



Health & Safety  
Executive

**OFFSHORE TECHNOLOGY  
REPORT - OTO 98 952**

**Offshore Accident and Incident  
Statistics Report 1998**

**(Provisional Data)**

**OFFSHORE ACCIDENT AND INCIDENT  
STATISTICS REPORT 1998**  
(PROVISIONAL DATA)

**HSE**  
**Offshore Safety Division**

## **Preface**

This is the sixth report in a series covering offshore accident and incident statistics and is the second under the Reporting of Injuries, Diseases and Dangerous Occurrences Regulations 1995 (RIDDOR 95). The report presents data on incidents and accidents reported for the period 1 April 1997 to 31 March 1998.

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## 1. Introduction

This report covers the 12-month period from 1 April 1997 to 31 March 1998. It is based on incidents reported under the Reporting of Injuries, Diseases and Dangerous Occurrences Regulations 1995 (RIDDOR 95).

The accident and incident rates are based on the annual offshore population survey conducted by the Inland Revenue. The Inland Revenue have introduced some changes to the survey, but these changes should not affect the estimate of the persons on board. For the 1997/98 period, the estimated population of those working offshore was 23,000, a decrease of 3,853 or 14.3% over the previous year.

Further information on accident and incident categories is described in the HSE publication A Guide to RIDDOR.

### 1.1 Offshore Activity

The level of offshore activity is indicated below.

### 1.2 Safety Case Work

The table below summarises the safety cases handled during 1997/98.

<b>SUMMARY OF SAFETY CASE PROGRESS DURING 1997/98</b>			
<b>Case Type</b>	<b>Received Since 1 April 1997</b>	<b>Accepted Since 1 April 1997</b>	<b>Assessment in Progress at 31 Mrch 1998</b>
Operational	20	12	12
Combined Ops.	46	41	9
Changes:Reg 9(2) &(3)Rev.'s	12	13	4
Resubmissions Reg 9(4) Rev.'s	85	69	29
Abandonments	0	0	0
Design (5)	9	N/A	0
<b>TOTAL</b>	<b>172</b>	<b>135</b>	<b>54</b>

### 1.3 Field Development

Information extracted from the DTI Brown Book (The Energy Report - Oil & Gas Resources of the United Kingdom, Volume 2, 1998)

A record number of 186 offshore fields were in production at the end of 1997 (98 oil, 75 gas and 13 condensate). Production commenced at 22 new offshore fields during 1997 compared to 16 in 1996.

256 development wells were drilled in 1997 compared with 261 in 1996.

A total of 128 million tons of oil was produced in 1997 and 91.3 billion cubic metres of gas. The approximate remaining reserves are estimated as 2015 million tons of oil and 1985 billion cubic metres of gas.

## **2. Injuries and Dangerous Occurrences Statistics**

Table 1 shows a summary of the number of accidents and incidents occurring per year since 1991/92 and the fatality and major injury numbers are graphically represented in Fig 1.

Table 2 and Figs 2 and 3 provide summaries of the accident rates based on the Inland Revenue's estimate of persons working offshore of 23,000.

### **2.1 Fatal Accidents**

Three fatal accidents were reported during the year 1997/98.

- 1 - Wire line tool rack fell onto chest of the casualty causing fatality.
- 2 - One person died as a consequence of falling overboard and a second died in an attempted rescue.

### **2.2 Major Injury Rates**

There has been an increase in the number of reported injuries compared to 1996/97, from 45 to 59 [ see figure 1 and table 1 ] and the accident rate has increased from 167.6 to 256.5 per 100,000 employees (see Fig 2 and table 2).

### **2.3 Over 3-Day Injury Rates**

There has been a decrease in the number of reported over 3-Day injuries [ see figure 1 and table 1 ] however there has been an increase in the over 3-Day rate from 1132.1 to 1269.6 per 100,000 employees [see Figure 3 and table 2].

### **2.4 Dangerous Occurrences**

Table 1 shows the number of reported dangerous occurrences has increased this year from 569 to 607.

