IADC

IADC ISP PROGRAM

2013

Summary of Occupational Incidents (South America Land Totals)

Issued 20 May 2014
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IADC 2013 South America Land Totals (Table 1)

<table>
<thead>
<tr>
<th>Total Manhours</th>
<th>30,360,068</th>
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<td>Total Medical Treatment Incidents</td>
<td>21</td>
</tr>
<tr>
<td>Total Restricted Work Incidents</td>
<td>32</td>
</tr>
<tr>
<td>Total Lost Time Incidents</td>
<td>24</td>
</tr>
<tr>
<td>Total Fatalities</td>
<td>0</td>
</tr>
<tr>
<td>Total Recordables</td>
<td>77</td>
</tr>
<tr>
<td>MTO Incidence Rate</td>
<td>0.14</td>
</tr>
<tr>
<td>RWC Incidence Rate</td>
<td>0.21</td>
</tr>
<tr>
<td>LTI Incidence Rate</td>
<td>0.16</td>
</tr>
<tr>
<td>LTI Frequency Rate</td>
<td>0.79</td>
</tr>
<tr>
<td>DART Incidence Rate</td>
<td>0.37</td>
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<tr>
<td>DART Frequency Rate</td>
<td>1.84</td>
</tr>
<tr>
<td>Recordable Incidence Rate</td>
<td>0.51</td>
</tr>
<tr>
<td>Recordable Frequency Rate</td>
<td>2.54</td>
</tr>
</tbody>
</table>

Companies Reporting: Land – 8

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

South America Land Total Incidence Rates vs Man-hours (Figure 1)
IADC 2013 South America Land Charts
South America Land Total Lost Time Incidents by Month (Chart 1)
Based on 24 Incidents

- January: 12.50%
- February: 4.17%
- March: 8.33%
- April: 4.17%
- May: 8.33%
- June: 4.17%
- July: 16.67%
- August: 8.33%
- September: 4.17%
- October: 16.67%
- November: 4.17%
- December: 8.33%
South America Land Total Recordable Incidents by Month (Chart 2)
Based on 77 Incidents

January 9.09%
February 6.49%
March 5.19%
April 5.19%
May 15.58%
June 5.19%
July 6.49%
August 11.69%
September 7.79%
October 12.99%
November 7.79%
December 6.49%

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South America Land Total Lost Time Incidents by Occupation (Chart 3)
Based on 24 Incidents

- Floorman: 33.33%
- Derrickman: 16.67%
- Driller (Asst. Dr.): 8.33%
- Roustabout (Lease Hand): 8.33%
- Roustabout (Asst.TP, Tourpusher): 4.17%
- Toolpusher (Asst.TP, Tourpusher): 4.17%
- Electrician (Electronic Technician): 4.17%
- Mechanic (Repair Technician): 4.17%
- Motorman: 4.17%
- Superintendent/other Supervisors: 4.17%
- Other: 8.33%

`Based on 24 Incidents`
South America Land Total Recordable Incidents by Occupation (Chart 4)
Based on 77 Incidents

- Floorman: 33.77%
- Roustabout (Lease Hand): 11.69%
- Derrickman: 16.88%
- Driller (Asst. Dr.): 6.49%
- Toolpusher (Asst.TP, Tourpusher): 2.60%
- Electrician (Electronic Technician): 3.90%
- Mechanic (Repair Technician): 2.60%
- Motorman: 3.90%
- Welder: 3.90%
- Truck Helper: 1.30%
- Crane Operator (Forklift Operator): 1.30%
- Superintendent/other Supervisors: 1.30%
- Rig Helper: 2.60%
- Roustabout (Lease Hand): 11.69%
- Other: 7.79%

Based on 77 Incidents

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South America Land Total Lost Time Incidents by Body Part (Chart 5)
Based on 24 Incidents

- Knee(s): 4.17%
- Other: 4.17%
- Feet/Ankles: 20.83%
- Leg(s): 16.67%
- Finger(s): 20.83%
- Hand(s) / Wrist(s): 8.33%
- Trunk/Torso (chest, abdomen, groin): 16.67%
- Head: 8.33%
South America Land Total Recordable Incidents by Body Part (Chart 6)
Based on 77 Incidents

