ISSUED 20 MAY 2014

IADC

ISP PROGRAM

2013

Summary of Occupational Incidents
(Africa Water Totals)
Table of Contents

(Table of Contents is Hyperlinked, Just click on Topic & go)

IADC 2013 AFRICA WATER TOTALS (TABLE 1) .............................................................. 1

Africa Water Total Incidence Rates vs Man-hours (Figure 1) ........................................ 1

IADC 2013 AFRICA WATER CHARTS ................................................................. 2

Africa Water Total Lost Time Incidents by Month (Chart 1) ........................................ 2
Africa Water Total Recordable Incidents by Month (Chart 2) .................................... 3
Africa Water Total Lost Time Incidents by Occupation (Chart 3) ............................ 4
Africa Water Total Recordable Incidents by Occupation (Chart 4) ............................ 5
Africa Water Total Lost Time Incidents by Body Part (Chart 5) ............................... 6
Africa Water Total Recordable Incidents by Body Part (Chart 6) .............................. 7
Africa Water Total Lost Time Incidents by Incident Type (Chart 7) .......................... 8
Africa Water Total Recordable Incidents by Incident Type (Chart 8) ......................... 9
Africa Water Total Lost Time Incidents by Equipment (Chart 9) ............................ 10
Africa Water Total Recordable Incidents by Equipment (Chart 10) ......................... 11
Africa Water Total Lost Time Incidents by Operation (Chart 11) ............................... 12
Africa Water Total Recordable Incidents by Operation (Chart 12) ............................ 13
Africa Water Total Lost Time Incidents by Location (Chart 13) ............................... 14
Africa Water Total Recordable Incidents by Location (Chart 14) .............................. 15
Africa Water Total Lost Time Incidents by Time in Service (Chart 15) ..................... 16
Africa Water Total Recordable Incidents by Time in Service (Chart 16) .................... 17
Africa Water Total Lost Time Incidents by Time of Day (Chart 17) ......................... 18
Africa Water Total Recordable Incidents by Time of Day (Chart 18) ....................... 19
## IADC 2013 Africa Water Totals (Table 1)

<table>
<thead>
<tr>
<th>Totals</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Manhours</td>
<td>43,377,983</td>
</tr>
<tr>
<td>Total Medical Treatment Incidents</td>
<td>49</td>
</tr>
<tr>
<td>Total Restricted Work Incidents</td>
<td>29</td>
</tr>
<tr>
<td>Total Lost Time Incidents</td>
<td>32</td>
</tr>
<tr>
<td>Total Fatalities</td>
<td>3</td>
</tr>
<tr>
<td>Total Recordables</td>
<td>113</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Incidence Rate</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>MTO Incidence Rate</td>
<td>0.23</td>
</tr>
<tr>
<td>RWC Incidence Rate</td>
<td>0.13</td>
</tr>
<tr>
<td>LTI Incidence Rate</td>
<td>0.16</td>
</tr>
<tr>
<td>LTI Frequency Rate</td>
<td>0.81</td>
</tr>
<tr>
<td>DART Incidence Rate</td>
<td>0.30</td>
</tr>
<tr>
<td>DART Frequency Rate</td>
<td>1.48</td>
</tr>
<tr>
<td>Recordable Incidence Rate</td>
<td>0.52</td>
</tr>
<tr>
<td>Recordable Frequency Rate</td>
<td>2.61</td>
</tr>
</tbody>
</table>

MEDICAL TREATMENT INCIDENCE RATE = MTOs X 200,000 / MANHOURS (LTIs NOT INCLUDED)
REstricted WORK INCIDENCE RATE = RWCs X 200,000 / MANHOURS (LTIs NOT INCLUDED)
LOST TIME INCIDENCE RATE = (LTIs+FTLs) X 200,000 / MANHOURS
LOST TIME FREQUENCY RATE = (LTIs+FTLs) X 1,000,000 / MANHOURS
DART INCIDENCE RATE = (LTIs+FTLs+RWCs) X 200,000 / MANHOURS
DART INCIDENCE RATE = (LTIs+FTLs+RWCs) X 1,000,000 / MANHOURS
RECORDABLE INCIDENCE RATE = RECORDABLES X 200,000 / MANHOURS
RECORDABLE FREQUENCY RATE = RECORDABLES X 1,000,000 / MANHOURS

