury (1)
Area:	West Delta	Operation:	Production
Block:	152	Cause:	Equipment Failure
Rig/Platform:	A	Water Depth:	414’

Remarks: Newfield experienced a fire on the No. 2 compressor at WD 152-A. The source of the fire was a gas leak from a short tubing line run between the PSV and pilot for the PSV on the second stage of the No. 2 compressor. The ignition source is unknown. It was extinguished within 5 minutes. The platform cook injured the back of his hand when the lid of the life jacket box fell on his hand while he was mustering at the escape capsule.

Gulf of Mexico Region

Injuries – 1998

Date:	31-Jan-1998	Operator:	Chevron U.S.A. Production Company
Investigation:	None	Activity:	Development
Lease:	G01241	Event(s):	Injury (1)
Area:	South Timbalier	Operation:	Production
Block:	52	Cause:	Slip/Trip/Fall
Rig/Platform:	C	Water Depth:	56’

Remarks: An employee was searching for parts on a shelf when he placed his foot in front of a crate that was sitting on the floor. He moved the crate, causing the equipment to fall forward onto his foot. He sustained a fracture on top of his left foot. Corrective action: (1) initiate program for proper packaging/shipment of equipment, and (2) initiate program for proper storage of equipment once it goes out to the field.

Date:	27-Feb-1998	Operator:	OXY USA Inc.
Investigation:	None	Activity:	Unknown
Lease:	G05051	Event(s):	Injury (1)
Area:	South Pass	Operation:	Unknown
Block:	75	Cause:	Slip/Trip/Fall
Rig/Platform:	A	Water Depth:	301’

Remarks: An A-Operator for Baker Energy at SP 75 slipped when he was climbing down a ladder from the crane, causing his right knee to strike the ladder, resulting in an injury to his knee. An investigation by Baker Energy revealed that the most probable cause for this incident was the wearing of rubber boots while climbing down the ladder. A contributing cause may have been not taking sufficient time to climb down the ladder.

Date:	11-Mar-1998	Operator:	Stone Energy Corporation
Investigation:	Complete	Activity:	Development
Lease:	G01238	Event(s):	Fire / Injury (1)
Area:	South Pelto	Operation:	Production
Block:	23	Cause:	Human Error
Rig/Platform:	D	Water Depth:	61’

Remarks: The incident was caused by welding slag burning through polyflow tubing and contacting natural gas. The master panel was not covered with protective material and the panel door was open while an ignition source was in the area.

Date:	12-Mar-1998	Operator:	Chevron U.S.A. Production Company
Investigation:	Complete	Activity:	Development
Lease:	G01101	Event(s):	Injury (1) / Pollution, Other
Area:	West Delta	Operation:	Workover
Block:	117	Cause:	Equipment Failure
Rig/Platform:	C	Water Depth:	204’

Remarks: The failure of the guide wire padeye at the left upper mast extension or a failure of the turnbuckle pin on the same guide wire occurred. The padeyes on one side of the derrick board that were used for support were missing.

Date:	20-Mar-1998	Operator:	Union Pacific Resources Company
Investigation:	Complete	Activity:	Development
Lease:	G01524	Event(s):	Fire / Injury (1)
Area:	Ship Shoal	Operation:	Production
Block:	216	Cause:	Human Error
Rig/Platform:	C	Water Depth:	102’

Remarks: Gas fumes contacted a flaming torch. The gas being used to operate a starter and the exhaust fumes were not piped to a safe area.

Date:	23-Mar-1998	Operator:	Mobil E&P U.S. Development Corporation
Investigation:	None	Activity:	Development
Lease:	G03417	Event(s):	Injury (1)
Area:	Main Pass	Operation:	Production
Block:	72	Cause:	Human Error
Rig/Platform:	B	Water Depth:	47’

Remarks: The injury was a back sprain caused by overexertion. The employee did this when drums were being moved off a drum rack. The employee manhandled drums into position in order to put downstairs with the crane. In a small area, he again manhandled drums and valves to put them on a dolly to move around on deck. The overexertion caused a back sprain.

Date:	31-Mar-1998	Operator:	Exxon Corporation
Investigation:	Complete	Activity:	Development
Lease:	00016	Event(s):	Injury (1)
Area:	West Delta	Operation:	Drilling
Block:	31	Cause:	Human Error / Equipment Failure
Rig/Platform:	Ensco 86	Water Depth:	50’

Remarks: The *Ensco 86* rig was in the process of tripping pipe at approximately 11:30 a.m. on March 31, 1998, when an accident occurred on the rig floor. The injured crewman was part of the rig crew. The automatic pipe spinner would not spin the pipe properly because of the chain in the pipe spinner hanging up. Apparently, in an attempt to correct the problem with the hung up pipe spinner, the crewman was injured when the pipe spinner chain caught his glove and pulled his left hand into the pipe spinner.

Date:	19-Apr-1998	Operator:	Amoco Production Company
Investigation:	Complete	Activity:	Development
Lease:	G00987	Event(s):	Injury (1)
Area:	Eugene Island	Operation:	Drilling
Block:	273	Cause:	Human Error
Rig/Platform:	C/PRIDE 1003E	Water Depth:	184’

Remarks: The injury was a result of the employee using his hand instead of an instrument to guide the cable.

Date:	28-Apr-1998	Operator:	Amoco Production Company
Investigation:	Complete	Activity:	Development
Lease:	G00971	Event(s):	Injury (1)
Area:	East Cameron	Operation:	Production
Block:	261	Cause:	Human Error/Slip/Trip/Fall
Rig/Platform:	A	Water Depth:	160’

Remarks: Failure to observe warning/caution tape. 4x6 feet opening in the grating.

Date:	11-May-1998	Operator:	Mobil Oil Exploration & Producing SE, Inc.
Investigation:	None	Activity:	Unknown
Lease:	G02947	Event(s):	Injury (1)
Area:	Main Pass	Operation:	Unknown
Block:	73	Cause:	Human Error
Rig/Platform:	CF	Water Depth:	147’

Remarks: An employee helped carry a pump stand weighing approximately 150 lbs from the A side of the platform to the CF side. He later noticed a knot near his navel. Injury diagnosed as an umbilical hernia due to overexertion.

Date:	13-May-1998	Operator:	Vastar Resources, Inc.
Investigation:	None	Activity:	Unknown
Lease:	G01608	Event(s):	Injury (1)
Area:	South Pass	Operation:	Unknown
Block:	60	Cause:	Human Error
Rig/Platform:	C	Water Depth:	172’

Remarks: An employee was taking off a tree connection while he was standing on a stepladder. The 36" wrench he was using slipped, causing him to fall. The injury was diagnosed as a fractured left wrist.

Date:	14-May-1998	Operator:	Seneca Resources Corporation
Investigation:	None	Activity:	Unknown
Lease:	G09010	Event(s):	Injury (1)
Area:	Brazos	Operation:	Workover
Block:	375	Cause:	Slip/Trip/Fall
Rig/Platform:	2	Water Depth:	59’

Remarks: Subject was taken to hospital in Galveston for treatment to his back and ribs.

Date:	21-May-1998	Operator:	Oryx Energy Company
Investigation:	Complete	Activity:	Development
Lease:	G02087	Event(s):	Injury (1)
Area:	Vermilion	Operation:	Production
Block:	320	Cause:	Equipment Failure /Human Error
Rig/Platform:	A	Water Depth:	207’

Remarks: Pressure below the manumatic valve released abruptly, forcing the perforating gun to the top of the lubricator. The gun firing head was activated either by pressure from the wellbore and/or upon impact into the top of the lubricator. Cardinal Services' written step-by-step safety procedures were apparently not followed.

Date:	24-May-1998	Operator:	Enron Oil & Gas Company
Investigation:	None	Activity:	Development
Lease:	G06042	Event(s):	Injury (1)
Area:	Matagorda Island	Operation:	Production
Block:	633	Cause:	Human Error
Rig/Platform:	C (FMR.CAIS.#3)	Water Depth:	77’

Remarks: After degreasing the sump with water, an employee started cutting the 2" line on the bottom of the sump to drain water from the vessel. After cutting about half of the pipe to be removed, he ran out of oxygen. He then replaced the oxygen bottle and started to cut the remainder of the pipe when it flashed, causing 2nd-degree burns to his face and head. The employee was then transferred by helicopter to a Victoria hospital.

Date:	24-May-1998	Operator:	Pioneer Natural Resources (GPC) Inc.
Investigation:	Complete	Activity:	Exploration
Lease:	00577	Event(s):	Injury (1)
Area:	Eugene Island	Operation:	Drilling
Block:	208	Cause:	Slip/Trip/Fall
Rig/Platform:	J/Noble Bill Jennings	Water Depth:	98’

Remarks: The probable cause of this accident was the employee's lack of a proper work platform and the employee not securing himself to a hook point. The employee was wearing a safety harness; however, in this incident he did not attach himself to a hook point. The "Job Safety Advisor" should have identified the fall possibility. A platform should have been available for the workman to stand on one that did not have holes in it large enough for a man to fall through. Also, the workman himself should have taken the time to hook himself to a hook point, since he was wearing a safety harness. During the incident the employee was being observed by a supervisor and the supervisor did not instruct him to hook himself to a hook point.

Date:	30-May-1998	Operator:	Walter Oil & Gas Company
Investigation:	None	Activity:	Unknown
Lease:	G16463	Event(s):	Injury (1)
Area:	Grand Isle	Operation:	Other
Block:	58	Cause:	Human Error
Rig/Platform:	Rowan Houston	Water Depth:	119’

Remarks: While removing the slings from the hook on a starboard crane, an employee bent down after removing the sling to pick up another set of slings. While he was not facing the block, it swung toward him, striking him in the back of the head.

Date:	01-Jun-1998	Operator:	Shell Offshore Inc.
Investigation:	None	Activity:	Unknown
Lease:	G06884	Event(s):	Injury (1)
Area:	Viosca Knoll	Operation:	Explosion
Block:	780	Cause:	Human Error
Rig/Platform:	A	Water Depth:	919’

Remarks: While the employee was breaking loose the lifting sub from monel, he was struck by the pry bar while holding the chain tong in place. The employee sustained a possible fracture of his right finger.

Date:	02-Jun-1998	Operator:	Amoco Production Company
Investigation:	Complete	Activity:	Development
Lease:	00780	Event(s):	Injury (3) / Fatality (1)
Area:	South Marsh Island	Operation:	Production / Completion
Block:	33	Cause:	Human Error
Rig/Platform:	Sundowner XVI / D	Water Depth:	92’

Remarks: Three Sundowner crew members were positioned on the rig crane power pack unit, removing the four holding pins. Other Sundowner crew members were in the process of laying the rig crane gantry section onto the platform top deck with the platform crane. Upon completion of laying down the gantry section, the crew prepared to hook the platform crane onto the rig crane power pack unit. The three crew members on the rig crane power pack unit removed the pins prematurely before the lifting slings were attached to the power pack unit. Once the pins were removed, the unsecured power pack unit tilted, rolled, and fell off the substructure approximately 28 feet to the platform’s top deck. The three personnel positioned on the power pack unit sustained severe injuries, and one was thrown from the platform into the Gulf. Another crew member sustained major injuries. The body of the person thrown overboard was recovered on June 16, 1998, in the Grand Isle Block 64 area.

Date:	08-Jun-1998	Operator:	Samedan Oil Corporation
Investigation:	Complete	Activity:	Development
Lease:	G01676	Event(s):	Injury (1)
Area:	Main Pass	Operation:	Explosion
Block:	305	Cause:	Human Error/Slip/Trip/Fall
Rig/Platform:	A / Pool 14	Water Depth:	275’

Remarks: The harness safety line was not secured to an anchor point. The safety harness in use at the time of the accident required the user to detach from the anchor point to move beyond the limits of the safety line. A retractable safety line device block was available, but not in position for use. Such a device, used properly, would preclude the need to detach the safety line for long moves. The opening in the deck next to the BOP stack was not necessary for the work being performed. A covering for the opening should have been in place. Only one side of the BOP stack had an opening in the deck. The employee could have descended on the side of the BOP stack with no opening in the deck.

Date:	18-Jun-1998	Operator:	Samedan Oil Corporation
Investigation:	None	Activity:	Unknown
Lease:	G05052	Event(s):	Injury (1)
Area:	South Pass	Operation:	Other
Block:	83	Cause:	Human Error
Rig/Platform:	A/Hercules 2	Water Depth:	448’

Remarks: A rig welder was cutting 14" angle iron on the rig substructure during rigging down operations when the 14" angle iron broke loose and struck him in the face. The company plans on conducting joint site assessments on projects in the future, with better communications and planning.

Date:	18-Jun-1998	Operator:	Vastar Resources, Inc.
Investigation:	Complete	Activity:	Exploration
Lease:	G08852	Event(s):	Injury (1)
Area:	Mississippi Canyon	Operation:	Drilling
Block:	764	Cause:	Human Error/Slip/Trip/Fall
Rig/Platform:	Diamond Ocean Victory	Water Depth:	3,285’

Remarks: The rig drill floor crew was not using the correct procedure to break out the stand of drill pipe from the top drive and the rotary table. The bottom tool joint of the stand of drill pipe should have been broken out at the rotary table on the drill floor first. The top tool joint of the stand of drill pipe should have been broken out at the top drive once the bottom tool joint was successfully broken. The driller did not have a clear vision of the top of the drill pipe stand being broken out of the top drive in the derrick. He was using a camera to observe this procedure.

Date:	19-Jun-1998	Operator:	Vastar Resources, Inc.
Investigation:	None	Activity:	Unknown
Lease:	G01072	Event(s):	Injury (1)
Area:	West Delta	Operation:	Unknown
Block:	40	Cause:	Human Error
Rig/Platform:	B	Water Depth:	84’

Remarks: A contract employee smashed his finger between an acetylene bottle cap and a handrail while trying to move the bottle. The injury required stitches.

Date:	27-Jun-1998	Operator:	Sonat Exploration GOM Inc.
Investigation:	None	Activity:	Development
Lease:	00253	Event(s):	Fire / Injury (1)
Area:	West Cameron	Operation:	Production
Block:	149	Cause:	Other
Rig/Platform:	A	Water Depth:	40’

Remarks: During heavy thunderstorms, a diesel generator began surging. The operator went to start a gas generator and during the startup a flash fire occurred. This resulted in the operator receiving 1st-degree burns. The probable cause of the accident was a design defect in the control circuit, which would allow the starter transformer to remain engaged indefinitely if a current-sensing relay was not satisfied. A contributing cause of the accident was the wrong setting being used on a current-sensing relay. This relay was in place to keep the starter transformer engaged until the motor current fell below the relay setting. This relay was set below the normal current rate; thus, it never released the transformer.