### **3. Breakdown of Accidents and Incidents**

#### **3.1 Breakdown by Part of Body**

Table 3 provides details of the part of body injured and shows that finger and back injuries dominate, with 19% associated with finger injuries and 17% associated with back injuries.

#### **3.2 Details of Incidents**

Table 4 provides details of the operations associated with different broad incident types of major injuries. 34% of major injuries are associated with drilling/workover, 20% associated with deck operations and 20% with maintenance. 47% of major injuries are due to slips, trips and falls.

Table 5 provides details of 3 day injuries by operations associated with different broad incident types of injuries. The 2 most common incident types were slips, trips and falls (accounting for 27%) and handling goods and materials (22%). 29% over 3 day injuries are associated with drilling/workover and 22% are associated with maintenance.

Table 6 provides details of the operations associated with different broad incident types of Dangerous occurrence. 31% Dangerous occurrences are associated with Production and 29% with drilling/workover. 37% Dangerous occurrences are associated with loss of containment of which 67% involved production and 10% involved drilling. 18% of Dangerous occurrences involved falling objects or crane operations.

#### **3.5 Breakdown of Injuries by Month**

Tables 7,8 and 9 provide information on when accidents and incidents occur. There are no obvious patterns in the data.

#### 4. Discussion

The figures for 1996/97 and 1997/98 cannot be compared with previous years' figures since they are derived under the new reporting regime, RIDDOR 95. Certain definitions are different under the new regime, eg the definition of a major injury has been expanded and injuries caused by acts of physical violence are now reportable. In view of this OSD have undertaken a review of the 1996 and 1997 data against the RIDDOR definitions and some incidents previously reported as over 3-day injuries have been re-classified under the RIDDOR definition as major injuries. In particular, OTO 97/951 reported 25 major injuries whereas the revised figure is now 45.

The UKOOA and Inland Revenue, together with IADC, BROA and OCA, project to improve the accuracy of the estimate of persons working offshore is progressing well. OSD plan to use the information on the number of persons employed in different occupations to predict the accident rates to different groups of workers in a report scheduled for the 2 quarter 1999.



**Table 1**

**Summary of Numbers of Accidents and Incidents 1991 - 1998 [Provisional]**

	1991/92	1992/93	1993/94	1994/95	1995/96	1996/97	1997/98
Estimated workforce *	33,200	29,500	34,200	27,200	29,003	26,853	23,000
FATALITIES	13 #	5	1	1	5	2	3
MAJOR INJURIES	Total	73	79	52	41	42	45
COMBINED FATALITIES AND MAJOR INJURIES	Total	86	84	53	42	47	62
OVER THREE DAY INJURIES	Total	571	511	412	270	304	292
DANGEROUS OCCURRENCES	Total	373	525	633	594	528	607

\* From Inland Revenue statistics for the period shown

# Includes Cormorant Alpha helicopter accident

**Table 2**

**Summary of Accidents and Incidents Rates 1991 - 1998 [Provisional]**

	1991/92	1992/93	1993/94	1994/95	1995/96	1996/97	1997/98
Estimated workforce *	33,200	29,500	34,200	27,200	29,003	26,853	23,000
FATALITIES	39.2#	16.9	2.9	3.7	17.2	7.4	13.0
INCIDENCE PER 100,000 EMPLOYEES							
MAJOR INJURIES	219.9	267.8	152.0	150.7	144.8	167.6	256.5
INCIDENCE PER 100,000 EMPLOYEES							
COMBINED FATALITIES AND MAJOR INJURIES	259.0	284.7	155.0	154.4	162.1	175.0	269.6
INCIDENCE PER 100,000 EMPLOYEES							
OVER THREE DAY INJURIES	1719.9	1732.2	1204.7	992.6	1293.0	1132.1	1269.6
INCIDENCE PER 100,000 EMPLOYEES							