Companies Reporting: Water – 23

## Africa Water Total Incidence Rates vs Man-hours (Figure 1)

<table>
<thead>
<tr>
<th>Year</th>
<th>Man-hours</th>
<th>Incidence Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>2001</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2002</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2003</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2004</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2005</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2006</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2007</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2008</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2009</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2010</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2011</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2012</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2013</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- **LTI Rate**
- **Rec. Rate**
- **DART Rate**
- **Man-hours**
Africa Water Total Lost Time Incidents by Month (Chart 1)
Based on 30 Incidents

January: 6.67%
February: 3.33%
March: 23.33%
April: 10.00%
May: 6.67%
June: 6.67%
July: 10.00%
August: 6.67%
September: 6.67%
October: 6.67%
November: 6.67%
December: 6.67%
March: 23.33%
April: 10.00%
Africa Water Total Recordable Incidents by Month (Chart 2)
Based on 105 incidents

- December: 9.52%
- November: 6.67%
- October: 5.71%
- September: 6.67%
- August: 6.67%
- July: 6.67%
- June: 7.62%
- May: 4.76%
- April: 7.62%
- March: 16.19%
- February: 5.71%
- January: 16.19%
Africa Water Total Lost Time Incidents by Occupation (Chart 3)
Based on 30 Incidents

- Roustabout (Lease Hand): 26.67%
- Floorman: 20.00%
- Driller (Asst. Dr.): 13.33%
- Crane / Forklift Operator: 6.67%
- Motorman: 3.33%
- Mechanic: 3.33%
- Deck Supervisor (Deck Coordinator): 3.33%
- Other: 23.33%
Africa Water Total Recordable Incidents by Occupation (Chart 4)
Based on 105 incidents

- Roustabout (Lease Hand) 18.10%
- Floorman 10.48%
- Derrickman 2.86%
- Driller (Asst. Dr.) 12.38%
- Electrician 5.71%
- Mechanic 9.52%
- Motorman 2.86%
- Crane / Forklift Operator 1.90%
- Barge Engineer/Ballast Control Op. 0.95%
- Superintendent/other Supervisors 0.95%
- Welder 1.90%
- Catering / Camp Personnel 2.86%
- Marine Crew 0.95%
- Subsea Engineer 2.86%
- Deck Supervisor (Deck Coordinator) 0.95%
- Other 24.76%
- 0.95%
Africa Water Total Lost Time Incidents by Body Part (Chart 5)
Based on 30 Incidents

- Leg(s) 20.00%
- Feet/Ankles 16.67%
- Finger(s) 16.67%
- Arm(s) 16.67%
- Hand(s) / Wrist(s) 3.33%
- Trunk/Torso (chest, abdomen, groin) 3.33%
- Back 6.67%
- Head 3.33%
- Shoulder(s) 3.33%
- Knee(s) 6.67%
- Other 3.33%
- Trunk/Torso (chest, abdomen, groin) 3.33%
Africa Water Total Recordable Incidents by Body Part (Chart 6)
Based on 105 Incidents

- Finger(s): 37.14%
- Hand(s) / Wrist(s): 3.81%
- Arm(s): 7.62%
- Trunk/Torso (chest, abdomen, groin): 3.81%
- Head: 11.43%
- Back: 2.86%
- Shoulder(s): 0.95%
- Elbow(s): 1.90%
- Knee(s): 3.81%
- Skin: 0.95%
- Digestive/Internal: 0.95%
- Eyes (eyelid): 1.99%
- Other: 3.81%
- Feet/Ankles: 11.43%
- Leg(s): 7.62%
Africa Water Total Lost Time Incidents by Incident Type (Chart 7)
Based on 30 Incidents