Date:	07-Jul-1998	Operator:	Bois d'Arc Offshore Ltd.
Investigation:	None	Activity:	Unknown
Lease:	G04842	Event(s):	Injury (1)
Area:	South Timbalier	Operation:	Unknown
Block:	34	Cause:	Human Error
Rig/Platform:	A	Water Depth:	45’

Remarks: A wireline crew was picking up the lubricator to the second rung. As they were picking it up by hand, the wireline operator's hand was caught between the rail and lubricator, causing the lubricator to slip and fall on the co-worker’s foot. There were no broken bones, but his foot was badly bruised.

Date:	13-Jul-1998	Operator:	Newfield Exploration Company
Investigation:	None	Activity:	Development
Lease:	G02051	Event(s):	Injury (1)
Area:	East Cameron	Operation:	Motor Vessel
Block:	286	Cause:	Human Error
Rig/Platform:	A	Water Depth:	186’

Remarks: A deckhand aboard M/V transporter sustained serious injury to both legs as he was tying off the vessel onto the platform. Two personnel who had just exited the vessel onto the platform heard the employee screaming. Responding to the scream, they found him on the M/V, deck with his right foot severed at the ankle and his left leg severed at the knee. It is believed that he became entangled in the tie-up rope as the rope was pulled taut by vessel maneuvering. Immediate first aid/tourniquets were applied, and he was airlifted to Lake Charles Memorial Hospital, arriving at 1447 hours. All efforts were taken to preserve the severed limbs and to possibly reattach them. They were unsuccessful.

Date:	16-Jul-1998	Operator:	Elf Exploration, Inc.
Investigation:	None	Activity:	Unknown
Lease:	G03594	Event(s):	Injury (1) / Fatality (1)*
Area:	South Timbalier	Operation:	Other
Block:	301	Cause:	Other
Rig/Platform:	B	Water Depth:	340’

Remarks: An Era Boelkow ship (contracted to Elf) was experiencing mechanical problems and safely landed on Shell's unmanned ST 301 B platform. Era dispatched two mechanics to the site to work on the helicopter. During testing of the repairs, the pilot throttled up and the ship lifted off the helideck and crashed on the main deck (wooden well bay cover). One mechanic went to the pilot's aid and the other went to call for assistance. When the mechanic who made the call returned to the helicopter, he realized the other mechanic had had a heart attack. Attempts to revive the mechanic were unsuccessful. The pilot received a head laceration and injuries to his back. The pilot was airlifted to shore at 3:00 p.m.

* This fatality was not included in the total count because it was a heart attack from natural causes.

Date:	17-Jul-1998	Operator:	Ocean Energy, Inc.
Investigation:	Complete, MMS 99-0027	Activity:	Development
Lease:	G01967	Event(s):	Injury (11) / Fatality (1)
Area:	Main Pass	Operation:	Other
Block:	153	Cause:	Equipment Failure
Rig/Platform:	B	Water Depth:	290’

Remarks: Nabor's Drilling was in the process of rigging-up Nabor's *Rig 269* on the platform when the accident occurred. They had completed rigging-up the substructure and were skidding the substructure in preparation for lifting the derrick. The substructure failed catastrophically and the rig substructure separated. Part of the package toppled off the platform to the barge, and another part toppled to the seafloor. There were 3 fatalities, 1 serious injury, and 12 other injuries.

Date:	20-Jul-1998	Operator:	Shell Offshore Inc.
Investigation:	None	Activity:	Development
Lease:	G07963	Event(s):	Injury (1)
Area:	Mississippi Canyon	Operation:	Production
Block:	807	Cause:	Human Error
Rig/Platform:	A (MARS)	Water Depth:	2,945’

Remarks: A contract painter was preparing a column top for painting. The employee bent over to pick up a piece of trash. Upon retrieving the trash, the employee straightened up and struck his head and shoulder against a low I-beam that was above him during the job. The employee finished the day's work and reported a hurt back the next day.

Date:	27-Jul-1998	Operator:	Chevron U.S.A. Production Company
Investigation:	None	Activity:	Development
Lease:	G02625	Event(s):	Injury (1)
Area:	South Timbalier	Operation:	Production
Block:	37	Cause:	Human Error
Rig/Platform:	C	Water Depth:	50’

Remarks: An employee was attempting to stand a 55-gallon drum (with about 45-50 gallons inside) up on end and felt a muscle pull in his back.

Date:	01-Aug-1998	Operator:	Exxon Company, U.S.A.
Investigation:	None	Activity:	Development
Lease:	00031	Event(s):	Injury (1)
Area:	Grand Isle	Operation:	Production
Block:	22	Cause:	Human Error
Rig/Platform:	U/Pool 903	Water Depth:	60’

Remarks: While tubing was being picked up from the pipe rack, a tubing collar hung up in the spring of the lift cylinder of the tongs. When the driller noticed it, he slammed on the brake, causing the tubing to come free (remained latched in elevators). The tubing began to bounce on the pipe rack and struck a contractor in the forehead, knocking him down. He was hospitalized Aug. 1-3.

Date:	18-Aug-1998	Operator:	Walter Oil & Gas Corporation
Investigation:	None	Activity:	Unknown
Lease:	G06180	Event(s):	Injury (1)
Area:	High Island	Operation:	Workover
Block:	A22	Cause:	Human Error
Rig/Platform:	Sundowner Dolphin 106	Water Depth:	57’

Remarks: The employee was closing the valve on the supply line and was bleeding the line down when he received burns to the hands, arms, and face.

Date:	30-Aug-1998	Operator:	Chevron U.S.A. Inc.
Investigation:	None	Activity:	Development
Lease:	G05660	Event(s):	Injury (1)
Area:	Grand Isle	Operation:	Production
Block:	86	Cause:	Slip/Trip/Fall
Rig/Platform:	AA	Water Depth:	293’

Remarks: The injured was operating a crane when he stepped backward and flipped over the handrail, striking his back on a beam and then the grating.

Date:	31-Aug-1998	Operator:	Amoco Production Company
Investigation:	None	Activity:	Development
Lease:	G01085	Event(s):	Injury (1)
Area:	West Delta	Operation:	Production
Block:	75	Cause:	Slip/Trip/Fall
Rig/Platform:	D	Water Depth:	157’

Remarks: While evacuating the facility because of a hurricane, the injured jumped on the boat bumper and pulled himself over the bulwark. His right foot landed on the deck and slipped, which caused him to twist his knee.

Date:	13-Sep-1998	Operator:	Chevron U.S.A. Inc.
Investigation:	Complete	Activity:	Exploration
Lease:	G10005	Event(s):	Injury (2)
Area:	Atwater	Operation:	Other
Block:	118	Cause:	Equipment Failure
Rig/Platform:	Glomar Explorer	Water Depth:	7,716’

Remarks: The brake bleed lines to the four motor brake assemblies were tied into the hydraulic fluid return line from the cart function on the elevator. The return line for the cart function contained a manual valve, which had been closed. When hydraulic power was supplied to the system after repairs were made to the cart, the closed valve caused pressure to be fed back through the bleed lines, which released the brakes. When the hydraulic power was shut down a second time to troubleshoot the cart further, the brakes could not bleed back and remained released, causing the elevator to fall. There was no fail-safe backup to the brake system.

Date:	14-Sep-1998	Operator:	Equitable Resources Energy Company
Investigation:	None	Activity:	Unknown
Lease:	G03264	Event(s):	Injury (1)
Area:	West Cameron	Operation:	Drilling
Block:	197	Cause:	Slip/Trip/Fall
Rig/Platform:	Falcon 85	Water Depth:	56’

Remarks: A mudlogger was dropping a rope down from top of a cantilever beam to pull up a purge hose. The employee slipped and fell approximately 13-14 feet into a Halliburton tool basket.

Date:	16-Sep-1998	Operator:	Nippon Oil Exploration U.S.A. Limited
Investigation:	None	Activity:	Development
Lease:	G16508	Event(s):	Injury (1)
Area:	Main Pass	Operation:	Production
Block:	226	Cause:	Slip/Trip/Fall
Rig/Platform:	A	Water Depth:	192’

Remarks: An employee was tracing lines out from the high-pressure separator and was walking in the direction of the master panel and fell off a 12-inch skid, breaking his hip.

Date:	06-Oct-1998	Operator:	ENSERCH Corporation
Investigation:	Complete	Activity:	Exploration
Lease:	G18259	Event(s):	Injury (1)
Area:	Mississippi Canyon	Operation:	Drilling
Block:	580	Cause:	Equipment Failure /Human Error
Rig/Platform:	R&B C. Kirk Rhein, Jr.	Water Depth:	2,611’

Remarks: The latch, that secures the door on the lower pipe clamp had not been fully seated prior to the pipe connection being loosened. The breakout force applied to the pipe to loosen the connection caused the latch to come loose suddenly and caused the door to swing open suddenly. The person whose job was to close the clamp latch did not check to see if the latch was fully seated. The latch holds the door closed on the pipe clamp and has a spring action design. The spring is designed to promote full engagement of the latch with the door. This inspector operated the latch involved in the accident and noticed that the spring strength seemed weak when compared with a similar latch on the same make and model iron roughneck on a different drilling rig. The levers operating the iron roughneck are too close to the swing path of the two clamp doors.

Date:	09-Oct-1998	Operator:	Vastar Resources, Inc.
Investigation:	None	Activity:	Unknown
Lease:	G01073	Event(s):	Injury (1)
Area:	West Delta	Operation:	Unknown
Block:	41	Cause:	Slip/Trip/Fall
Rig/Platform:	A	Water Depth:	87’

Remarks: A radio tech was standing on an 8-ft ladder adjusting the Primestar satellite dish. As he attempted to remove the dish, the wind caught the dish and blew the tech off the ladder and onto a walkway. His knee "popped." The knee was immobilized and ice applied.

Date:	10-Oct-1998	Operator:	EEX Corporation
Investigation:	None	Activity:	Exploration
Lease:	G15157	Event(s):	Injury (2)
Area:	East Cameron	Operation:	Completion
Block:	350	Cause:	Human Error / Other
Rig/Platform:	Rowan Fort Worth	Water Depth:	302’

Remarks: Normal completion operations were being conducted when the completion fluid U-tubed and splashed on two floorhands. Both were wearing safety glasses but no goggles.

Date:	14-Oct-1998	Operator:	Vastar Resources, Inc.
Investigation:	None	Activity:	Unknown
Lease:	G01073	Event(s):	Injury (1)
Area:	West Delta	Operation:	Unknown
Block:	41	Cause:	Slip/Trip/Fall
Rig/Platform:	AUX	Water Depth:	87’

Remarks: An employee was tightening a 2" piece of threaded pipe. The wrench slipped and he fell back to the deck, twisting his left knee. Employee missed several days of work before being placed on light duty.

Date:	24-Oct-1998	Operator:	Vastar Resources, Inc.
Investigation:	None	Activity:	Unknown
Lease:	G01608	Event(s):	Injury (1)
Area:	South Pass	Operation:	Other
Block:	60	Cause:	Slip/Trip/Fall
Rig/Platform:	C	Water Depth:	172’

Remarks: An employee was on the +10' deck of the platform preparing to disconnect a water hose used to pump water from the M/V *Miss Mary* to the platform. He stepped on a structural support and, because some walkway grating was missing, the result of a recent hurricane, he slipped and fell overboard. While in the water, the employee received numerous abrasions to his hands, legs, and arms from rubbing against and grabbing onto barnacles on the platform structural members. He was rescued from the water and airlifted to West Jefferson Medical Center.

Date:	27-Oct-1998	Operator:	Marathon Oil Company
Investigation:	None	Activity:	Exploration
Lease:	G19104	Event(s):	Injury (1) / Fatality (1)
Area:	Garden Banks	Operation:	Other
Block:	329	Cause:	Other
Rig/Platform:	Diamond Ocean Lexington	Water Depth:	2,230’

Remarks: The accident occurred during an operation of lifting and transferring a chain chaser off the top deck of the rig onto a motor vessel. The crane operator experienced trouble controlling the crane boom with the load attached. He managed to regain control with the manual boom brake. The auxiliary/whip line began to unspool and free fall with the load attached. It stopped approximately 10 feet above the water. The crane started rocking from the effect of the downward force and boom angle. At least one of the roller bearings sheared. The crane separated from the pedestal and fell into the water with the operator still at the controls. Another employee was injured as he jumped from the crane as it began to fall. The crane operator’s body was recovered immediately.

Date:	10-Nov-1998	Operator:	EEX Corporation
Investigation:	None	Activity:	Development
Lease:	G18259	Event(s):	Injury (1)
Area:	Mississippi Canyon	Operation:	Production
Block:	580	Cause:	Equipment Failure / Weather Related
Rig/Platform:	R&B C. Kirk Rhein, JR.	Water Depth:	2,545’

Remarks: Men were repositioning iron plates in a storage rack used for welding so that painters could paint. There was movement from rough seas and the rack could not hold the shifting plates. The rack broke and a supervisor was hit by falling plates and was taken to a hospital for treatment.

Date:	12-Nov-1998	Operator:	Enron Oil & Gas Company
Investigation:	None	Activity:	Development
Lease:	G08151	Event(s):	Injury (1)
Area:	High Island	Operation:	Production
Block:	207	Cause:	Human Error
Rig/Platform:	A	Water Depth:	50’

Remarks: Operator's letter dated November 18, advised MMS that an employee was injured on November 12. He slipped and fell while he was taking the Generator Report.

Date:	25-Nov-1998	Operator:	Union Oil Company of California
Investigation:	None	Activity:	Unknown
Lease:	G09010	Event(s):	Injury (1)
Area:	Brazos	Operation:	Drilling
Block:	375	Cause:	Slip/Trip/Fall
Rig/Platform:	Glomar High Island II	Water Depth:	62’

Remarks: The mud recovery unit is installed below the shale shakers, in the same area that the centrifical charging pumps are located. This area is difficult to move in because of the piping and pumps. The mud recovery unit has a hopper that the cuttings fall into and an auger to move and compress the synthetic oil from the cuttings. The injured told the tool pusher that he slipped and while trying to regain his balance, shoved his hand into the hopper, where his right hand was severed just behind the thumb.

Date:	03-Dec-1998	Operator:	Texaco Exploration and Production Inc.
Investigation:	None	Activity:	Development
Lease:	G12119	Event(s):	Injury (1) / Other
Area:	Viosca Knoll	Operation:	Production
Block:	786	Cause:	Equipment Failure
Rig/Platform:	A (PETRONIUS)	Water Depth:	1,700’

Remarks: Crane load line No. 3 broke, losing the south production module at VK 786 in 1,700 feet of water. The crane operator injured his foot. Lift barge DB50 and the material barge are damaged. DB50 lost its thruster. The accident occurred 1500 feet from structure. The north module is installed on the structure.