\* From Inland Revenue statistics for the period shown

# Includes Cormorant Alpha helicopter accident

**Table 3**

**Breakdown of Injuries by Part of Body**  
**April 1997 - March 1998**

	Part of Body	Total for Year
01	Eye	5
02	Ear	1
03	Face (Other parts)	7
04	Head	11
05	Several Head Injuries	2
06	Neck	3
07	Back	60
08	Trunk	14
09	Several Torso	4
10	Finger	69
11	Hand	39
12	Wrist	7
13	Upper Limb	32
14	Several Upper Limbs	2
15	Toe	5
16	Foot	19
17	Ankle	30
18	Lower Limb	21
19	Several Lower Limbs	1
20	Several Locations	16
21	General Locations	5
22	Unspecified	1
	<b>Total</b>	<b>354</b>

**Table 4**

**Details of MAJOR INJURIES by Operation for Broad Incident Type**

**April 1997 - March 1998 [Provisional]**

Operations	Broad Incident Types																		
	OIR/9B Code	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	Total
Production	1				1						1								2
Drilling/Workover	2				8	2	3	4		2								1	20
Maintenance	3	1			7		2		1		1								12
Diving	4											2							2
Construction/Commissioning	5				1														1
Deck Operations	6				1	6	1	3							1				12
Domestic/Catering	7				1														1
Modification of Plant/Structures	8				1														1
Transport	9																		0
Other	10					4	2	1										1	8
<b>Totals</b>		<b>0</b>	<b>1</b>	<b>0</b>	<b>2</b>	<b>28</b>	<b>4</b>	<b>7</b>	<b>7</b>	<b>1</b>	<b>3</b>	<b>1</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>2</b>	<b>59</b>

**KEY: - Broad Incident Types**

- |                        |                               |  |                            |
|------------------------|-------------------------------|--|----------------------------|
| 1. Loss of Containment | 5. Slips / Trips/ Falls       | 9. Use of Hand Tool                            | 13. Electrical             |
| 2. Fire / Explosion    | 6. Falling Objects            | 10. Use of Machinery                           | 14. Structural /Foundation |
| 3. Air Transport       | 7. Handling Goods / Materials | 11. Exposure / Contact with Harmful Substances | 15. Mooring                |
| 4. Sea Transport       | 8. Lifting / Crane Operations | 12. Diving Related                             | 16. Radiation              |
|                        |                               |  | 17. Other                  |

**Table 5**

**Details of OVER 3-DAY INJURIES by Operation for Broad Incident Type  
April 1997 - March 1998 [Provisional]**

Operations	Broad Incident Types																	Not re-corded		
	OIR/9B Code	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16		17	
Production	1				8	2			1	3	1									15
Drilling/ Workover	2	2		1	13	11	27	9	6	6	4							6		85
Maintenance	3	2			14	4	13	2	6	7	6							10		64
Diving	4				1	1	1	1				3								6
Construction/ Commissioning	5				3	1	4	1												9
Deck Operations	6	1		4	11	4	10	9	3	1	1					1		1		47
Domestic/ Catering	7				11	2	2	1										4		18
Modification of Plant/ Structures	8				3			2	1									1		7
Transport	9				2		1											1		4
Other	10				12	4	4	1							1			12	1	35
Operation not recorded						1	1													2
<b>Totals</b>		<b>5</b>	<b>0</b>	<b>0</b>	<b>5</b>	<b>78</b>	<b>25</b>	<b>65</b>	<b>24</b>	<b>19</b>	<b>17</b>	<b>12</b>	<b>3</b>	<b>0</b>	<b>0</b>	<b>2</b>	<b>0</b>	<b>35</b>	<b>2</b>	<b>292</b>

KEY: - Broad Incident Types

- 1. Loss of Containment
- 2. Fire / Explosion
- 3. Air Transport
- 4. Sea Transport

- 5. Slips / Trips / Falls
- 6. Falling Objects
- 7. Handling Goods / Materials
- 8. Lifting / Crane Operations

- 9. Use of Hand Tool
- 10. Use of Machinery
- 11. Exposure / Contact with Harmful Substances
- 12. Diving Related

- 13. Electrical
- 14. Structural / Foundation
- 15. Mooring
- 16. Radiation
- 17. Other