- Caught Between/in: 46.67%
- Struck By: 30.00%
- Other: 10.00%
- Flame/heat/steam (contact/exposed): 3.33%
- Strain/Overexertion: 6.67%
- Slip/Fall: Same Level: 3.33%
Africa Water Total Recordable Incidents by Incident Type (Chart 8)
Based on 105 incidents

- Caught Between/In: 36.19%
- Struck By: 21.90%
- Struck Against: 4.76%
- Other: 10.48%
- Sprain: 2.86%
- Debris: 1.90%
- Flame/heat/steam (contact/exposed): 1.90%
- Strain/Overexertion: 2.86%
- Slip/Fall: Different Level: 1.90%
- Slip/Fall: Same Level: 6.67%
- Struck Against: 4.76%
- Exposed to Gas: 0.95%

Total: 100%
Africa Water Total Lost Time Incidents by Equipment (Chart 9)
Based on 30 Incidents

- Other: 40.00%
- Rig Floor Winch/Deck Winch (air/hydraulic): 3.33%
- Elevators: 6.67%
- Iron Roughneck, Pipe Spinner, etc.: 3.33%
- Pressure Hoses/Lines: 6.67%
- Crane: 6.67%
- Engines/Pumps/Machinery: 6.67%
- Trans. - Boat: 3.33%
- Slings (rope, cable, chain, web): 3.33%
- Hand Tools: Manual: 3.33%
- Pipes/Collars/Tubulars/Csg.: 13.33%
- Chemicals (sack, drum, pail, bulk hopper): 3.33%
- Iron Roughneck, Pipe Spinner, etc.: 3.33%
- Elevators: 6.67%
Africa Water Total Recordable Incidents by Equipment (Chart 10)
Based on 105 Incidents

Other 37.14%

Rig Floor Winch/Deck Winch (air/hydraulic) 0.95%

Boat Cargo (skids, tubulars, containers, etc.) 2.86%

Chemicals (sack, drum, pail, bulk hopper) 3.81%

Welding, Cutting, Grinding Equipment 1.90%

Decks (grating, walkway) 6.67%

Ladders 0.95%

Crane 3.81%

Pressure Hoses/lines 5.71%

Engines/Pumps/Machinery 5.71%

Hand Tools: Power 4.76%

Hand Tools: Manual 5.71%

BOP Stack (well head, tree) 0.95%

Boat 1.90%

Slings (rope, cable, chain, web) 3.81%

Pipes/Collars/Tubulars/Csg. 5.71%

Iron Roughneck, Pipe Spinner, etc. 1.90%

Rotary 0.95%
Africa Water Total Lost Time Incidents by Operation (Chart 11)
Based on 30 Incidents

- Travle/Transportation: 13.33%
- Jacking Up/Down Oper.: 3.33%
- Equipment Repairs or Maintenance: 13.33%
- Rigging Up/Down: 6.67%
- Rigging Up/Down: 6.67%
- Material Handling: Crane/Cherry Picker: 6.67%
- Material Handling: Manual: 3.33%
- Laying Down/Picking up Tubulars: 10.00%
- Running Casing/Tubing: 3.33%
- Routine Drilling Oper.: 13.33%
- Other: 23.33%
Africa Water Total Recordable Incidents by Operation (Chart 12)
Based on 105 Incidents

- Equipment Repairs or Maintenance: 18.10%
- Mud Mixing/Pumping: 0.95%
- Handling Riser: 1.90%
- Special Operations: 0.95%
- Walking: 3.81%
- Rigging Up/Down: 4.76%
- BOP Stack Install/Maintenance: 2.86%
- Management/Control/Coordination: 0.95%
- Rig Move: 0.95%
- Cementing: 1.90%
- Tripping in/out: 2.86%
- Other: 24.76%
- Routine Drilling Oper.: 12.38%
- Running Casing/Tubing: 5.71%
- Laying Down/Picking up Tubula: 3.81%
- Material Handling: Manual: 5.71%
- Material Handling: Crane/Cherry Picker: 4.76%
- Jacking Up/Down Oper.: 0.95%
- Travel/Transportation: 3.81%
Africa Water Total Lost Time Incidents by Location (Chart 13)
Based on 30 Incidents