Date:	09-Dec-1998	Operator:	Samedan Oil Corporation
Investigation:	None	Activity:	Development
Lease:	G01676	Event(s):	Injury (1)
Area:	Main Pass	Operation:	Production
Block:	305	Cause:	Equipment Failure
Rig/Platform:	B	Water Depth:	241’

Remarks: One person was injured when a stainless steel flex hose broke loose on an air compressor skid. The person was struck on the wrist and transported to a doctor for medical attention.

Date:	17-Dec-1998	Operator:	Howell Petroleum Corporation
Investigation:	None	Activity:	Development
Lease:	G04909	Event(s):	Injury (1)
Area:	Main Pass	Operation:	Production
Block:	64	Cause:	Slip/Trip/Fall
Rig/Platform:	A	Water Depth:	52’

Remarks: One person was stepping down from a vertical separator deck to the deck below when he misplaced his footing, which caused him to fall and twist his ankle.

Date:	23-Dec-1998	Operator:	Union Pacific Resources Company
Investigation:	Complete, MMS 99-0067	Activity:	Development
Lease:	G03811	Event(s):	Fire / Injury (2) / Fatality (1)
Area:	Eugene Island	Operation:	Production
Block:	108	Cause:	Human Error
Rig/Platform:	3	Water Depth:	31’

Remarks: Two Grasso personnel were in the process of returning satellite well No. 3 to production when a large cloud of gas was released and then ignited. The two Grasso personnel and one Tech-Air helicopter pilot and the helicopter were on the satellite during the incident. All three victims were recovered from the water and transported to a facility located on Eugene Island 120. The helicopter pilot and one Grasso employee were treated for injuries. Attempts to resuscitate the other Grasso employee were unsuccessful and he was pronounced dead from apparent drowning. A nearby motor vessel extinguished the fire on the structure. The helicopter was determined to be airworthy and flown off the structure.

Date:	27-Dec-1998	Operator:	Newfield Exploration Company
Investigation:	None	Activity:	Development
Lease:	G01604	Event(s):	Fire / Injury (1)
Area:	West Delta	Operation:	Production
Block:	152	Cause:	Equipment Failure
Rig/Platform:	A	Water Depth:	250’

Remarks: Newfield experienced a fire on the No. 2 compressor at WD 152-A. The source of the fire was a gas leak from a short tubing line run between the PSV and pilot for the PSV on the second stage of the No. 2 compressor. The ignition source is unknown. It was extinguished within 5 minutes. The platform cook injured the back of his hand when the lid of the life jacket box fell on his hand while he was mustering at the escape capsule.

Gulf of Mexico Region

Significant Pollution Events (>50bbl) – 1998

Date:	29-Apr-1998	Operator:	Mobil Oil Exploration & Producing SE, Inc.
Investigation:	Complete	Activity:	Development
Lease:	G04940	Amount (bbl):	100 – Diesel
Area:	Green Canyon	Operation:	Production
Block:	18	Cause:	Weather, Equipment Failure, Human Error
Rig/Platform:	Platform A	Water Depth:	700’

Remarks: Weather conditions, 25-mph winds and 15-20-foot seas caused the hose nozzle to a diesel-driven portable pump skid to break off the hose. An isolation valve had been left open after the last fill-up.

Date:	29-Jun-1998	Operator:	Shell Deepwater Development Inc.
Investigation:	None	Activity:	Development
Lease:	G05862	Amount (bbl):	85 – Ethylene Glycol
Area:	Mississippi Canyon	Operation:	Production
Block:	686	Cause:	Equipment Failure
Rig/Platform:	Platform Mensa	Water Depth:	5,292’

Remarks: Leak developed in ethylene glycol flowline at a fitting on wellhead.

Date:	13-Jul-1998	Operator:	Shell Deepwater Development Inc.
Investigation:	Complete	Activity:	Development
Lease:	G06896	Amount (bbl):	55 – Paraffin Inhibitor
Area:	Viosca Knoll	Operation:	Production
Block:	956	Cause:	Equipment Failure, Leak
Rig/Platform:	Platform Ram-Powell	Water Depth:	3,214’

Remarks: Paraffin inhibitor storage tank overflowed while filling because of design flaws in the overflow line.

Date:	24-Jul-1998	Operator:	Amerada Hess Corporation
Investigation:	None	Activity:	Development
Lease:	G07462	Amount (bbl):	170 – Zinc Bromide
Area:	Garden Banks	Operation:	Completion
Block:	260	Cause:	Equipment Failure, Human Error
Rig/Platform:	Rig Ensco 23	Water Depth:	1,648’

Remarks: While the mud tank was being drained, faulty gate valve caused leakage from the adjacent mud tank.

Date:	29-Jul-1998	Operator:	Amerada Hess Corporation
Investigation:	None	Activity:	Development
Lease:	G07462	Amount (bbl):	88 – Zinc Bromide
Area:	Garden Banks	Operation:	Completion
Block:	260	Cause:	Equipment Failure, Human Error
Rig/Platform:	Rig Ensco 23	Water Depth:	1,648’

Remarks: The rubber transfer hose ruptured during transfer from a mud holding tank. No valve was installed on the hose departing the outlet of the tank to isolate the flow once the hose ruptured.

Pipeline Events – 1998

Date:	22-Jan-1998	Operator:	Amoco Pipeline Company
Investigation:	Complete	Activity:	Development
Lease:	G02366	Amount(bbl):	800 - Crude Oil
Area:	High Island	Operation:	Pipeline
Block:	A474	Cause:	External damage to pipeline
Segment:	4879	Water Depth:	150’

Remarks: The leak was located approximately 15 miles to the northwest of High Island Block A-462. The pipeline had sustained significant mechanical damage, possibly from the anchor of a vessel. The damaged section was inside a fairway area and a lightering zone.

Date:	01-Oct-1998	Operator:	Chevron Pipe Line Company
Investigation:	Complete, MMS 99-0053	Activity:	Development
Lease:	G02177	Amount(bbl):	8,212 - Crude Oil
Area:	South Pass	Operation:	Pipeline
Block:	38	Cause:	Hurricane, Mudslide, Human Error
Segment:	5625	Water Depth:	110’

Remarks: The damage to the pipeline occurred as a result of a natural hazard, specifically, a mudslide that was precipitated by Hurricane Georges in the latter part of September 1998. The pipeline was found completely parted 20 feet below the mudline. Deviations from established other-than-normal startup operating procedures contributed to the failure to identify the pipeline leak promptly. OCS Report 99-0053

Pacific Region

Blowouts - 1998

Date:	07-Mar-1998	Operator:	Torch Operating Company
Investigation:	Complete	Activity:	Development
Lease:	P00441	Event(s):	Blowout
Area:	SM	Operation:	Drilling / Workover
Block:	332	Cause:	Other – gas bubble below highest packer
Rig/Platform:	Irene	Water Depth:	242’

Remarks: A loss of well control occurred during workover operations to remove and replace annular SCSSV on Well A-14. After the packer was released and 30' of tubing was pulled, the well began flowing natural gas and seawater through the tubing/casing annulus. The flow pushed tubing 30' up well, damaging the tubing and the flowline from the BOPE to the active mud pit. The well flowed for 30 seconds prior to the BOPE shut-in.

Pacific Region

Fires - 1998

Date:	23-Mar-1998	Operator:	Chevron USA, Inc.
Investigation:	Complete	Activity:	Development
Lease:	P00316	Event(s):	Fire
Area:	6A	Operation:	Production
Block:	5584	Cause:	Equipment Failure
Rig/Platform:	Hermosa	Water Depth:	603’

Remarks: Engine oil-soaked manifold insulator caught fire because the engine was operated at max load for 20 minutes. The fire was extinguished by 8:15 a.m. with a handheld dry chemical extinguisher. Damage appeared to be limited to insulators and air supply line (TSE). The operator is instituting corrective action and daily inspections to prevent similar mishaps.

Date:	12-Apr-1998	Operator:	Nuevo Energy Company
Investigation:	Complete	Activity:	Development
Lease:	P00234	Event(s):	Fire
Area:	6B	Operation:	Production
Block:	5064	Cause:	Equipment Failure
Rig/Platform:	Habitat	Water Depth:	292’

Remarks: Mr. Bob Marsalek called to report a fire on the Cooper gas compressor exhaust at Platform Habitat. Fire occurred at approx. 0845 4/12. No injuries, little damage, report to follow.

Pacific Region

Injuries - 1998

Date:	29-Jan-1998	Operator:	Nuevo Energy Company
Investigation:	None	Activity:	Development
Lease:	P00240	Event(s):	Injury (1)
Area:	6B	Operation:	Production
Block:	5164	Cause:	Human Error
Rig/Platform:	Hillhouse	Water Depth:	189’

Remarks: A screwdriver being used by an electrician contacted the "hot" side of 90-amp circuit breaker, grounding it out to the energized 480v panel. Electrical "flash" burns resulted on the electrician's face, chest, arms, and hands.

Pacific Region

Other Events – 1998

Date:	15-Jan-1998	Operator:	Nuevo Energy Company
Investigation:	Complete	Activity:	Development
Lease:	P00240	Event(s):	Other – Crane Incident
Area:	6B	Operation:	Production
Block:	5164	Cause:	Equipment Failure
Rig/Platform:	Hillhouse	Water Depth:	189’

Remarks: During the crane accident, crude splashed from the container and oil sprayed from crane gear box into the ocean. The operator put a boom out to contain the spill and clean up as much hydrocarbons as possible with absorbent pads.

Date:	03-Apr-1998	Operator:	Torch Operating Company
Investigation:	None	Activity:	Development
Lease:	P00240	Event(s):	Other – Crane Incident
Area:	6B	Operation:	Production
Block:	5164	Cause:	Equipment Failure / Human Error
Rig/Platform:	Henry	Water Depth:	173’

Remarks: In the process of tailing the riser out from under the rig sub base, the boom was raised up into the boom stops, causing extensive damage to boom stringers. Boom travel limit switch failed to stop boom. Daily pre-use crane inspection had not been completed prior to daily operations.

Date:	28-May-1998	Operator:	Nuevo Energy Company
Investigation:	Complete	Activity:	Development
Lease:	P00241	Event(s):	Other – Crane Incident
Area:	6B	Operation:	Production
Block:	5165	Cause:	Human Error
Rig/Platform:	B	Water Depth:	200’

Remarks: So as to be out of the way, load line blocks were secured temporarily to the crane base. While loading a shipping basket onto a boat via the crane fast line, a crane operator accidentally pulled the load line lever, which put tension on the load line and caused the heavy blocks to bang into the bottom side of the crane boom, causing damage to boom lattice works. No injuries or pollution were associated with this incident.

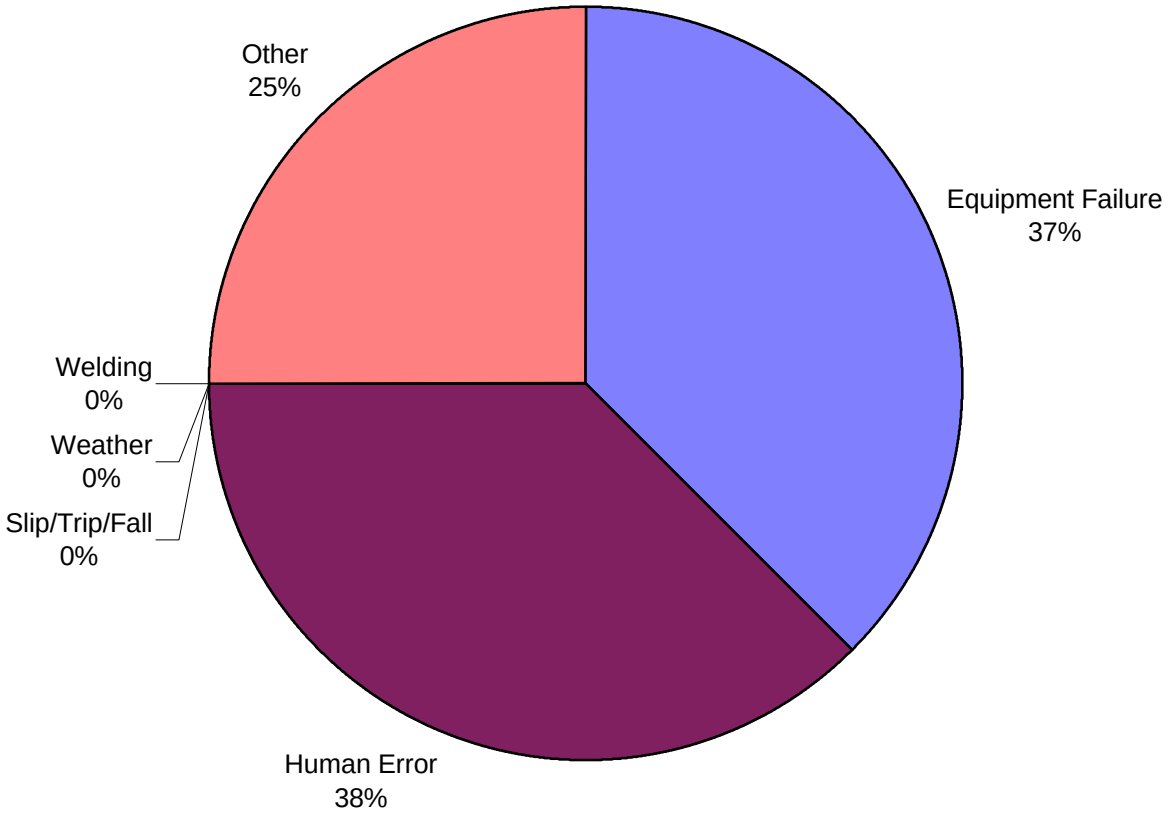
OCS Events by Category: 1995 – 1999

	1995	1996	1997	1998	1999
Blowouts	1	4	5	7	2
Collisions	6	5	10	6	9
Explosions	0	8	10	4	7
Fatalities	8	10	11	14	5
Fires	42	87	125	92	74
Injuries	31	62	83	65	40