**Table 6**

**Details of DANGEROUS OCCURRENCES by Operation for Broad Incident Type  
April 1997 - March 1998 [Provisional]**

		Broad Incident Types																		
Operations	OIR98 Codes	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	Not re- corded	Total
Production	1	153	22				1		2		1							8		190
Drilling/Workover	2	23	6			61	3	20	1	3						6		50		173
Maintenance	3	22	13		1	16	1	5	1		1		3	1				6		70
Diving	4	1			1				1			7						1		11
Construction/Commissioning	5	8	3		1	1	1	4		1			1					2		22
Deck Operations	6	4	2		2	20	2	26	1	2			1	3	1					64
Domestic/ Catering	7	1	5												1			1		8
Modification of Plant/ Structures	8		2				1		1											4
Transport	9	1			6				1						1	2		1		12
Other	10	14	5		1	2	8	5		1					1	1		11		49
Operation not recorded																1			3	4
<b>Totals</b>		<b>227</b>	<b>58</b>	<b>0</b>	<b>12</b>	<b>2108</b>	<b>7</b>	<b>65</b>	<b>3</b>	<b>8</b>	<b>2</b>	<b>7</b>	<b>8</b>	<b>7</b>	<b>10</b>	<b>0</b>	<b>80</b>	<b>3</b>		<b>607</b>

**KEY - Broad Incident Types**

- |                        |  |                            |
|------------------------|--|----------------------------|
| 1. Loss of Containment | 9. Use of Hard Tool                            | 13. Electrical             |
| 2. Fire / Explosion    | 10. Use of Machinery                           | 14. Structural /Foundation |
| 3. Air Transport       | 11. Exposure / Contact with Harmful Substances | 15. Mooring                |
| 4. Sea Transport       | 12. Diving Related                             | 16. Radiation              |
|                        |  | 17. Other                  |

**Table 7**

**Breakdown of MAJOR INJURIES by Operation for each month**  
**April 1997 - March 1998 [Provisional]**

Operations	OIR/9B Code	Month												Total			
		April	May	June	July	Aug	Sept	Oct	Nov	Dec	Jan	Feb	Mar				
Production	1	1						1									2
Drilling/Workover	2	1	2	1	1	1		2	2	1	3	2	4				20
Maintenance	3		1		2	1	2	3			1	2					12
Diving	4			1									1				2
Construction/Commissioning	5										1						1
Deck Operations	6	2	1		1		1	2	2		1	1	1				12
Domestic/Catering	7								1								1
Modification of Plant/Structures	8									1							1
Transport	9																0
Other	10		3	1					1	1	1	1	1	1			8
<b>Totals</b>		<b>4</b>	<b>7</b>	<b>3</b>	<b>4</b>	<b>3</b>	<b>3</b>	<b>8</b>	<b>6</b>	<b>2</b>	<b>6</b>	<b>6</b>	<b>7</b>	<b>6</b>	<b>7</b>	<b>59</b>	

**Table 8**

**Breakdown of OVER 3-DAY INJURIES by Operation for each month**  
**April 1997 - March 1998 [Provisional]**

Operations	OIR/9B Code	Month												Total
		April	May	June	July	Aug	Sept	Oct	Nov	Dec	Jan	Feb	Mar	
Production	1	1	2			1	1		2	2	3	2	1	15
Drilling/ Workover	2	9	11	7	8	8	5	11	8	6	3	5	4	85
Maintenance	3	4	7	7	7	6	4	2	5	7	7	2	6	64
Diving	4		1								1	2	2	6
Construction/ Commissioning	5	2	1		2	2	1	1						9
Deck Operations	6	2	2	4	4	1	2	3	7	5	5	8	4	47
Domestic/ Catering	7	3	2	1	1	3	2	3	2				1	18
Modification of Plant/ Structures	8	3	1	1						1	1			7
Transport	9	1				1			1		1			4
Other	10	8	5	4	4	3	3	1	2	2		2	3	35
Operation not recorded									2					2
<b>Totals</b>		<b>33</b>	<b>32</b>	<b>24</b>	<b>26</b>	<b>25</b>	<b>18</b>	<b>21</b>	<b>27</b>	<b>23</b>	<b>21</b>	<b>21</b>	<b>21</b>	<b>292</b>