- Finger(s): 49.35%
- Hand(s) / Wrist(s): 10.39%
- Arm(s): 5.19%
- Trunk/Torso (chest, abdomen, groin): 5.19%
- Back: 1.30%
- Head: 5.19%
- Other: 2.60%
- Knee(s): 1.30%
- Shoulder(s): 1.30%
- Feet/Ankles: 9.09%
- Leg(s): 9.09%
- Trunk/Torso (chest, abdomen, groin): 5.19%
South America Land Total Lost Time Incidents by Incident Type (Chart 7)
Based on 24 Incidents

- Caught Between/in: 29.17%
- Struck By: 25.00%
- Slip/Fall: Same Level: 16.67%
- Slip/Fall: Different Level: 12.50%
- Flame/heat/steam (contact/exposed): 4.17%
- Cut: 4.17%
- Jump: 4.17%
- Other: 4.17%
South America Land Total Recordable Incidents by Incident Type (Chart 8)
Based on 77 Incidents

Caught Between/In: 40.26%
Caught On: 1.30%
Cut: 3.90%
Jump: 1.30%
Flame/heat/steam (contact/exposed): 1.30%
Strain/Overexertion: 1.30%
Slip/Fall: Different Level: 7.79%
Slip/Fall: Same Level: 6.49%
Other: 2.60%
Struck By: 27.27%
Struck Against: 6.49%
South America Land Total Lost Time Incidents by Equipment (Chart 9)
Based on 24 Incidents

- Other 33.33%
- Anchor Chains/Cables/Winches 4.17%
- Top Drive (blocks, swivel, kelly) 8.33%
- Decks (grating, walkway) 4.17%
- Forklift 8.33%
- Crane 4.17%
- Kelly Bushings (master bushings) 4.17%
- Material 4.17%
- Hand Tools: Power 4.17%
- Hand Tools: Manual 8.33%
- Crane 4.17%
- Pipes/Collars/Tubulars/Casing 8.33%
- Iron Roughneck, Pipe Spinner, etc. 8.33%
- Decks (grating, walkway) 4.17%
- Forklift 8.33%
- Crane 4.17%
- Kelly Bushings (master bushings) 4.17%
- Material 4.17%
- Hand Tools: Power 4.17%
- Hand Tools: Manual 8.33%
- Crane 4.17%
- Pipes/Collars/Tubulars/Casing 8.33%
- Iron Roughneck, Pipe Spinner, etc. 8.33%
- Decks (grating, walkway) 4.17%
- Forklift 8.33%
- Crane 4.17%
- Kelly Bushings (master bushings) 4.17%
- Material 4.17%
- Hand Tools: Power 4.17%
- Hand Tools: Manual 8.33%
- Crane 4.17%
- Pipes/Collars/Tubulars/Casing 8.33%
- Iron Roughneck, Pipe Spinner, etc. 8.33%
- Decks (grating, walkway) 4.17%
- Forklift 8.33%
- Crane 4.17%
- Kelly Bushings (master bushings) 4.17%
- Material 4.17%
- Hand Tools: Power 4.17%
- Hand Tools: Manual 8.33%
- Crane 4.17%
- Pipes/Collars/Tubulars/Casing 8.33%
- Iron Roughneck, Pipe Spinner, etc. 8.33%
- Decks (grating, walkway) 4.17%
- Forklift 8.33%
- Crane 4.17%
- Kelly Bushings (master bushings) 4.17%
- Material 4.17%
- Hand Tools: Power 4.17%
- Hand Tools: Manual 8.33%
- Crane 4.17%
- Pipes/Collars/Tubulars/Casing 8.33%
- Iron Roughneck, Pipe Spinner, etc. 8.33%
- Decks (grating, walkway) 4.17%
- Forklift 8.33%
- Crane 4.17%
- Kelly Bushings (master bushings) 4.17%
- Material 4.17%
- Hand Tools: Power 4.17%
- Hand Tools: Manual 8.33%
- Crane 4.17%
- Pipes/Collars/Tubulars/Casing 8.33%
- Iron Roughneck, Pipe Spinner, etc. 8.33%
- Decks (grating, walkway) 4.17%
- Forklift 8.33%
- Crane 4.17%
- Kelly Bushings (master bushings) 4.17%
- Material 4.17%
- Hand Tools: Power 4.17%
- Hand Tools: Manual 8.33%
- Crane 4.17%
- Pipes/Collars/Tubulars/Casing 8.33%
- Iron Roughneck, Pipe Spinner, etc. 8.33%
- Decks (grating, walkway) 4.17%
- Forklift 8.33%
- Crane 4.17%
- Kelly Bushings (master bushings) 4.17%
- Material 4.17%
- Hand Tools: Power 4.17%
- Hand Tools: Manual 8.33%
- Crane 4.17%
- Pipes/Collars/Tubulars/Casing 8.33%
- Iron Roughneck, Pipe Spinner, etc. 8.33%
- Decks (grating, walkway) 4.17%
- Forklift 8.33%
- Crane 4.17%
- Kelly Bushings (master bushings) 4.17%
- Material 4.17%
- Hand Tools: Power 4.17%
- Hand Tools: Manual 8.33%
- Crane 4.17%
- Pipes/Collars/Tubulars/Casing 8.33%
- Iron Roughneck, Pipe Spinner, etc. 8.33%
- Decks (grating, walkway) 4.17%
- Forklift 8.33%
- Crane 4.17%
- Kelly Bushings (master bushings) 4.17%
- Material 4.17%
- Hand Tools: Power 4.17%
- Hand Tools: Manual 8.33%
- Crane 4.17%
- Pipes/Collar
South America Land Total Recordable Incidents by Equipment (Chart 10)
Based on 77 Incidents