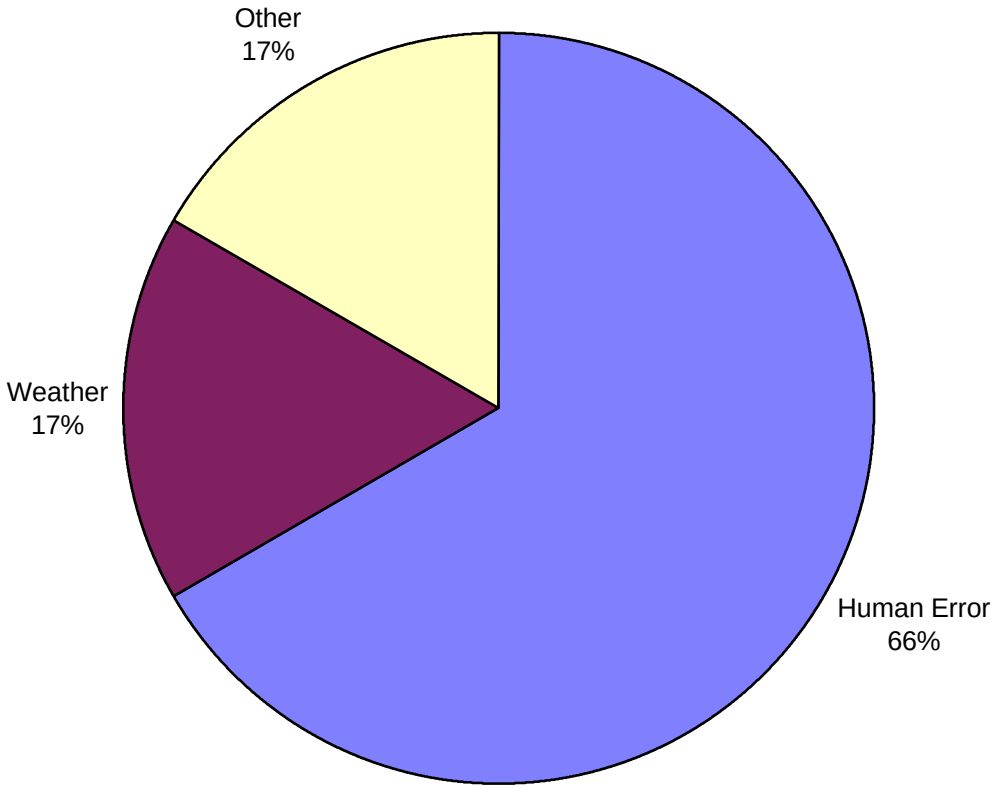
Appendix

Graphical Summary
of
OCS Incident Data
1998

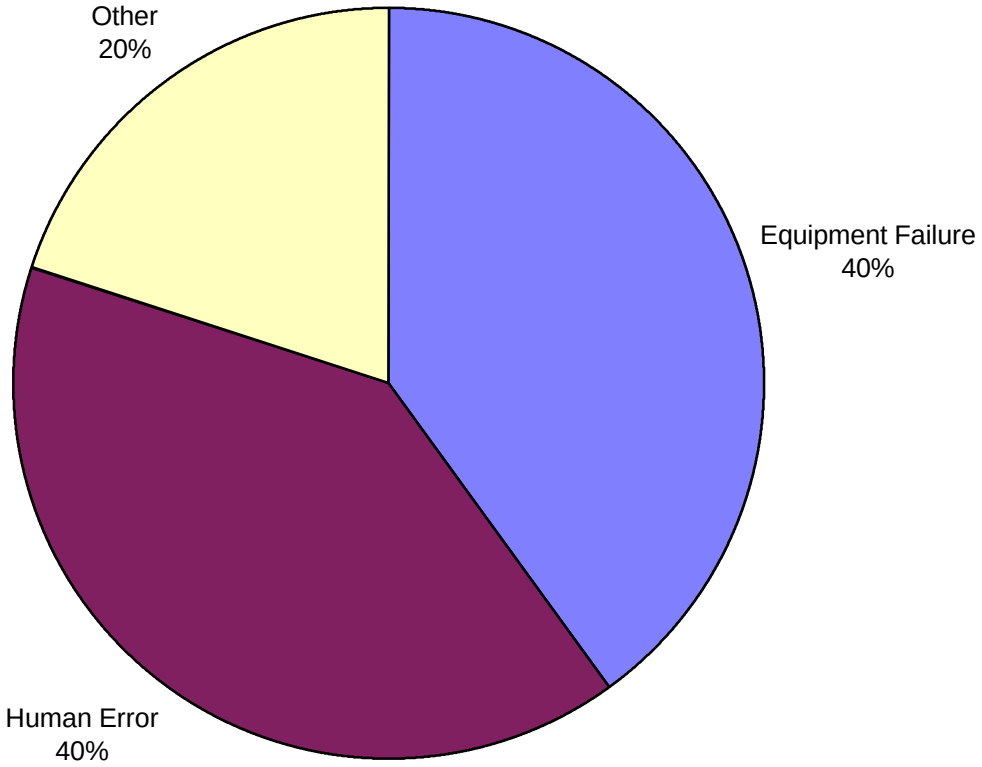
Causes of Blowouts on OCS 1998



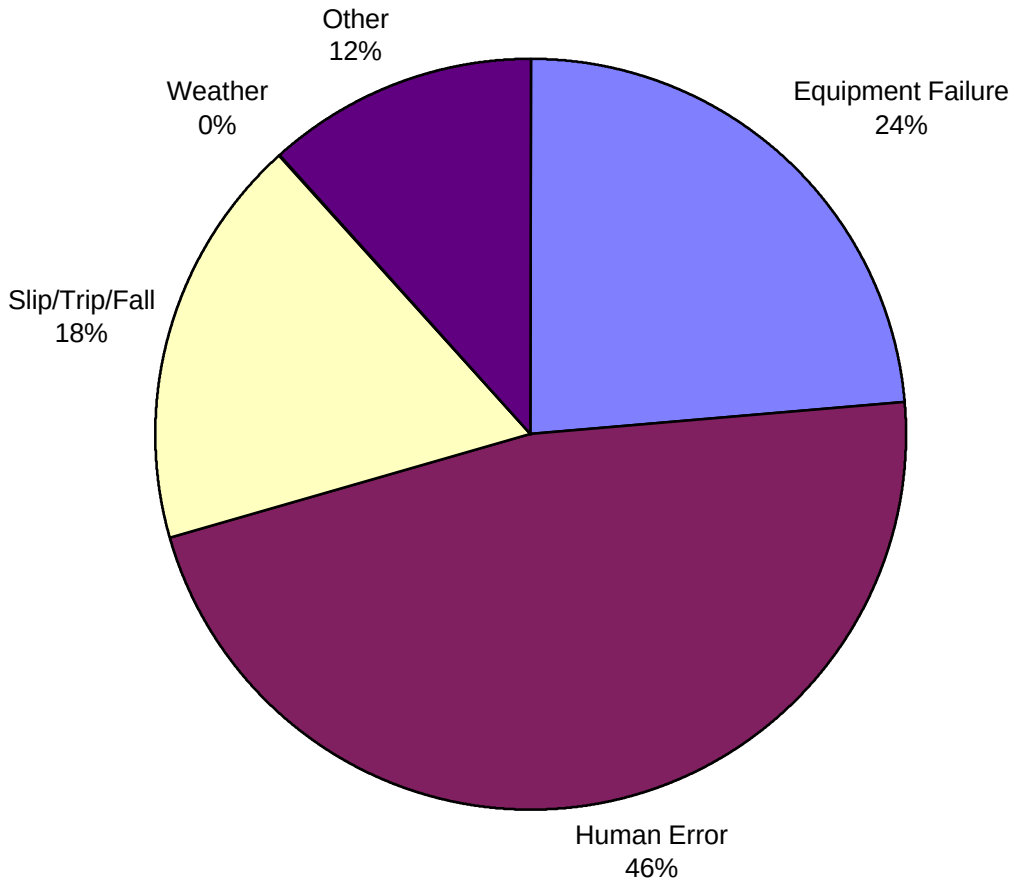
Causes of Collisions on OCS 1998



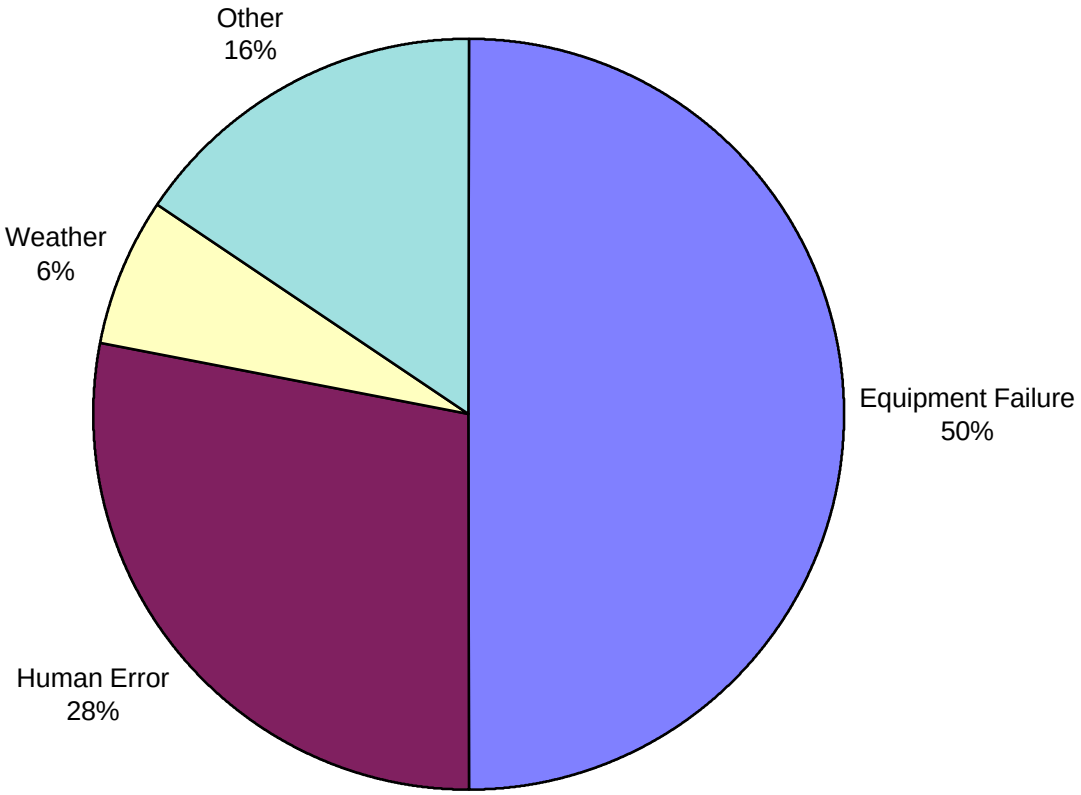
Causes of Explosions on OCS 1998



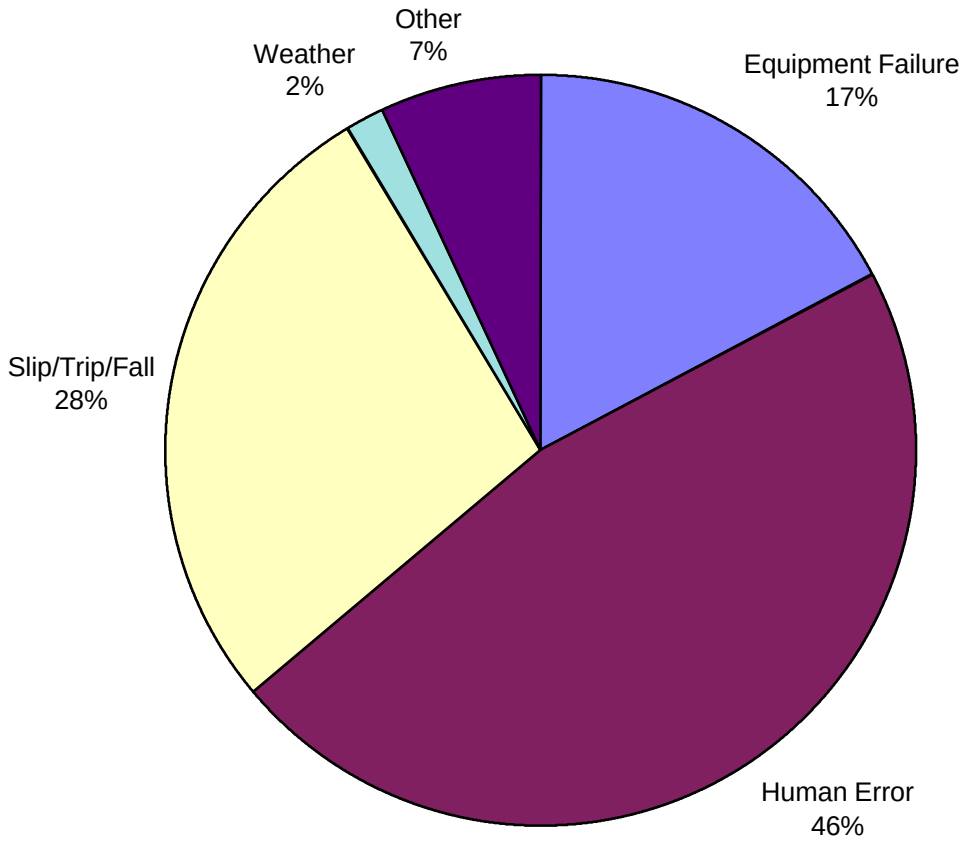
Causes of Fatalities on OCS 1998



