IADC

IADC
ISP PROGRAM

2017

Summary of Occupational Incidents
(US Water Totals)

Issued 15 June 2018
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IADC 2017 US Water Totals (Table 1)

<table>
<thead>
<tr>
<th>Description</th>
<th>Total</th>
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</thead>
<tbody>
<tr>
<td>Total Man-hours</td>
<td>22,777,018</td>
</tr>
<tr>
<td>Total Medical Treatment Incidents</td>
<td>23</td>
</tr>
<tr>
<td>Total Restricted Work Incidents</td>
<td>17</td>
</tr>
<tr>
<td>Total Lost Time Incidents</td>
<td>11</td>
</tr>
<tr>
<td>Total Fatalities</td>
<td>1</td>
</tr>
<tr>
<td>Total Recordables</td>
<td>52</td>
</tr>
<tr>
<td>MTO Incidence Rate</td>
<td>0.20</td>
</tr>
<tr>
<td>RWC Incidence Rate</td>
<td>0.15</td>
</tr>
<tr>
<td>LTI Incidence Rate</td>
<td>0.11</td>
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<tr>
<td>LTI Frequency Rate</td>
<td>0.53</td>
</tr>
<tr>
<td>DART Incidence Rate</td>
<td>0.25</td>
</tr>
<tr>
<td>DART Frequency Rate</td>
<td>1.27</td>
</tr>
<tr>
<td>Recordable Incidence Rate</td>
<td>0.46</td>
</tr>
<tr>
<td>Recordable Frequency Rate</td>
<td>2.28</td>
</tr>
</tbody>
</table>

Companies Reporting: Water – 14

Medical Treatment Incidence Rate = MTOs X 200,000
Restricted Work Incidence Rate = RWCs X 200,000
Lost Time Incidence Rate = LTIs + FTLs X 200,000
Lost Time Frequency Rate = LTIs + FTLs X 1,000,000
DART Incidence Rate = LTIs + RWC X 200,000
DART Frequency Rate = LTIs + RWC X 1,000,000
Recordable Incidence Rate = RCRD X 200,000
Recordable Frequency Rate = RCRD X 1,000,000

US Water Total LTI & Recordable Incidence Rates vs Man-hours (Figure 1)
IADC 2017 US Water Charts
US Water Total Lost Time Incidents by Month (Chart 1)
Based on 11 Incidents

October 9.09%
September 9.09%
June 18.18%
May 9.09%
April 9.09%
March 9.09%
February 18.18%
January 18.18%
US Water Total Recordable Incidents by Month (Chart 2)
Based on 52 Incidents

- December: 13.46%
- November: 7.69%
- October: 11.54%
- September: 7.69%
- August: 1.92%
- July: 3.65%
- June: 5.77%
- May: 11.54%
- April: 5.77%
- March: 7.69%
- February: 13.46%
- January: 9.62%
US Water Total Lost Time Incidents by Occupation

Based on 11 Incidents

- Floorman: 45.45%
- Roustabout (Lease Hand): 36.36%
- Derrickman: 9.09%
- Subsea Engineer: 9.09%
US Water Total Recordable Incidents by Occupation (Chart 4)
Based on 52 Incidents

- **Subsea Engineer**: 9.62%
- **Floorman**: 30.77%
- **Roustabout (Lease Hand)**: 34.62%
- **Rig Helper**: 1.92%
- **Driller (Asst. Dr.)**: 1.92%
- **Derrickman**: 3.85%
- **Mechanic**: 7.69%
- **Electrician**: 5.77%
- **Crane / Forklift Operator**: 1.92%
- **Welder**: 1.92%

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US Water Total Lost Time Incidents by Body Part (Chart 5)
Based on 11 Incidents

- Back: 27.27%
- Hand(s) / Wrist(s): 18.18%
- Finger(s): 18.18%
- Knee(s): 18.18%
- Shoulder(s): 9.09%
- Leg(s): 9.09%
- Toes: 9.09%
- Toes: 9.09%
US Water Total Recordable Incidents by Body Part (Chart 6)
Based on 52 Incidents

- Finger(s): 44.23%
- Hand(s) / Wrist(s): 9.62%
- Leg(s): 5.77%
- Knee(s): 5.77%
- Shoulder(s): 5.77%
- Back: 7.69%
- Eyes (eyelid): 1.92%
- Toes: 1.92%
- Feet/Ankles: 1.92%
- Trunk/Torso (chest, abdomen, groin): 3.85%
- Head: 11.54%
US Water Total Lost Time Incidents by Incident Type (Chart 7)
Based on 11 Incidents

- Struck By: 9.09%
- Struck Against: 9.09%
- Caught Between/In: 45.45%
- Slip/Fall: Same Level: 18.18%
- Strain/Overexertion: 18.18%

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US Water Total Recordable Incidents by Incident Type (Chart 8)
Based on 52 Incidents

- Struck By: 25.00%
- Caught Between/In: 44.23%
- Struck Against: 3.85%
- Slip/Fall: Same Level: 7.69%
- Strain/Overexertion: 11.54%
- Cut: 5.77%
- Sprain: 1.92%
US Water Total Lost Time Incidents by Equipment (Chart 9)
Based on 10 Incidents