- **Other** 35.06%
- **Anchor Chains/Cables/Winches** 1.30%
- **Top Drive (blocks, swivel, kelly)** 6.49%
- **Chemicals (sack, drum, pail, bulk hopper)** 1.30%
- **Welding, Cutting, Grinding Equipment** 1.30%
- **Decks (grating, walkway)** 1.30%
- **Ladders** 1.30%
- **Forklift** 2.60%
- **Crane** 1.30%
- **Pressure Hoses/Lines** 1.30%
- **Wells (drill collar clamp)** 1.30%
- **Rig Floor Winch/Deck Winch (air/hydraulic)** 1.30%
- **Cathead/Drawworks** 1.30%
- **Slings (rope, cable, chain)** 2.60%
- **Hand Tools: Manual** 6.49%
- **Hand Tools: Power** 3.90%
- **Iron Roughneck, Pipe Spinner** 3.90%
- **Pipes/Collars/Tubulars/Csg.** 9.09%
- **Engines/Pumps/Machinery** 2.60%
- **Kelly Bushings (master bushing)** 1.30%
- **Well Control (BOP) Stack (wellhead, tree)** 1.30%
- **Material** 2.60%
- **Crane** 1.30%
- **Forklift** 2.60%
- **Ladders** 1.30%
- **Decks (grating, walkway)** 1.30%
- **Ladders** 1.30%
- **Forklift** 2.60%
- **Crane** 1.30%
- **Pressure Hoses/Lines** 1.30%
- **Wells (drill collar clamp)** 1.30%
- **Rig Floor Winch/Deck Winch (air/hydraulic)** 1.30%
- **Cathead/Drawworks** 1.30%
- **Slings (rope, cable, chain)** 2.60%
- **Hand Tools: Manual** 6.49%
- **Hand Tools: Power** 3.90%
- **Iron Roughneck, Pipe Spinner** 3.90%
- **Pipes/Collars/Tubulars/Csg.** 9.09%
- **Engines/Pumps/Machinery** 2.60%
- **Kelly Bushings (master bushing)** 1.30%
- **Well Control (BOP) Stack (wellhead, tree)** 1.30%
- **Material** 2.60%
South America Land Total Lost Time Incidents by Operation (Chart 11)
Based on 24 Incidents

- Tripping in/out (makeup/brakeout BHA, test tools, etc.): 20.83%
- Making Connection: 8.33%
- Routine Drilling Operations: 4.17%
- Laying Down/Picking up Pipe/Tubulars: 8.33%
- Well Control (BOP) Stack (well head/tree) Install/Maintenance: 16.67%
- Rig/Equipment Repairs or Maintenance: 8.33%
- Rig Up/Down (rig move preparation, rig move): 20.83%
- Material Handling: Crane/Cherry Picker: 4.17%
- Material Handling: Manual: 4.17%
- Other: 4.17%
South America Land Total Recordable Incidents by Operation (Chart 12)
Based on 77 Incidents