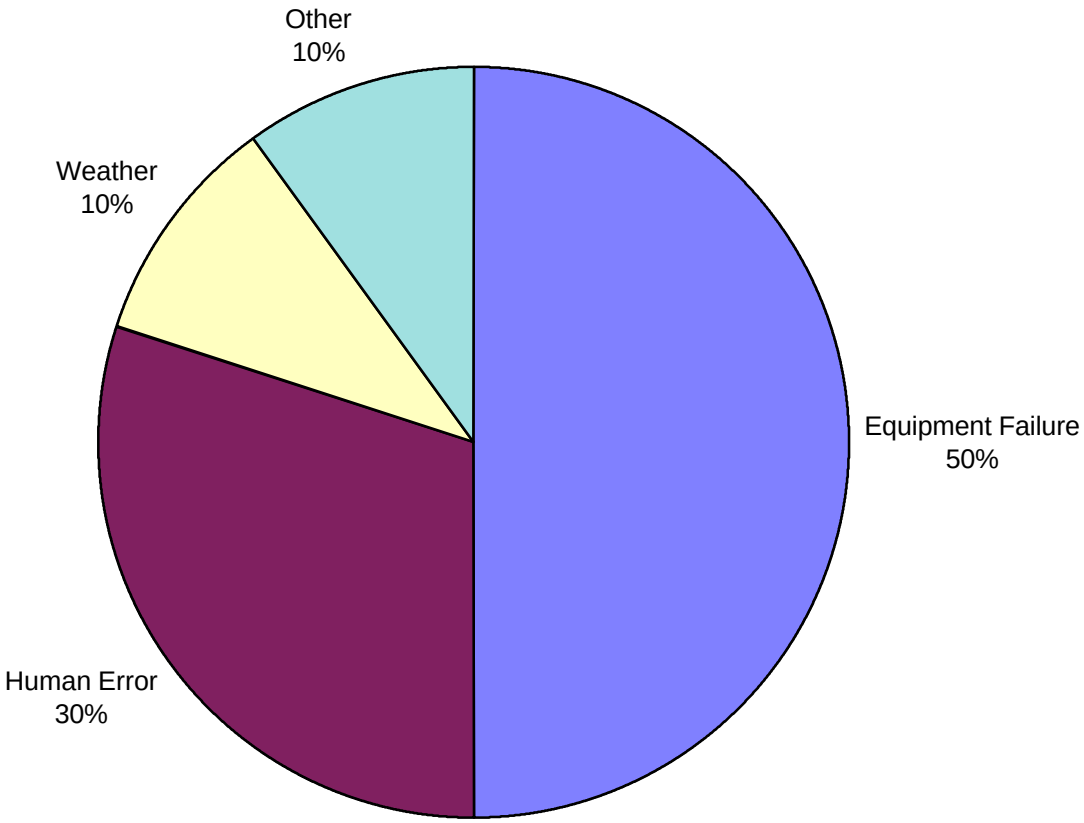
Causes of Fires on OCS 1998

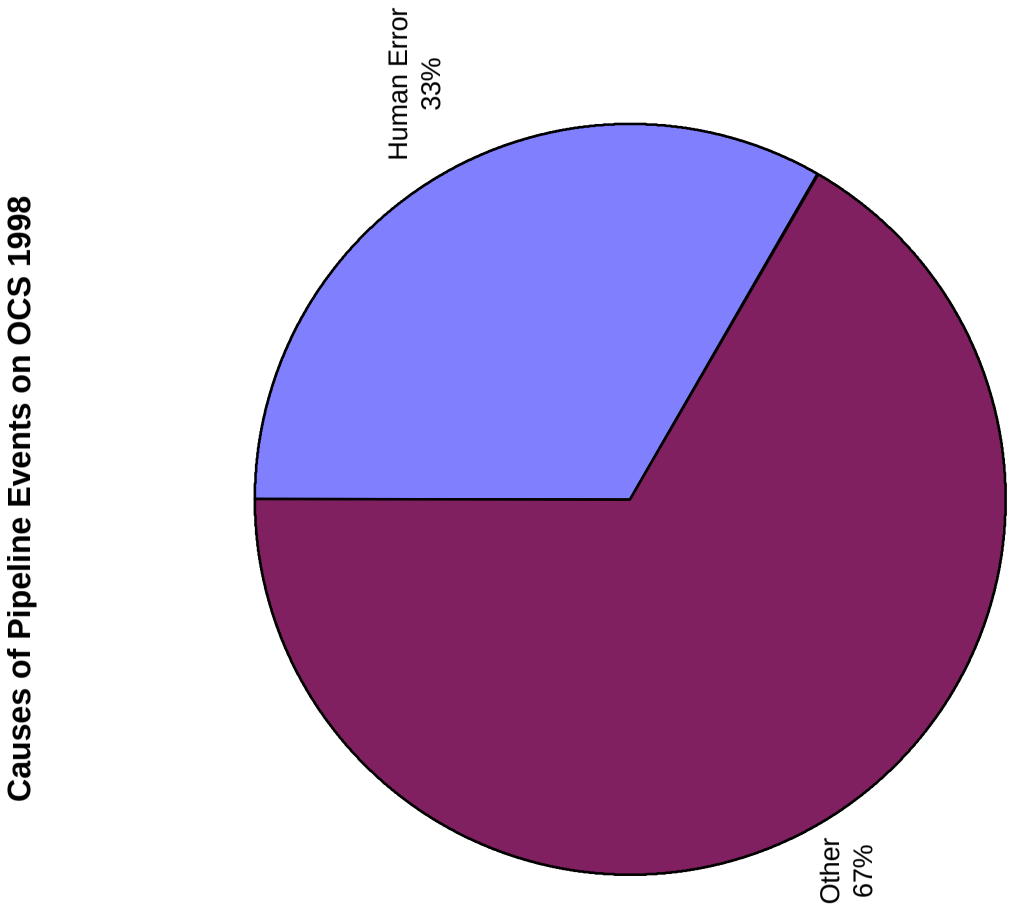


Causes of Injuries on OCS 1998

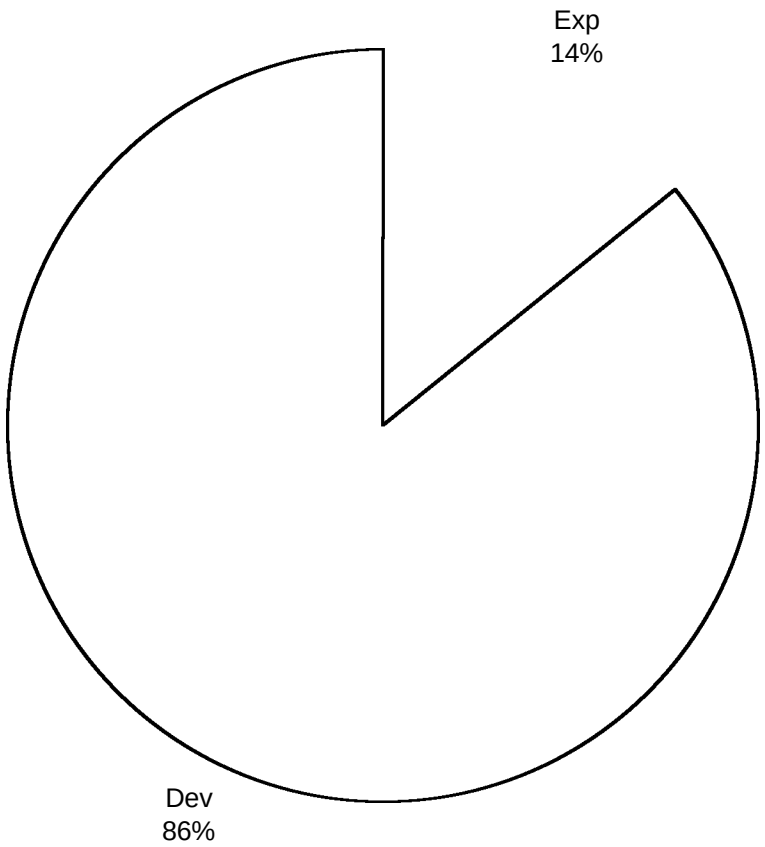


Causes of Significant Pollution Events on OCS in 1998

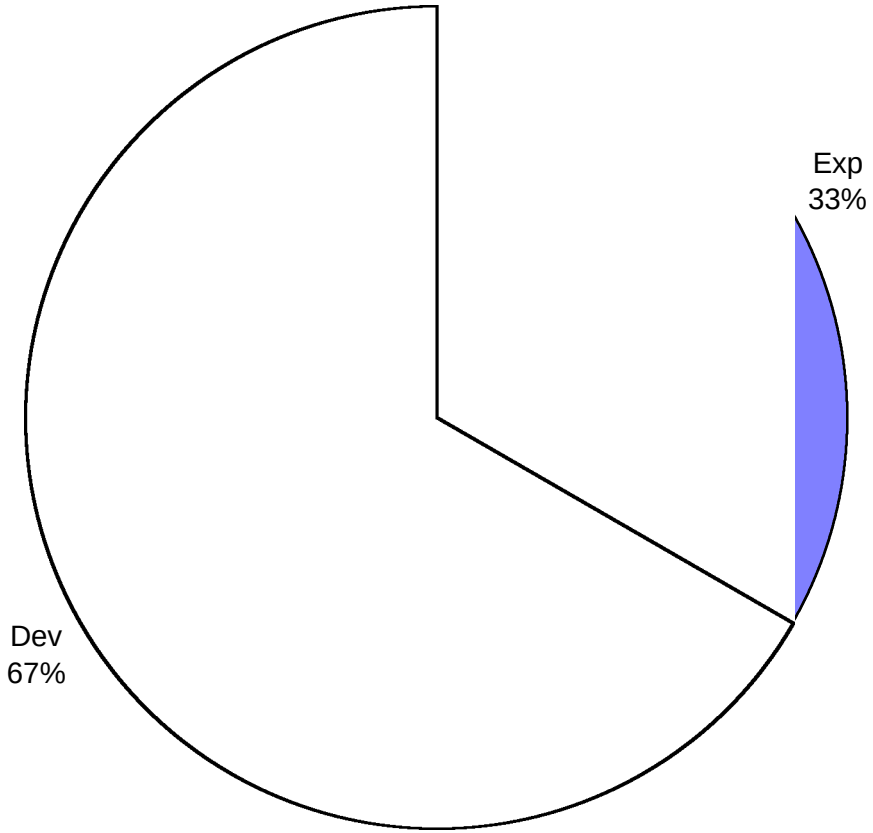



Causes of Pipeline Events on OCS 1998
Human Error
33%
Other
67%

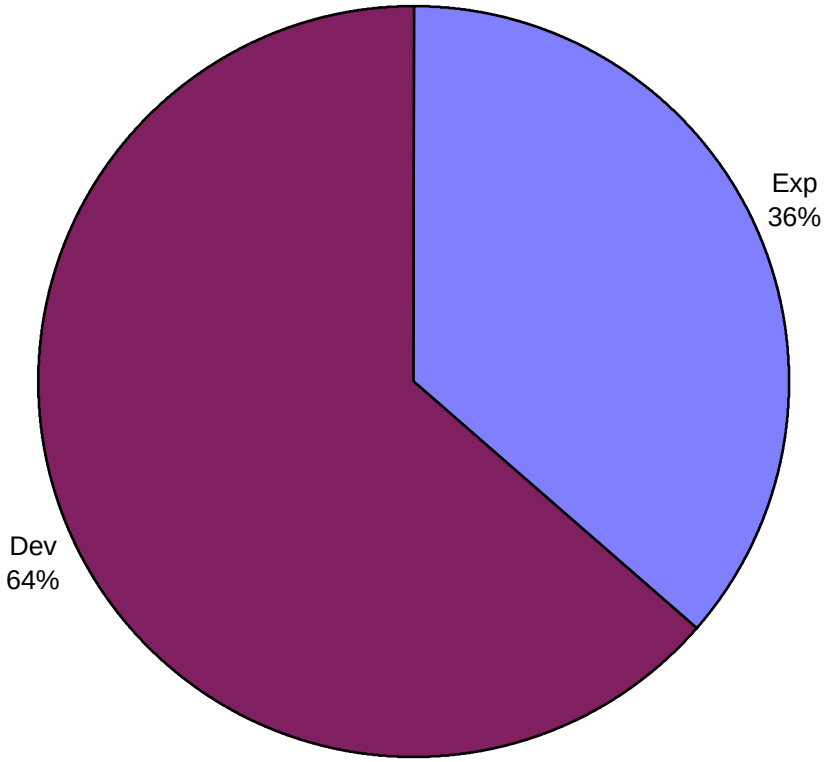
Type of Activity for Blowouts on OCS 1998



