As the global recession of the late 2000s dragged on, shipyards began offering newbuild contracts at drastically reduced prices. With characteristic financial sagacity, Diamond Offshore moved to take advantage of the opportunity. This article introduces the seven new rigs that were ordered—highlighting four high-spec dynamically positioned drillships that rank at the top of the world’s most advanced ultra-deepwater drilling units. The ships began securing contracts long before construction was complete. The Ocean BlackHawk and Ocean Onyx have now begun working, and all of these units have secured term contracts.
### ULTRA-DEEPWATER DRILLSHIPS

**OCEAN BLACKHAWK  (DELIVERED)**  
**OCEAN BLACKHORNET**  
**OCEAN BLACKRHINO**  
**OCEAN BLACKLION**

<table>
<thead>
<tr>
<th>GENERAL</th>
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<tbody>
<tr>
<td>Design:</td>
<td>Gusto P10,000 DW</td>
</tr>
<tr>
<td>Classification:</td>
<td>ABS, A1 Drillship</td>
</tr>
<tr>
<td>Dimensions:</td>
<td>754 ft long x 118 ft wide x 59 ft deep</td>
</tr>
<tr>
<td>Draft:</td>
<td>36 ft operating / 29 ft transit</td>
</tr>
<tr>
<td>Displacement:</td>
<td>70,000mT operating</td>
</tr>
<tr>
<td>Variable Deck:</td>
<td>22,045T operating</td>
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<tr>
<td>Transit Speed:</td>
<td>up to 12.5 knots</td>
</tr>
<tr>
<td>Water Depths:</td>
<td>12,000 ft designed / 10,000 ft outfitted</td>
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<tr>
<td>Drilling Depth:</td>
<td>40,000 ft</td>
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<tr>
<th>DERRICK</th>
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<tbody>
<tr>
<td>Derrick:</td>
<td>NOV Dual Bottleneck, 210 ft high with 80 ft x 60 ft base, combined hook load capacity of 4,000 kips</td>
</tr>
</tbody>
</table>
| Drawworks: | (Main): NOV / AHD 1250, six AC electric motors, 9,000hp total, 1,250T with sixteen 2 1/8" drilling lines  
(Aux): NOV / AHD 750, five AC electric motors, 5,750hp total, 750T with fourteen 1 3/4" drilling lines |
| Compensator: | Active Heave Compensating Drawworks |
| Rotary Table: | (Main): NOV RST 75 1/2" hydraulic, 1.375T static  
(Aux): NOV RST 60 1/2" hydraulic, 1.000T static |
| Top Drive: | (Main): NOV TDX-1250, 1,250T with 7,500 psi  
(Aux): NOV TDS-85A, 750T with 7,500 psi |
| Tubular handling: | 2 x NOV MPT "Hydraulic Roughneck" for tubular range 3 1/2" to 9 3/4" + 2 x NOV HRT-ER |
| Mud Pumps: | 5 x NOV 14-P, 220, 2,200hp, 7,500 psi |

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<tr>
<th>POWER</th>
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| Main Power: | 6 x Himsen diesel engines rated 4,500kW, each driving 5,375 kVA AC generators  
2 x Himsen V-type diesel engines rated 9,000kW, each driving 10,875 kVA AC generators |
| Emergency Power: | V-type Cummins diesel engine rated 1,900kw driving 1x STX engine rated 1,550kW AC generator |