- Tripping in/out (makeup/brakeout BHA, test tools, etc.) 23.38%
- Making Connection 7.79%
- Routine Drilling Operations 3.90%
- Running Casing/Tubing (rig up/down csg. tools) 2.60%
- Laying Down/Picking up Pipe/Tubulars 6.49%
- Material Handling: Manual 1.30%
- Material Handling: Crane/Cherry Picker 3.96%
- Rigging Up/Down (rig move preparation, rig move) 20.78%
- Well Control (BOP) Stack (well head/tree) Install/Maintenance 7.79%
- Special Operations (wireline, perforating, etc.) 1.30%
- Rig/Equipment Repairs or Maintenance 9.09%
- Walking 2.60%
- Other 7.79%
- Routine Drilling Operations 3.90%
- Walking 1.30%
South America Land Total Lost Time Incidents by Location (Chart 13)
Based on 24 Incidents

- Rig Floor (rotary, pipe set back area): 29.17%
- Derrick/Mast (crown, monkey/stabbing board, a-frame): 16.67%
- Well Control (BOP) Stack (well head/tree) Area: 8.33%
- Cellar / Substructure / Moonpool: 8.33%
- Mud Pump Room: 8.33%
- Cherry Picker/Crane: 4.17%
- Catwalk/V-door: 4.17%
- Rig Pad/Rig Decks: 4.17%
- Other: 12.50%
- Forklift: 4.17%
- Rig Floor (rotary, pipe set back area): 29.17%
### South America Land Total Recordable Incidents by Location (Chart 14)

Based on 77 Incidents

<table>
<thead>
<tr>
<th>Location</th>
<th>Percentage</th>
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<tbody>
<tr>
<td>Forklift</td>
<td>1.30%</td>
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<tr>
<td>Work Rooms (change house, storage house/room)</td>
<td>2.60%</td>
</tr>
<tr>
<td>Rig Floor (rotary, pipe set back area)</td>
<td>33.77%</td>
</tr>
<tr>
<td>Cellar / Substructure / Moonpool</td>
<td>6.49%</td>
</tr>
<tr>
<td>Mud Pump Room</td>
<td>6.49%</td>
</tr>
<tr>
<td>Pontoon</td>
<td>1.30%</td>
</tr>
<tr>
<td>Cherry Picker/Crane</td>
<td>1.30%</td>
</tr>
<tr>
<td>Mud Mixing Tank/Area</td>
<td>1.30%</td>
</tr>
<tr>
<td>Shale Shaker</td>
<td>1.30%</td>
</tr>
<tr>
<td>Well Control (BOP) Stack (well head/tree) Area</td>
<td>5.19%</td>
</tr>
<tr>
<td>Catwalk/V-door</td>
<td>1.30%</td>
</tr>
<tr>
<td>Derrick/Mast (crown, monkey/stabbing board, a-frame)</td>
<td>11.69%</td>
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South America Land Total Lost Time Incidents by Time in Service (Chart 15)
Based on 24 Incidents

- >5 yrs. < 10 yrs.: 16.67%
- >1 yr. < 5 yrs.: 58.33%
- >6 mos. < 1 yr.: 12.50%
- >3 mos. < 6 mos.: 4.17%
- 0 mo. < 3 mos.: 8.33%
South America Land Total Recordable Incidents by Time in Service (Chart 16)
Based on 76 Incidents

1.32% 10+ yrs.
13.16% >5 yrs. < 10 yrs.
13.16% >6 mos. < 1 yr.
13.16% >3 mos. < 6 mos.
6.58% >1 yr. < 5 yrs.
52.63% 0 mo. < 3 mos.
South America Land Total Lost Time Incidents by Time of Day (Chart 17)
Based on 24 Incidents

- 03:00: 4.17%
- 04:00: 8.33%
- 05:00: 8.33%
- 06:00: 8.33%
- 07:00: 4.17%
- 08:00: 8.33%
- 09:00: 4.17%
- 10:00: 12.50%
- 11:00: 4.17%
- 12:00: 8.33%
- 13:00: 12.50%
- 14:00: 4.17%
- 15:00: 4.17%
- 16:00: 8.33%
- 17:00: 8.33%
- 18:00: 4.17%
- 19:00: 4.17%
- 20:00: 12.50%
- 21:00: 4.17%
- 22:00: 12.50%
- 23:00: 4.17%