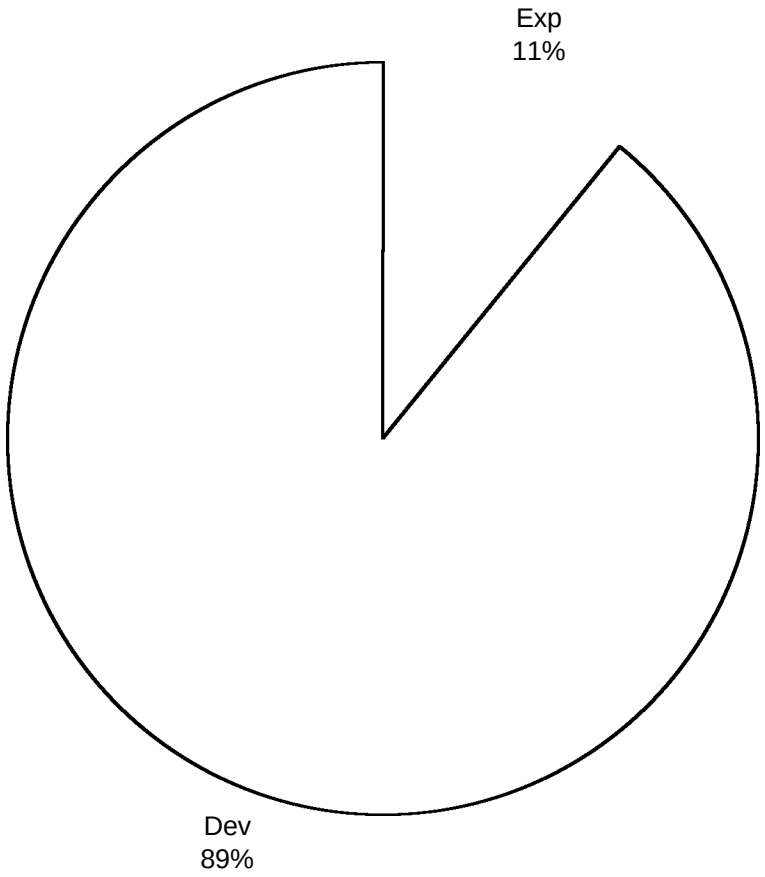
Activity During Explosions on OCS 1998



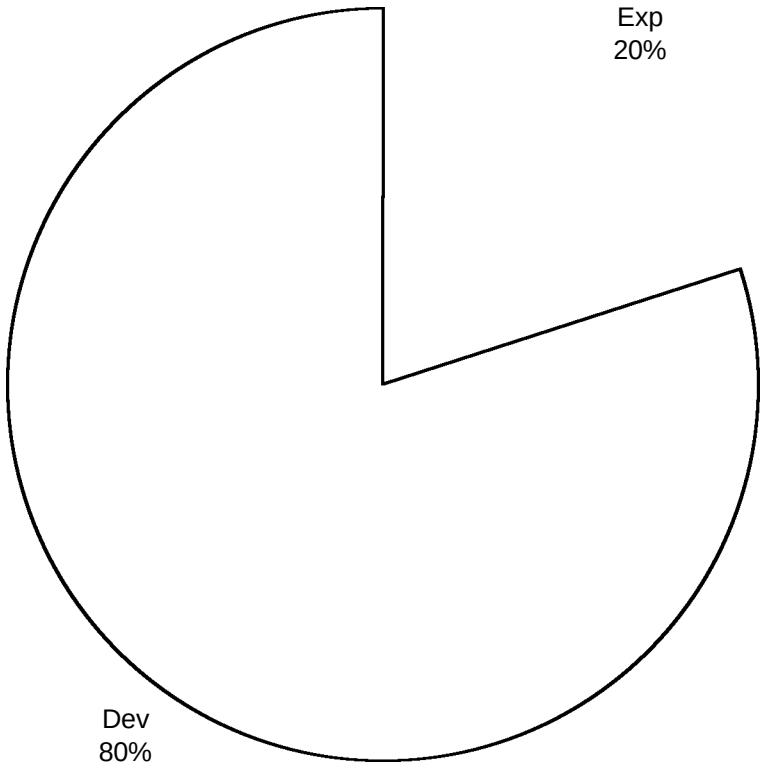
Activity During Fatalities on OCS 1998



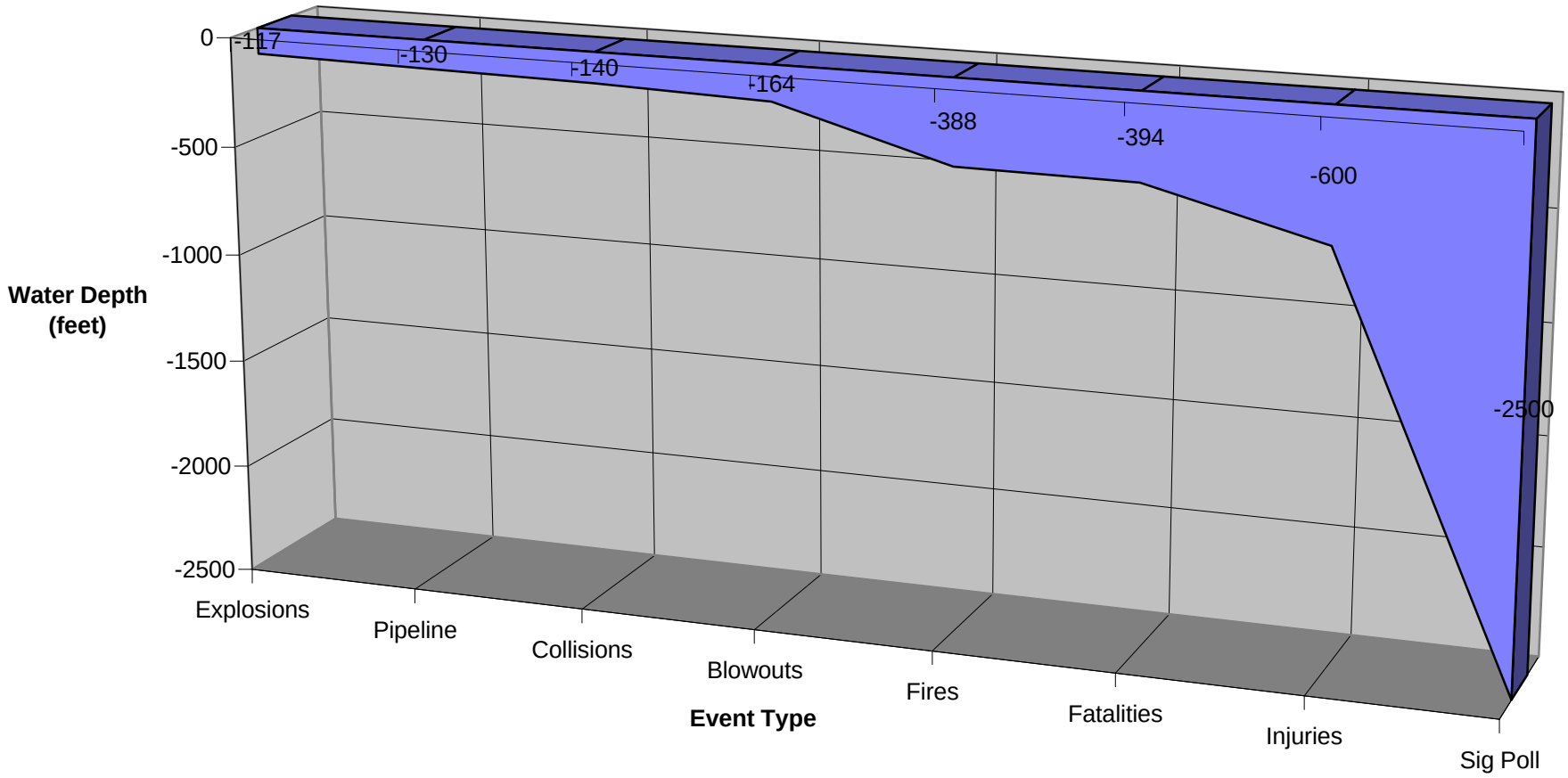
Activity During Fires on OCS 1998



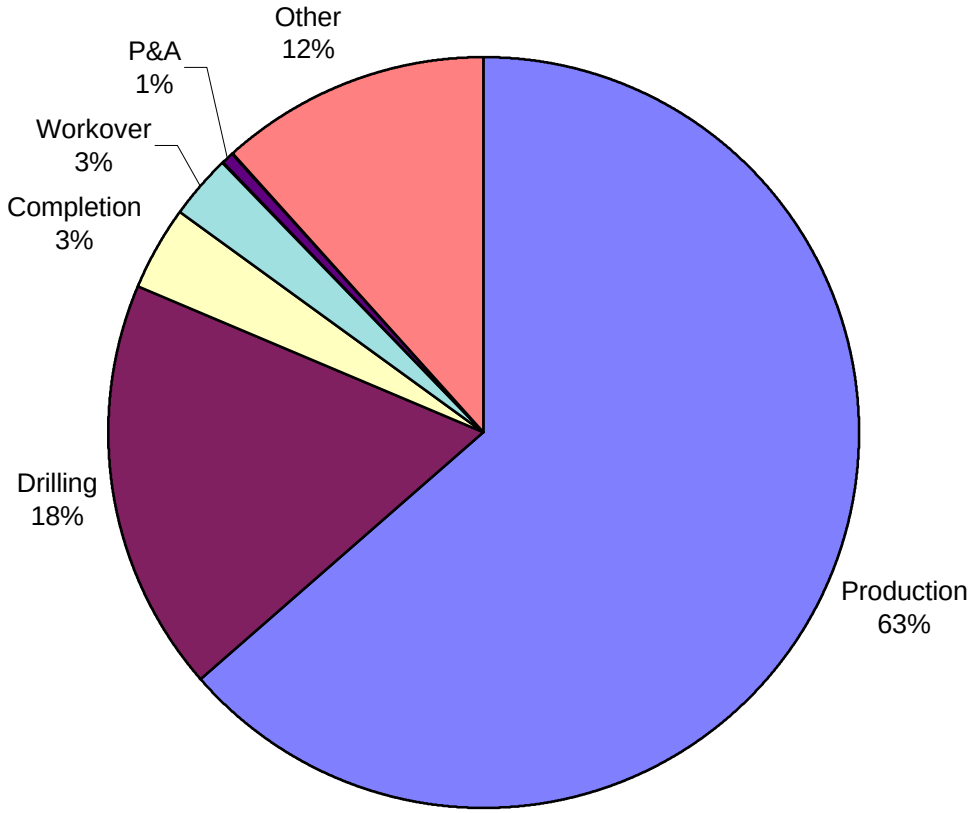
Activity During Injuries on OCS 1998



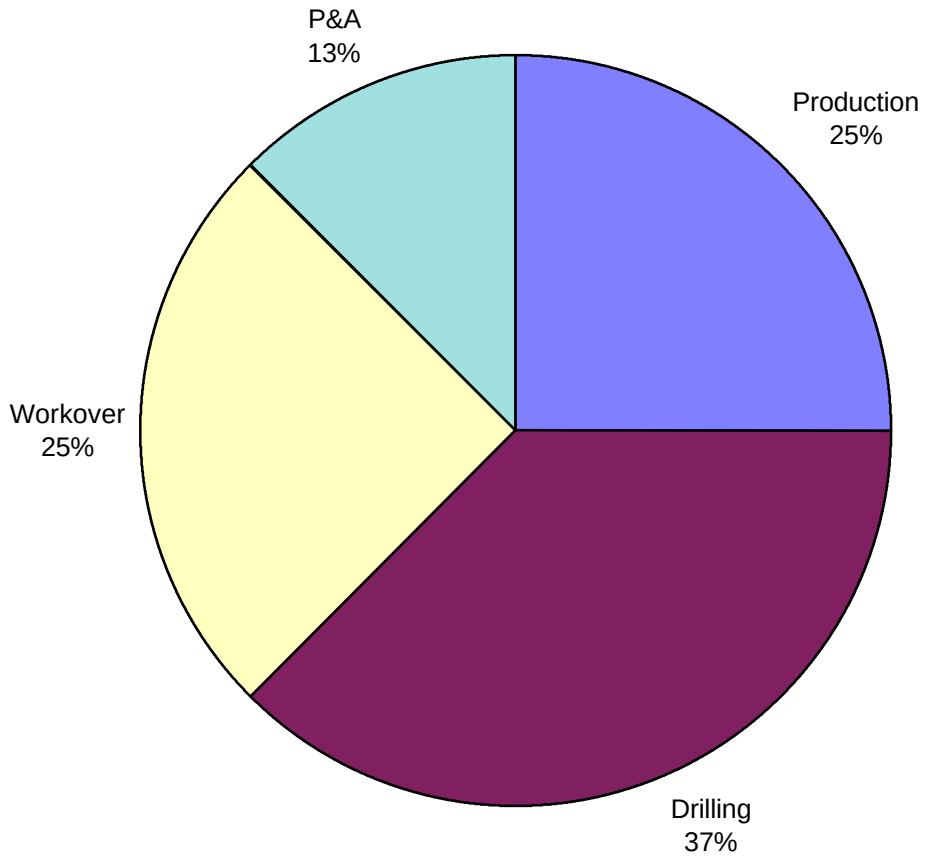
Average Depth of Event Type on OCS 1998



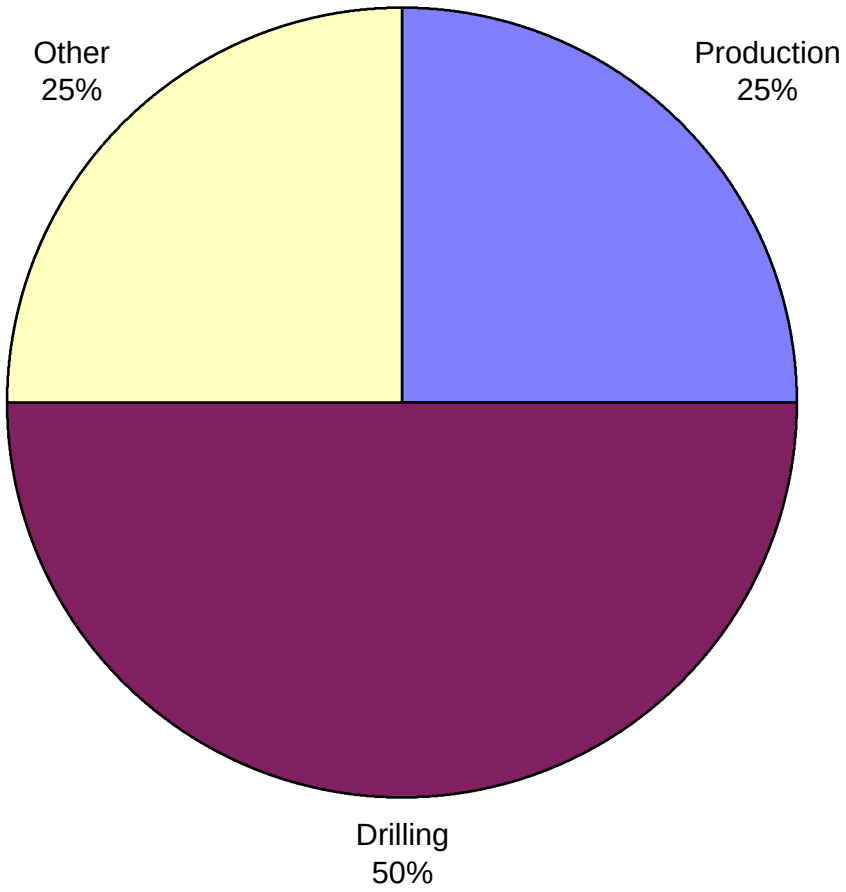
Type of Operation During All Incidents on OCS 1998



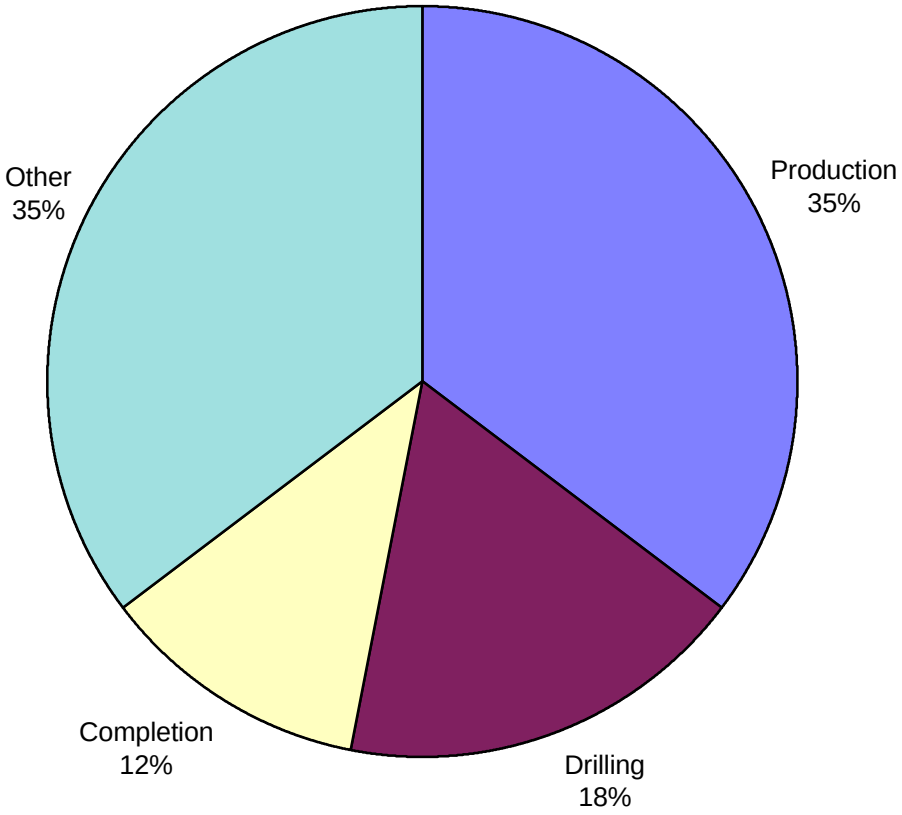
Type of Operation During Blowouts on OCS 1998