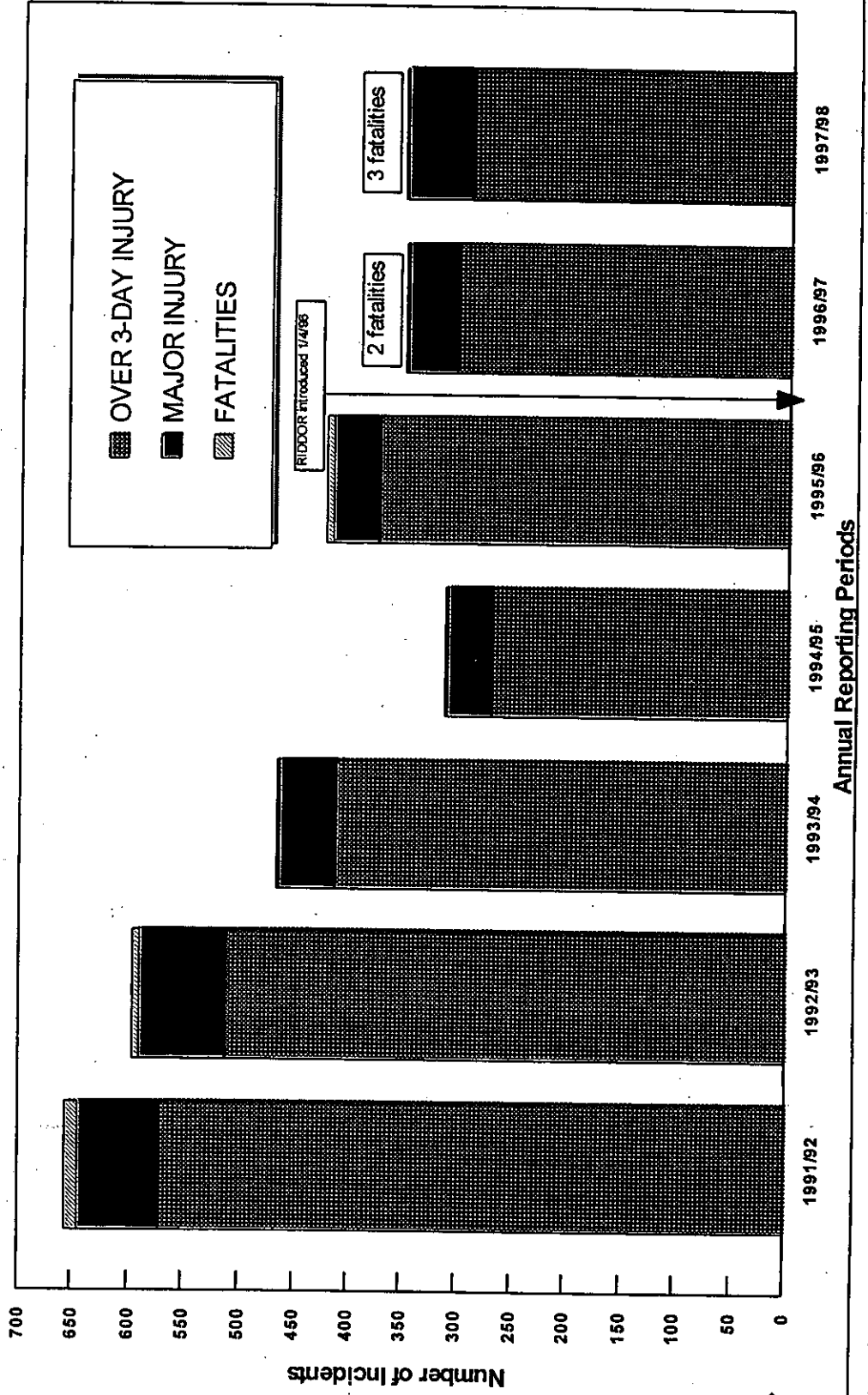


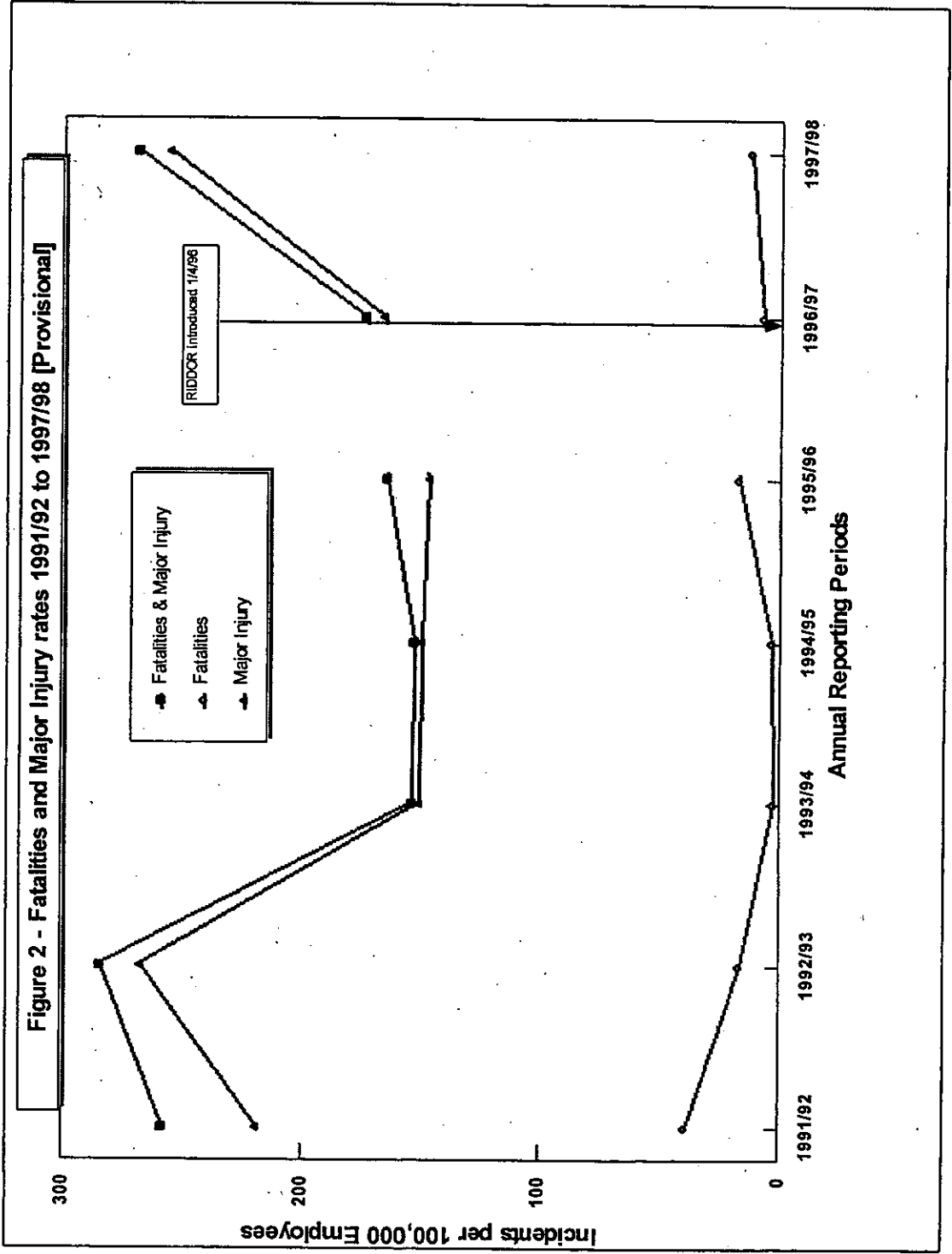
**Table 9**

**Breakdown of DANGEROUS OCCURRENCES by Operation for each month**  
**April 1997 - March 1998 [Provisional]**

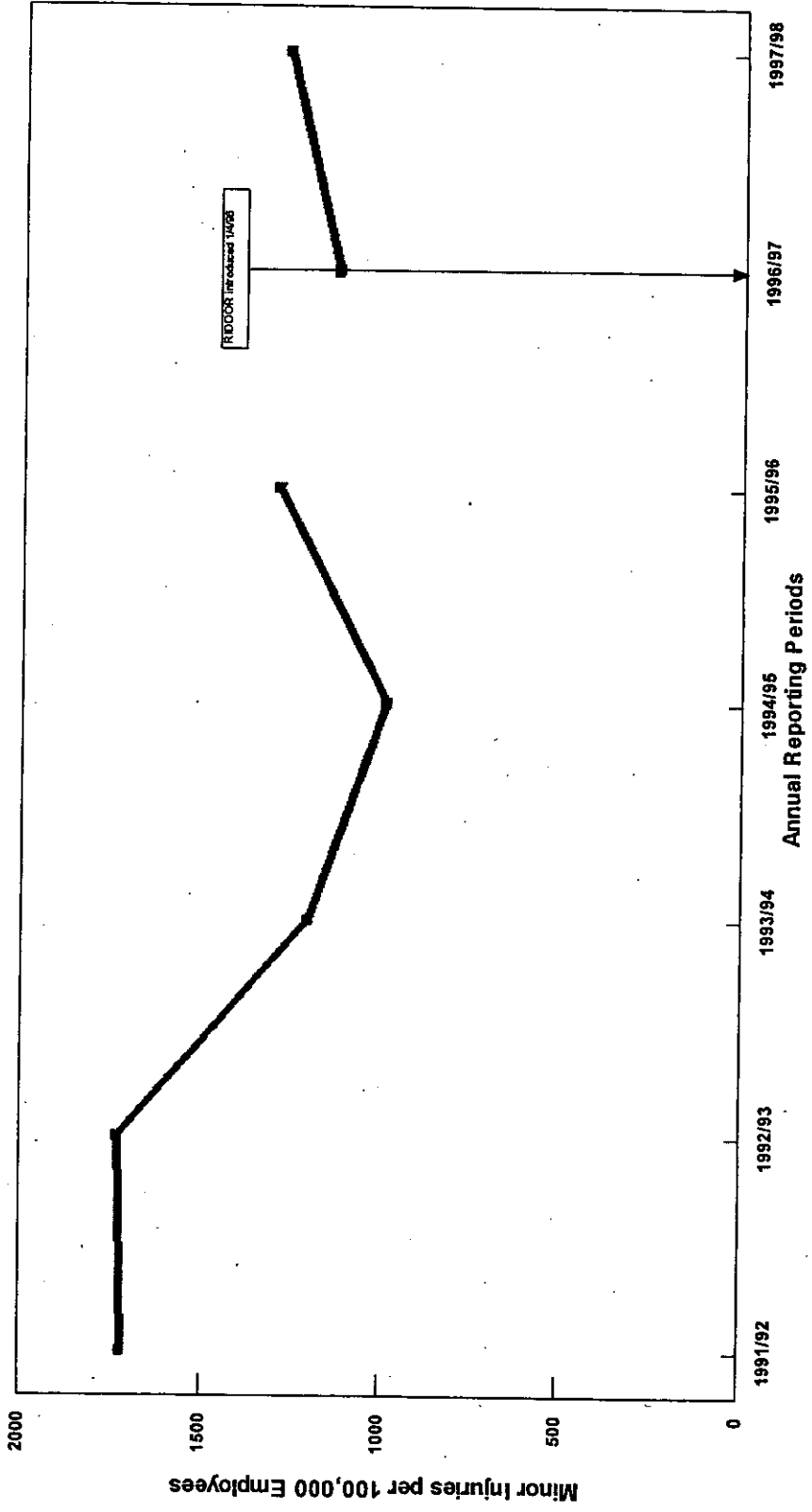
Operations	OIR/9B Code	Month												Total
		April	May	June	July	Aug	Sept	Oct	Nov	Dec	Jan	Feb	Mar	
Production	1	25	11	18	13	16	19	15	17	12	10	20	14	190
Drilling/Workover	2	10	20	26	14	21	11	9	11	15	11	17	8	173
Maintenance	3	9	6	7	8	5	3		6	8	10	6	2	70
Diving	4	1	2	2	2		1	1		1		1		11
Construction/Commissioning	5	2	2	2		2	2	4	2		2	4		22
Deck Operations	6	4	4	2	6	6	7	5	5	10	8	2	5	64
Domestic/Catering	7	1			1	3				2			1	8
Modification of Plant/Structures	8		1	1	1			1						4
Transport	9	1	1	1	1	1		2		4	1	1		12
Other	10	7	1	5	3	1	2	3	4	6	5	3	9	49
Operation not recorded		1	1									1	1	4
<b>Totals</b>		<b>61</b>	<b>49</b>	<b>63</b>	<b>49</b>	<b>55</b>	<b>45</b>	<b>40</b>	<b>45</b>	<b>58</b>	<b>47</b>	<b>55</b>	<b>40</b>	<b>607</b>