- BOP Stack (well head, tree) 20.00%
- Decks (grating, walkway) 20.00%
- Slings (rope, cable, chain, web) 10.00%
- Pipes/Collars/Tubulars/Csg. 10.00%
- Elevators 20.00%
- Top Drive (blocks, swivel, kelly) 10.00%
- Material 10.00%
- Top Drive (blocks, swivel, kelly) 10.00%

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US Water Total Recordable Incidents by Equipment (Chart 10)
Based on 48 Incidents

- Anchor Chains/Cables/Winches: 2.08%
- Top Drive (blocks, swivel, kelly): 2.08%
- Crane: 4.17%
- Pressure Hoses/Lines: 10.42%
- Material: 10.42%
- BOP Stack (well head, tree): 10.42%
- Hand Tools: Manual: 10.42%
- Hand Tools: Power: 4.17%
- Elevators: 4.17%
- Iron Roughneck, Pipe Spinner, etc.: 2.08%
- Rotary: 2.08%
- Pipes/Collars/Tubulars/Csg.: 12.50%
- Cathead/Drawworks: 2.08%
- Slings (rope, cable, chain, web): 6.25%
US Water Total Lost Time Incidents by Operation (Chart 11)
Based on 11 Incidents

- Special Operations: 9.09%
- Well Testing: 9.09%
- Equipment Repairs or Maintenance: 18.18%
- BOP Stack Install/Maintenance: 18.18%
- Tripping in/out: 18.18%
- Mud Mixing/Pumping: 9.09%
- Material Handling: Crane/Cherry Picker: 9.09%
- Material Handling: Rig Floor Winch: 9.09%
- Material Handling: Rig Floor Winch: 9.09%
- Mud Mixing/Pumping: 9.09%
US Water Total Recordable Incidents by Operation (Chart 12)
Based on 52 Incidents

- Routine Drilling Oper. 25.00%
- Tripping in/out 15.38%
- Laying Down/Picking up Tubulars 5.77%
- Running Casing/Tubing 5.77%
- Material Handling: Manual 1.92%
- Material Handling: Crane/Cherry Picker 1.92%
- Material Handling: Rig Floor Winch 3.85%
- Equipment Repairs or Maintenance 11.54%
- BOP Stack Install/Maintenance 13.46%
- Rigging Up/Down 1.92%
- Special Operations 5.77%
- Walking 1.92%
- Cementing 1.92%
- Mud Mixing/Pumping 1.92%
- Well Testing 1.92%
- Well Testing 1.92%
- Well Testing 1.92%
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- Well Testing 1.92%
US Water Total Lost Time Incidents by Location (Chart 13)
Based on 11 Incidents

- Work Rooms change, storage, room: 18.18%
- Mud Mixing Tank/Area: 9.09%
- BOP Stack /well head/tree Area: 18.18%
- Catwalk/V-door: 9.09%
- Cellar / Sub / Moonpool: 9.09%
- Derrick/Mast: 9.09%
- Rig Floor: 27.27%
US Water Total Recordable Incidents by Location (Chart 14)
Based on 52 Incidents
US Water Total Lost Time Incidents by Time in Service (Chart 15)
Based on 11 Incidents

- >10 yrs., 9.09%
- >5 yrs. <10 yrs., 9.09%
- >1 yr. <5 yrs., 54.55%
- >3 mos. <6 mos., 9.09%
- 0 mos. <3 mos., 18.18%
- >1 yr. <5 yrs., 54.55%
US Water Total Recordable Incidents by Time in Service (Chart 16)
Based on 52 Incidents

- 10+ yrs. 5.77%
- >5 yrs. < 10 yrs. 19.23%
- >1 yr. < 5 yrs. 46.15%
- >6 mos. < 1 yr. 5.77%
- >3 mos. < 6 mos. 9.62%
- 0 mo. < 3 mos. 13.46%
US Water Total Lost Time Incidents by Time of Day (Chart 17)
Based on 11 Incidents

<table>
<thead>
<tr>
<th>Time</th>
<th>Percentage</th>
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<tbody>
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<td>1:00</td>
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<tr>
<td>23:00</td>
<td>9.09%</td>
</tr>
</tbody>
</table>
US Water Total Recordable Incidents by Time of Day (Chart 18)

Based on 52 Incidents

- 10:00: 1.92%
- 11:00: 5.77%
- 12:00: 5.77%
- 13:00: 5.77%
- 14:00: 1.92%
- 15:00: 1.92%
- 16:00: 7.69%
- 17:00: 7.69%
- 18:00: 1.92%
- 19:00: 1.92%
- 20:00: 3.85%
- 21:00: 3.85%
- 22:00: 3.85%
- 23:00: 3.85%
- 0:00: 3.85%
- 1:00: 3.85%
- 2:00: 1.92%
- 3:00: 5.77%
- 4:00: 7.69%
- 5:00: 3.85%
- 6:00: 1.92%
- 7:00: 1.92%
- 8:00: 5.77%
- 9:00: 11.54%
US Water Total Lost Time Incidents by Age (Chart 19)
Based on 6 Incidents

- 26 - 35 (33.33%)
- 36 - 45 (33.33%)
- 46 - 55 (33.33%)
US Water Total Recordable Incidents by Age (Chart 20)
Based on 35 Incidents

- 18 - 25: 28.57%
- 26 - 35: 45.71%
- 36 - 45: 11.43%
- 46 - 55: 8.57%
- 56 - 65: 5.71%