- Rig Floor: 26.67%
- Pipe Rack/Pipe Deck: 20.00%
- Rig Pad/Rig Decks: 20.00%
- Cellar/Sub/Moonpool: 3.33%
- Crew/Work Boats: 3.33%
- Derrick/Mast: 3.33%
- Catwalk/V-door: 3.33%
- Machinery Spaces: 3.33%
- Engine Generator Room: 3.33%
- Other (3.33%)
Africa Water Total Recordable Incidents by Location (Chart 14)
Based on 105 incidents

- Rig Floor: 27.62%
- Engine Generator Room: 7.62%
- SCR/Electrical Room: 3.81%
- Mud Pits/Tanks: 0.95%
- Shale Shaker: 0.95%
- Mud Mixing Tank/Area: 0.95%
- BOP Stack/well head/tree Area: 0.95%
- Crew/Work Boats: 0.95%
- Stairs/Ladders: 0.95%
- Work Rooms change, storage, room: 0.95%
- Derric/Mast: 1.90%
- Catwalk/V-door: 1.90%
- BOP Stack /well head/tree Area: 1.90%
- Rig Pad/Rig Decks: 11.43%
- Cellar / Sub / Moonpool: 3.81%
- Machinery Spaces: 1.90%
- Mud Pump Room: 4.76%
- Cherry Picker/Crane: 0.95%
- Other: 19.05%
Africa Water Total Lost Time Incidents by Time in Service (Chart 15)
Based on 26 Incidents

- >1 yr. < 5 yrs.: 42.31%
- >6 mos. < 1 yr.: 26.92%
- >3 mos. < 6 mos.: 15.38%
- >6 mos. < 1 yr.: 15.38%
- >10 yrs.: 3.85%
- 0 mo. < 3 mos.: 3.85%
- >5 yrs. < 10 yrs.: 7.69%
Africa Water Total Recordable Incidents by Time in Service (Chart 16)
Based on 99 Incidents

- >6 mos. < 1 yr.: 23.23%
- >1 yr. < 5 yrs.: 42.42%
- >5 yrs. < 10 yrs.: 14.14%
- 10+ yrs.: 8.08%
- 0 mo. < 3 mos.: 5.05%
- >3 mos. < 6 mos.: 7.07%
- >1 yr. < 5 yrs.: 42.42%
Africa Water Total Lost Time Incidents by Time of Day (Chart 17)
Based on 28 Incidents

- 22:00: 3.57%
- 20:00: 17.86%
- 19:00: 3.57%
- 18:00: 3.57%
- 17:00: 3.57%
- 16:00: 3.57%
- 14:00: 7.14%
- 13:00: 3.57%
- 11:00: 3.57%
- 10:00: 3.57%
- 9:00: 14.29%
- 8:00: 7.14%
- 7:00: 3.57%
- 6:00: 7.14%
Africa Water Total Recordable Incidents by Time of Day (Chart 18)
Based on 103 Incidents

- 22:00: 2.91%
- 23:00: 0.97%
- 21:00: 2.91%
- 20:00: 10.68%
- 19:00: 4.85%
- 18:00: 5.83%
- 17:00: 4.85%
- 16:00: 1.94%
- 15:00: 3.88%
- 14:00: 4.85%
- 13:00: 5.83%
- 12:00: 6.80%
- 11:00: 6.80%
- 10:00: 6.80%
- 9:00: 5.83%
- 8:00: 4.85%
- 7:00: 5.83%
- 6:00: 2.91%
- 5:00: 3.88%
- 4:00: 1.94%
- 3:00: 1.94%
- 2:00: 1.94%
- 1:00: 2.91%
- 0:00: 5.83%
- 09:00: 5.83%
- 08:00: 4.85%
- 07:00: 5.83%
- 06:00: 2.91%
- 05:00: 3.88%
- 04:00: 1.94%
- 03:00: 1.94%
- 02:00: 10.68%
- 01:00: 4.85%
- 00:00: 5.83%