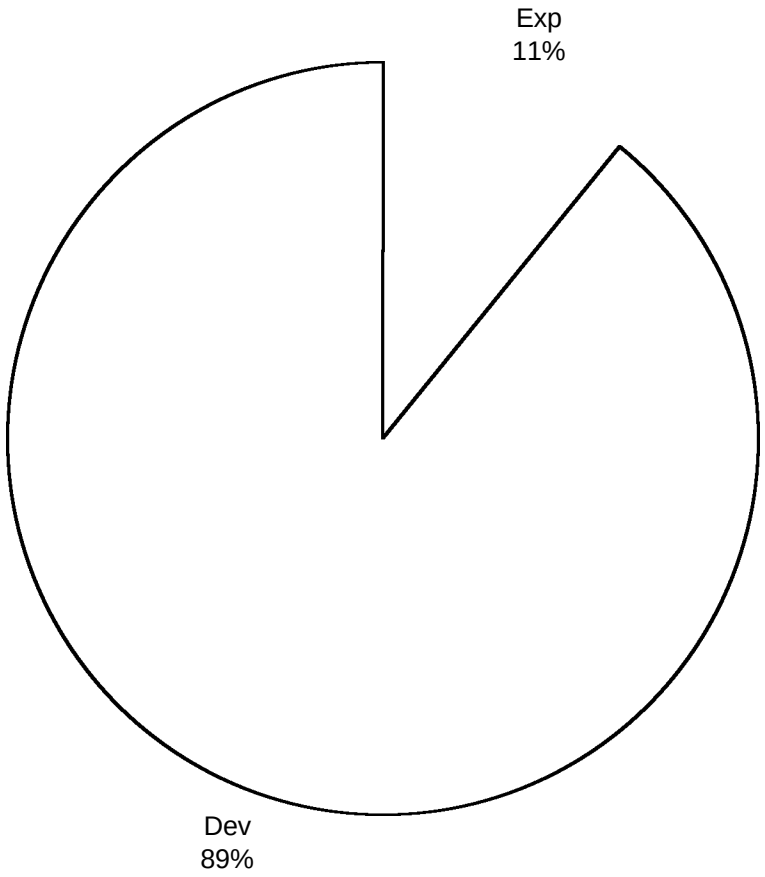
Type of Operation During Explosions on OCS 1998



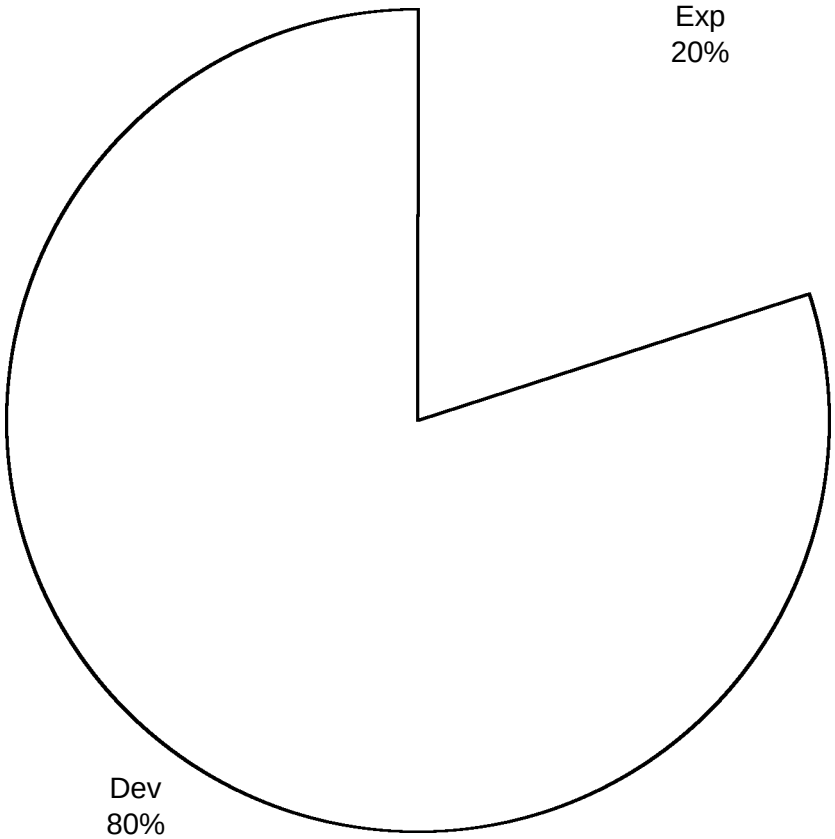
Type of Operation During Fatalities on OCS 1998



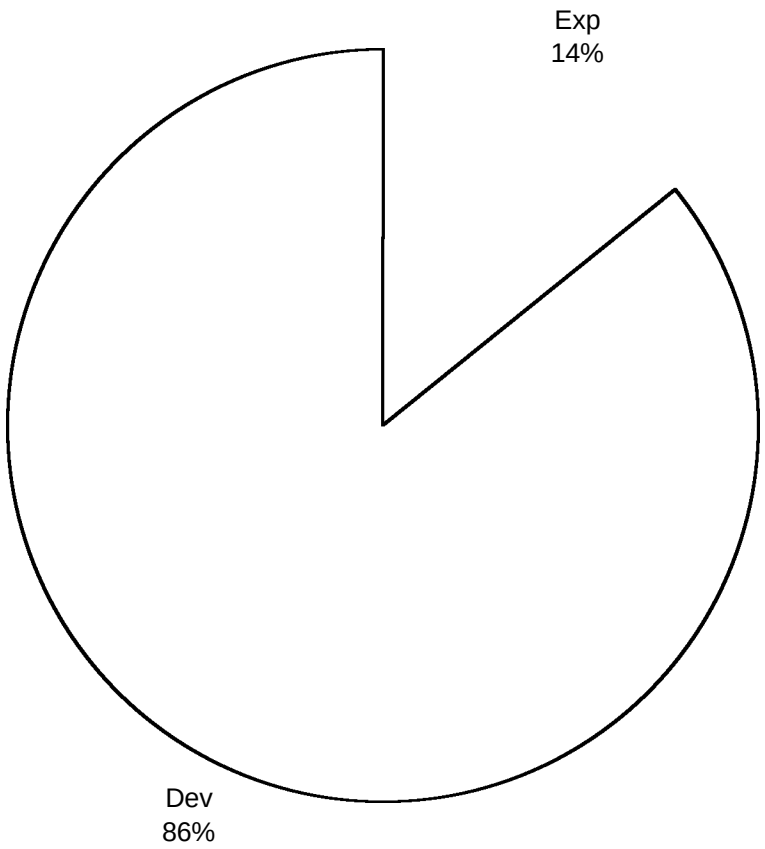
Type of Activity During Fires on OCS 1998