<table>
<thead>
<tr>
<th>STORAGE</th>
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<tbody>
<tr>
<td>Liquid Mud:</td>
<td>15,204 bbls</td>
</tr>
<tr>
<td>Base Oil:</td>
<td>7,209 bbls</td>
</tr>
<tr>
<td>Brine:</td>
<td>13,175 bbls</td>
</tr>
<tr>
<td>Drill Water:</td>
<td>18,593 bbls</td>
</tr>
<tr>
<td>Potable Water:</td>
<td>8,834 bbls</td>
</tr>
<tr>
<td>Bulk Material:</td>
<td>16,315 ft³ (barite + bentonite) + 15,891 ft³ (cement)</td>
</tr>
<tr>
<td>Sack Storage:</td>
<td>6,000 sacks</td>
</tr>
</tbody>
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<thead>
<tr>
<th>CRANES</th>
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</thead>
<tbody>
<tr>
<td>Knuckle-boom:</td>
<td>1 x 100 ton + 2 x 85 ton knuckle-boom</td>
</tr>
<tr>
<td>AHC Subsea:</td>
<td>165 ton Active Heave Compensation knuckle-boom</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>SUBSEA</th>
<th></th>
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</thead>
<tbody>
<tr>
<td>Diverter:</td>
<td>Vetco CSO 21 1/4&quot; 500 psi diverter with 1 x 20&quot; flow line + 2 x 16&quot; overboard diverter lines</td>
</tr>
</tbody>
</table>
| BOP Stacks (2): | Hydril 18 3/4" 15,000 psi seven-ram preventer  
2 x Hydril 18 3/4" 10,000 psi annular preventers |
| C&K Manifold: | 3 1/16", 15,000 psi |
| Marine Riser: | Vetco HMF Class H 21", 75 ft long per joint |
| Tensioners: | 16 x 225 kips NOV wireline riser tensioners. Total capacity 3,600 kips with 50 ft of wire travel |
| Moonpool: | 73 ft x 42 ft |

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<thead>
<tr>
<th>OTHER</th>
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<tbody>
<tr>
<td>Thrusters:</td>
<td>6 x Thrustmaster, 5,000kW azimuth thrusters with fixed pitch variable speed propellers</td>
</tr>
<tr>
<td>DP System:</td>
<td>Kongsberg K-POS</td>
</tr>
<tr>
<td>Dual Activity:</td>
<td>Yes</td>
</tr>
<tr>
<td>Accommodation:</td>
<td>210 people</td>
</tr>
<tr>
<td>Helideck:</td>
<td>Sikorsky S-61 &amp; S-92</td>
</tr>
</tbody>
</table>

**MILESTONES TO COMPLETION**

**SHIPYARD DELIVERY DATES**

**2014**

**OCEAN BLACKHAWK**  
**CONTRACT**  
**ANADARKO**  
**OCEAN BLACKHORNET**  
**OCEAN BLACKRHINO**  
**OCEAN BLACKLION**  
**OCEAN ONYX**  
**CONTRACT**  
**APACHE**  
**OCEAN APEX**
**SEMISUBMERSIBLES**

**OCEAN ONyx (DELIVERED)**

**OCEAN Apex**

- **Design:** Enhanced Victory Class/Crucifix Form
- **Classification:** ABS Column Stabilized Drilling Unit
- **Dimensions:** 361 ft long x 320 ft wide x 128 ft high
- **Draft:** 76 ft operating / 28 ft transit
- **Displacement:** 49,855LT operating
- **Variable Deck:** 7,000LT operating
- **Transit Speed:** up to 3.8 knots
- **Water Depths:** 6,000 ft designed / 5,000 ft outfitted
- **Drilling Depths:** 30,000 ft

**Derrick:** NOV, 185 ft high with 40 ft x 40 ft base, load capacity of 2,000 kips

**Drawworks:** NOV UDBEL 2040, four DC electric motors, 1,000hp each, with 2” drilling line

**Compensator:** NOV drill string motion compensator, 800 kips capacity with 25 ft stroke

**Rotary Table:** NOV RST, 49 1/2”, 1,250T

**Tubular handling:** NOV ST-120 Iron Roughneck for tubular range 3 1/2” to 10” + NOV BR-10-SD-D bridge racker

**Mud Pumps:** 4 x NOV 14-P 220, 2,200hp, 7,500 psi

**Main Power:** 5 x Caterpillar C175 Tier II diesel engines rated 2,400hp each with 4,160 VAC generators

- **Emergency Power:** 1 x Caterpillar C32 engine rated 720 kW

**Liquid Mud:** 10,798 bbls
- **Base Oil:** 3,315 bbls
- **Brine:** 2,000 bbls
- **Potable Water:** 1,002 bbls
- **Bulk Material:** 27,010 cu ft (mud + cement)
- **Sack Storage:** 5,000 sacks