**Figure 1 - Category 1-3 Incidents 1991/92 to 1997/98 [Provisional]**

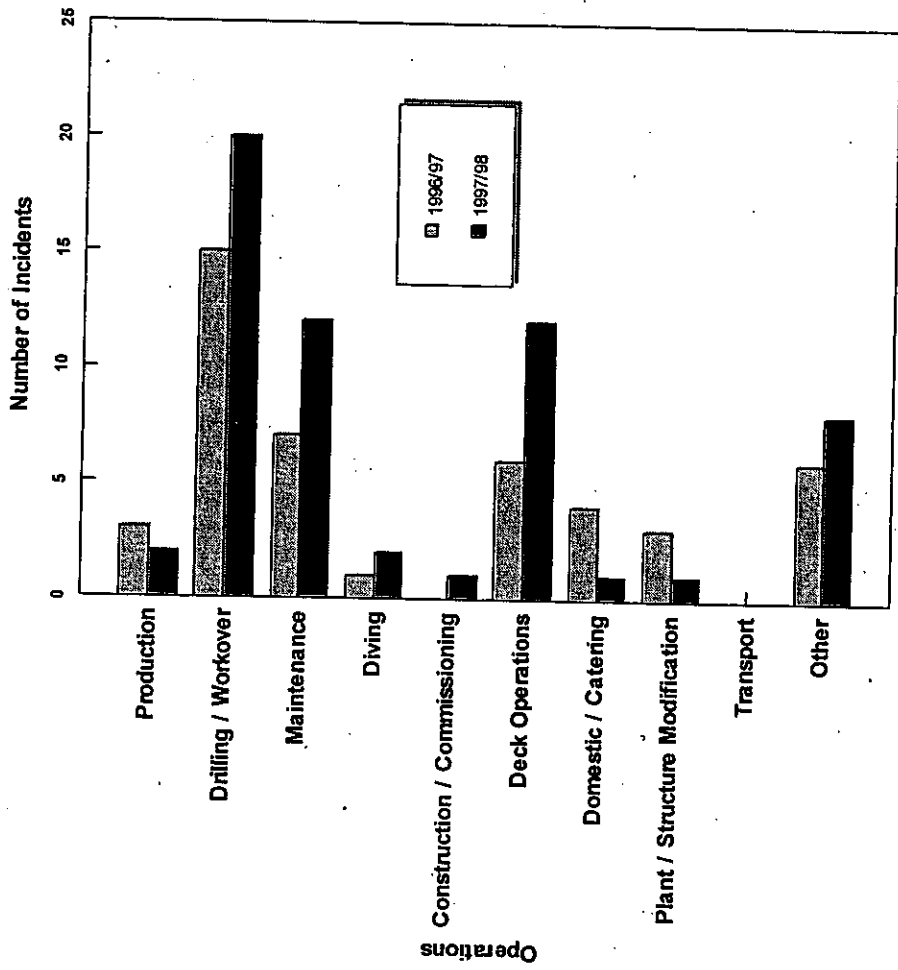




**Figure 3 - Over 3-Day Injury Rates 1991/1992 to 1997/1998 [Provisional]**



**Figure 4 - Major Injuries 1996/97 & 1997/98 [Provisional]**



**Figure 5 - Over 3-Day Injuries 1996/97 & 1997/98 [Provisional]**