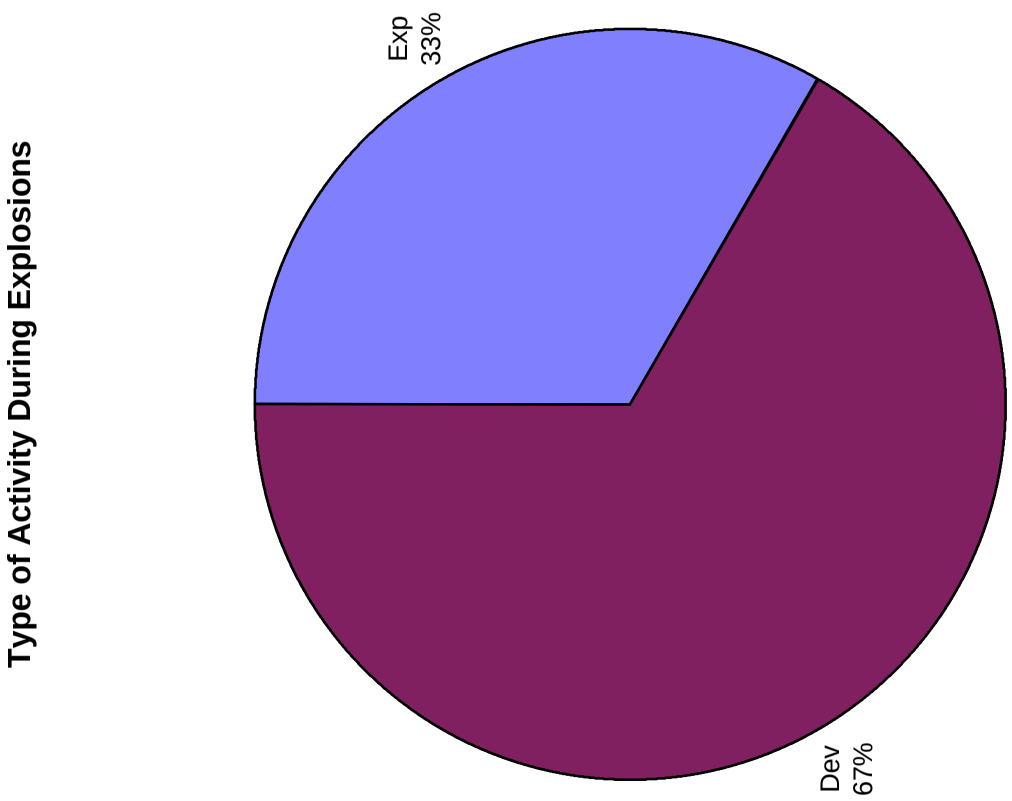


Type of Activity During Injuries on OCS 1998

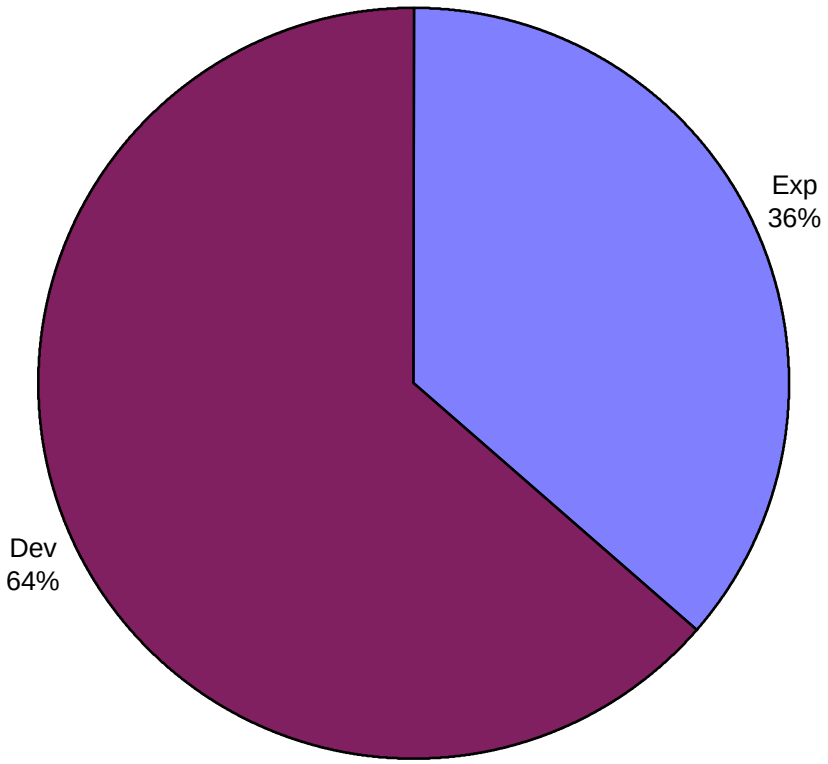


Type of Activity During Blowouts

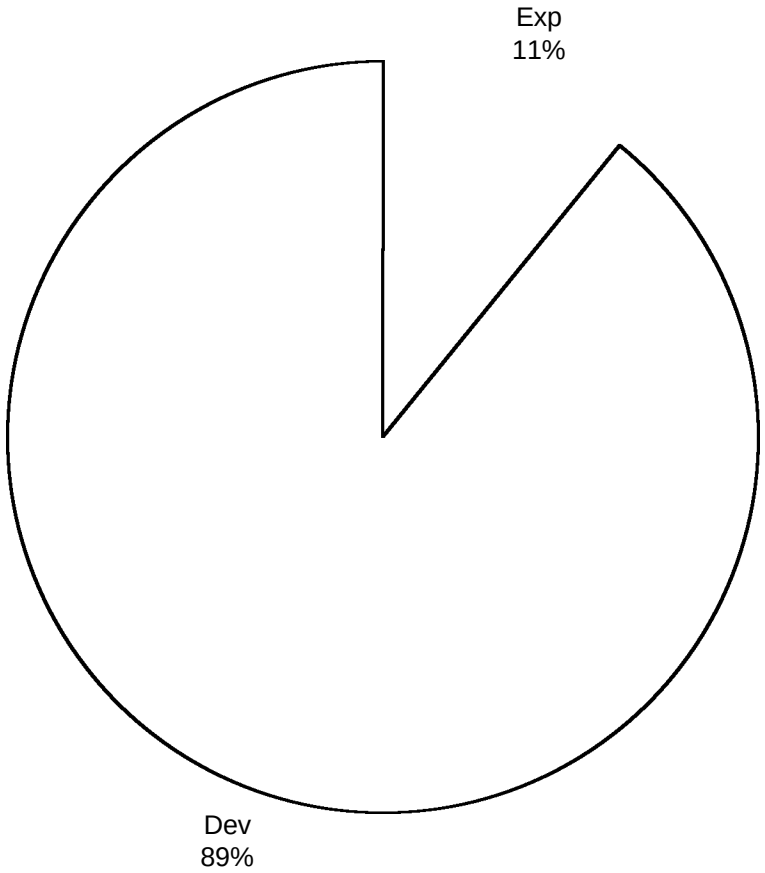



Type of Activity During Explosions
Exp
33%
Dev
67%

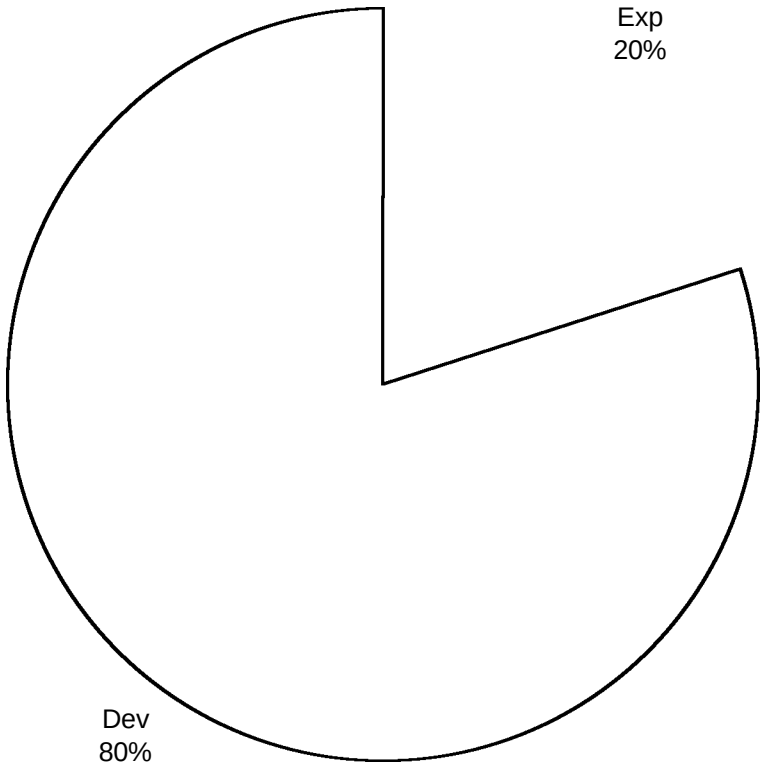
Type of Activity During Fatalities

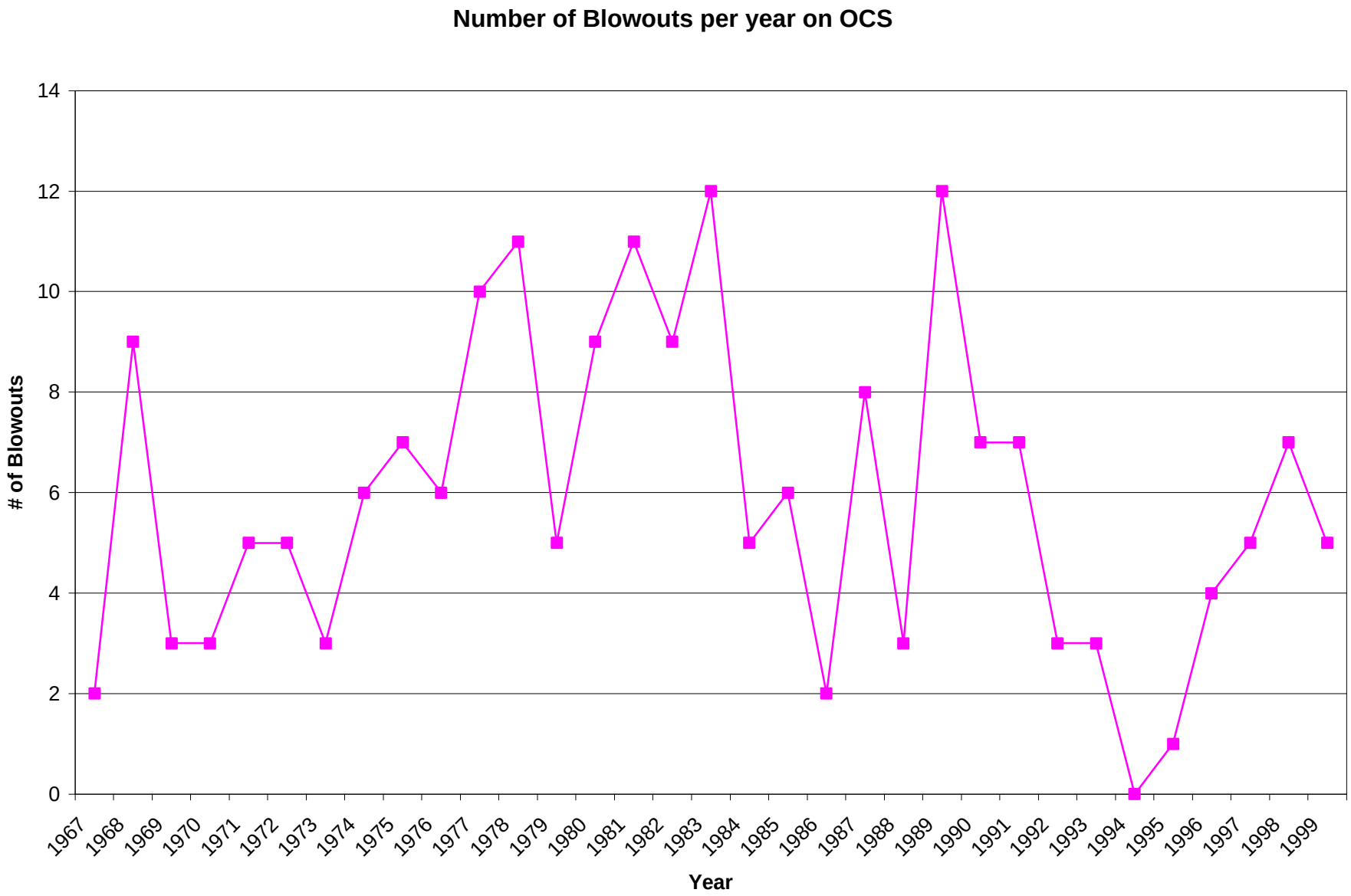


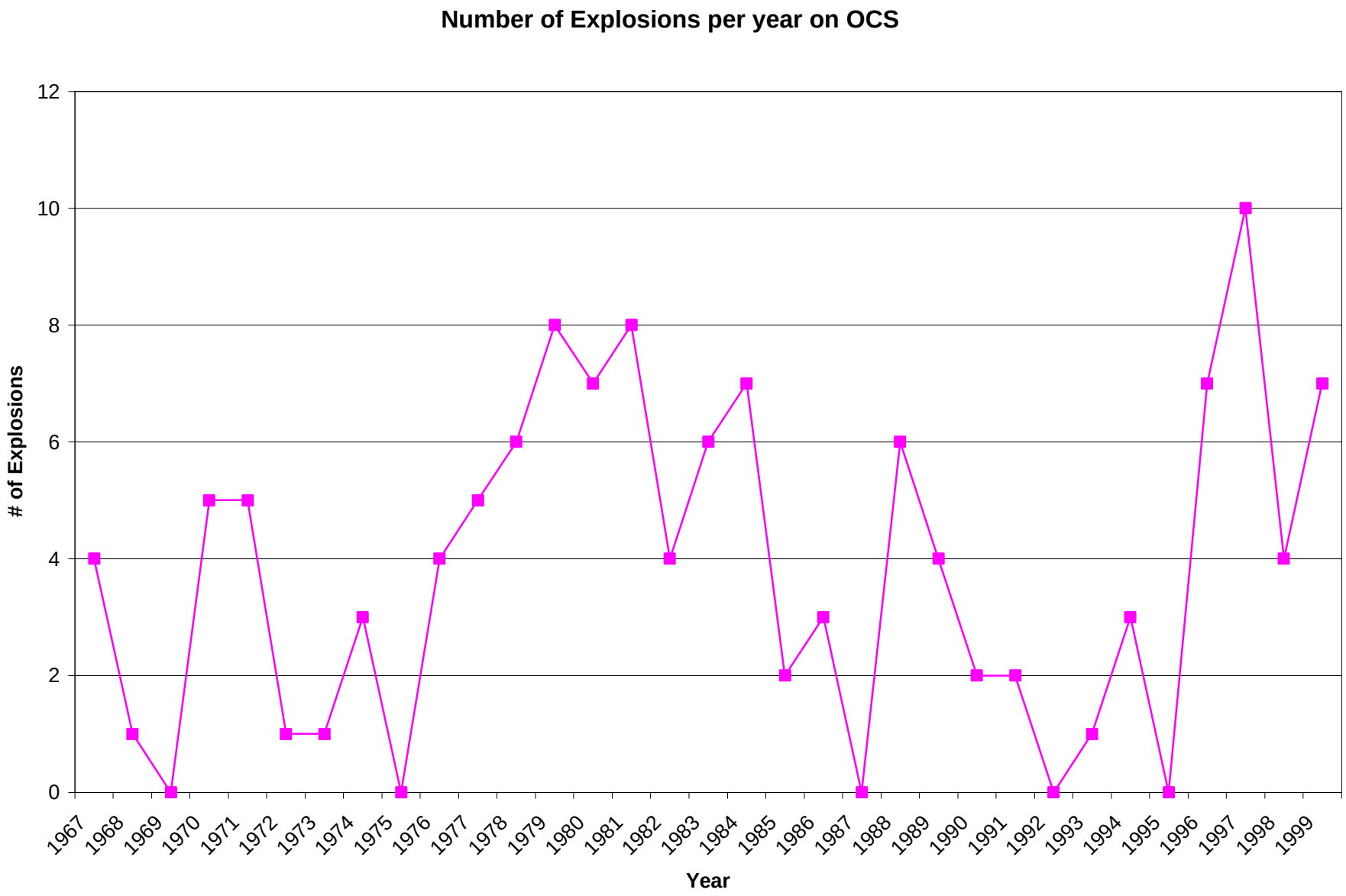
Type of Activity During Fires



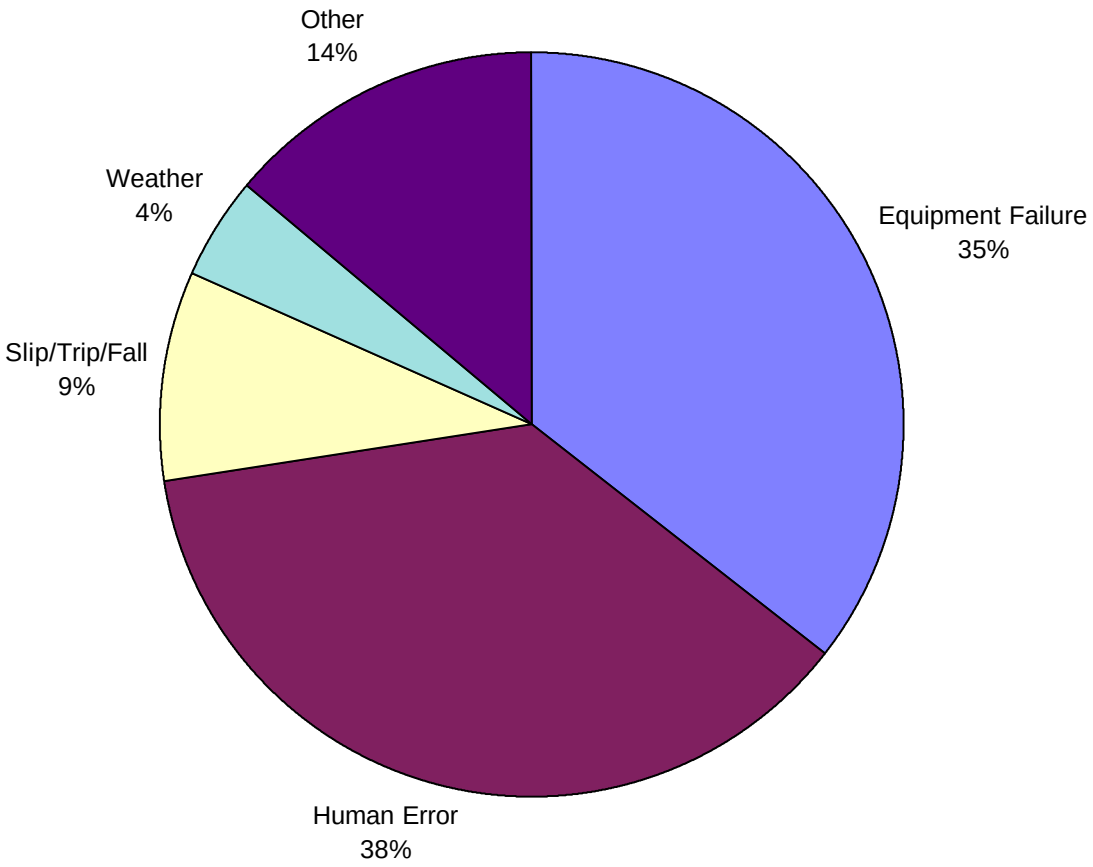
Type of Activity During Injuries




Number of Blowouts per year on OCS
# of Blowouts
0
2
4
6
8
10
12
14
1967
1968
1969
1970
1971
1972
1973
1974
1975
1976
1977
1978
1979
1980
1981
1982
1983
1984
1985
1986
1987
1988
1989
1990
1991
1992
1993
1994
1995
1996
1997
1998
1999
Year


Number of Explosions per year on OCS
# of Explosions
0
2
4
6
8
10
12
Year
1967
1968
1969
1970
1971
1972
1973
1974
1975
1976
1977
1978
1979
1980
1981
1982
1983
1984
1985
1986
1987
1988
1989
1990
1991
1992
1993
1994
1995
1996
1997
1998
1999

Overall Causes of All Incidents on OCS 1998



The Department of the Interior Mission

As the Nation's principal conservation agency, the Department of the Interior has responsibility for most of our nationally owned public lands and natural resources. This includes fostering sound use of our land and water resources; protecting our fish, wildlife, and biological diversity; preserving the environmental and cultural values of our national parks and historical places; and providing for the enjoyment of life through outdoor recreation. The Department assesses our energy and mineral resources and works to ensure that their development is in the best interests of all our people by encouraging stewardship and citizen participation in their care. The Department also has a major responsibility for American Indian reservation communities and for people who live in island territories under U.S. administration.

The Minerals Management Service Mission

As a bureau of the Department of the Interior, the Minerals Management Service's (MMS) primary responsibilities are to manage the mineral resources located on the Nation's Outer Continental Shelf (OCS), collect revenue from the Federal OCS and onshore Federal and Indian lands, and distribute those revenues.

Moreover, in working to meet its responsibilities, the **Offshore Minerals Management Program** administers the OCS competitive leasing program and oversees the safe and environmentally sound exploration and production of our Nation's offshore natural gas, oil and other mineral resources. The MMS **Royalty Management Program** meets its responsibilities by ensuring the efficient, timely and accurate collection and disbursement of revenue from mineral leasing and production due to Indian tribes and allottees, States and the U.S. Treasury.

The MMS strives to fulfill its responsibilities through the general guiding principles of: (1) being responsive to the public's concerns and interests by maintaining a dialogue with all potentially affected parties and (2) carrying out its programs with an emphasis on working to enhance the quality of life for all Americans by lending MMS assistance and expertise to economic development and environmental protection.