**CRANES**

- 1 x 56 ton SeaTrax 6032 with 150 ft boom
- 1 x 56 ton SeaTrax 7224 with 160 ft boom
- 1 x 68 ton SeaTrax 9040 with 160 ft boom
- 1 x 34.4mT NOV knuckle-boom crane for riser and tubular handling

**SUBSEA**

- **Diverter:** Vetco 24” ID/500 psi with 16” flow line
- **BOP Stack:** Shaffer 18 3/4” x 15,000 psi five-ram preventer
- **Shaffer dual 18 3/4” x 10,000 psi annular preventers**
- **C&K Manifold:** 3 1/16”, 15,000 psi
- **Marine Riser:** Shaffer FT-E, 75 ft long per joint
- **Tensioners:** 8 x 200 kips Dual Rucker wireline riser tensioners.
- **Total capacity:** 1,600 kips with 50 ft of wire travel
- **Moonpool:** 22 ft x 81 ft

**OTHER**

- **Mooring System:** (b) 3 1/4” x 4,200 ft RQS chains, (b) 3 3/4” x 8,800 ft wires, (b) 157 Stevpris MK6 anchors

**Accommodation:** 140 people; NR-30 compliant
- **Helideck:** Sikorsky S-92, CAP 437 compliant

**OCEAN GREATWHITE**

- **Design:** Moss CS60E Design 6th Generation, Harsh Environment
- **Classification:** DNV +1A1 Column Stabilized Drilling Unit
- **Dimensions:** 402 ft long x 255 ft wide
- **Draft:** 77 ft operating
- **Displacement:** 67,400LT operating
- **Variable Deck:** 7,500LT operating
- **Transit Speed:** up to 8 knots
- **Water Depth:** 10,000 ft
- **Drilling Depth:** 35,000 ft

**Derrick:** NOV, 210 ft high with 49 ft x 52.5 ft base, load capacity of 2,500 kips, capable of 900T setback

**Drawworks:** NOV SSDG, five AC electric motors, 1,150hp each, 2,000kips capacity, fourteen 2” drilling line

**Compensator:** NOV 1,000t static, 500t dynamic capacity, 25 ft stroke with Active Heave Compensation

**Rotary Table:** NOV, 60 1/2”, 1,250T

**Tubular handling:** 2 x NOV ARN-270 Iron Roughneck with full offline standbuilding + 2 x NOV Vertical Hydrarackers-IV-ER

**Mud Pumps:** 4 x NOV 12 P-220, 2,200hp each, 7,500 psi

**Main Power:** 8 x HH1 HIMSEN 12H32 Tier II diesel engines rated approx 6,120 kVA AC generators

- **Liquid Mud:** 13,332 bbls
- **Base Oil:** 3,962 bbls
- **Brine:** 3,962 bbls
- **Drill Water:** 12,326 bbls
- **Potable Water:** 5,220 bbls
- **Bulk Material:** 30,366 cu ft (mud + cement)
- **Sack Storage:** 5,000 sacks

**CRANES**

- 2 x 100t SeaTrax 10832 with 200 ft boom
- 1 NOV gantry crane for riser handling
- 1 x 12T NOV knuckle boom crane for tubular handling

**SUBSEA**

- **Diverter:** 60” Shaffer 21 1/4”, 500psi with 18” flow line
- **BOP Stack:** Shaffer 18 3/4” x 15,000 psi six-ram preventer
- **3x NXT Double 22” Operators LFSR-CVX**
- **C&K Manifold:** 3 1/16”, 15,000 psi
- **Marine Riser:** Shaffer FT-H, 10,000ft, 21” OD, 75 ft long per joint
- **Tensioners:** 8 x 450 kips double wireline riser tensioners
- **Total capacity:** 3,600 kips with 50 ft of wire travel
- **Moonpool:** 29.5 ft x 91.8 ft

**OTHER**

- **Mooring System:** Fitted with (2) 84mm x 320mm R5 chains w/ 18mT Stevpris MK6 anchors for harbor mooring, capacity for (8) 84mm x 2,200m R5 chain

**Accommodation:** 180 people
- **Helideck:** EH-101 or S-92; CAP 437 compliant

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**GENERAL**

**DRILLING**

**POWER**

**STORAGE**

**CRANES**

**SUBSEA**

**OTHER**