



# PROJECT NEWSLETTER



## Status Summary

The Delta House Facilities construction activities are continuing as planned and on schedule. The Exmar Engineering staff has completed the hull design work and is continuing to support ongoing fabrication activities. This is a significant achievement. Congratulations and thank you to Exmar. Large hull pontoon “block” sections are being assembled quayside awaiting integration in the dry dock at Hyundai.

Production system engineering design is nearing completion. There is still a very significant and ongoing effort by the Audubon Engineering staff to support equipment procurement, fabrication, and documentation. The list of fabricators and manufacturers that are building the production equipment continues to grow. Some of this equipment is starting to arrive at Kiewit where it will be integrated into the Production Deck.

Something to note is that the Lower Level Deck framing now rests on the skid ways near the heavy lift system where the deck fabrication and assembly will take place. The Upper Level Deck framing is being fabricated nearby and will be “floated” or lifted into place later this year.

Also of note is that the first shipment of subsea system line pipe fabricated by Sumitomo in Japan has arrived in New Orleans. This is the first shipment of many that will arrive from Japan and Germany through the rest of 2013.

As you will see in the following articles, there are hundreds of people around the world that are working very hard for us. Our continuing thanks to all of you.

## Drilling & Completions

The Sevan Louisiana was officially named on August 19th with Pam Baudoin from LLOG Drilling receiving the honor to serve as the Godmother of the rig. This is a fitting tribute to Pam since she plays a critical role at LLOG ensuring our well programs, contracts and especially our Drilling foreman on the rig are all set up for success. For Pam, this is not just an honorary title, for the next three years she will be the real Godmother to the rig and her crews. Thank you Pam!

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LLOG and Seadrill are progressing the mobilization and commissioning plans for the Louisiana. Rig QA International continues with the rig systems commissioning and acceptance, while Lloyd's Register (formerly West Engineering) is covering the commissioning and acceptance testing of the BOP and BOP systems. The rig has left dry dock and has "gone to sea" off Shanghai for the installation of the thrusters and then sea trials. Following sea trials, the rig will be loaded out and depart for Singapore by mid-October. In Singapore, we will take on tubulars, mud and cement to conduct extended commissioning of the mud and cement systems on the rig while enroute to Mauritius. In Mauritius, a splash of the BOP stack and riser running system is planned prior to departing for Namibia, followed by Curacao. Crews will train on the rig pipe handling and fluid systems during the voyage.

Once in Curacao, we will fully staff the rig with LLOG HSE and Operational supervision. After a 14 day voyage from Curacao, the rig will arrive in the Gulf of Mexico for final rig systems commissioning with work to start on the first well in early March.

LLOG Drilling is also moving forward with the Commissioning plans for the Seadrill West Neptune. We will also use Rig QA and Lloyd's Register as our main commissioning contractors for the West Neptune. Rig QA has successfully commissioned other Seadrill rigs of similar class from the same shipyard in Korea and can apply those learnings to our rig, the West Neptune.

Construction of the West Neptune is ongoing in Korea. LLOG engineering and operations staff are scheduled to tour/review construction of sister rigs scheduled for delivery prior to the West Neptune this fall. The initial operations focus of the West Neptune will be the efficient completion of the 5 Delta House wells drilled to date. The dual BOP rig should efficiently complete these wells as its first GOM operations enabling a quick production ramp up of the Delta House facility.



Pam Baudoin,

Godmother of the Sevan Louisiana



Seadrill West Neptune

# Hull Fabrication

HHI has expended 372,026 man hours. Overall progress is 58.4%.

Block Status: Of the 84 blocks, 7 are currently in the dry dock phase.

Major Equipment delivered to shipyard:

- ,GRE piping for hull
- ,CCTV equipment
- ,All 12 Fairleader brackets
- ,Riser Piping
- ,Sliding Watertight doors
- ,Fairlead Wheels
- ,Riser Porch Installation Jig
- ,Transformer and Telecom equipment
- ,Elevators and Mast
- ,Hawse Pipe closures

,Site team continues to coordinate with USCG. USCG visit was conducted on August 12-15.

,Messenger Chain heat treatment & proof load tests are underway at DaiHan.

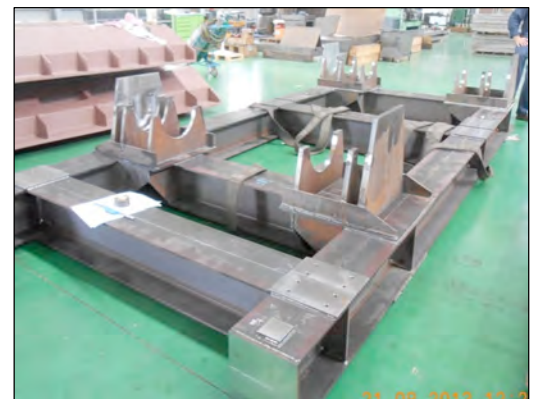
,Riser Adapter construction is underway at UNEX and Taewoong (Riser Bushing). Fabrication jig has been completed and all Riser Porch adapter plates have been cut. Assembly of Riser Porch is commencing. First bushing is now finished machining and will now move to UNEX for assembly.

,Fairlead bracket installation is on-going on South West Node.

,Site team continues Safety Walk-Downs on a weekly basis where the site team reports any discovered safety concerns to HHI for corrective action.



Pontoon Blocks in Pre-Erection Area



Riser Porch Fabrication Jig (Unex)

# Hull Engineering

Exmar Offshore Houston is in the process of closing out Phase I of the Delta House Hull detailed engineering. During Phase 2, Exmar will continue to provide engineering support to LLOG, HHI, the site team in Korea, Audubon Engineering, Kiewit Offshore and to the vendors fabricating Hull Owner Furnished Equipment (OFE).

The following are recent and ongoing activities:

- ,Mooring Chain fabrication—Ongoing
- ,Mooring Messenger Chain fabrication—Complete and ready to ship
- ,Mooring Polyester Rope fabrication—Ongoing
- ,Mooring Chain Jacks and associated equipment fabrication—Nearing completion
- ,Mooring Subsea Connector—Ongoing

Exmar representatives are witnessing fabrication and testing of hull OFE in China, Korea and Europe. Hull owner furnished equipment fabrication is ongoing as can be seen in the photo of the mooring jacking system.



Mooring Jacking System Traveling Cross Arms

## Engineering/Design:

- . Overall progress for Engineering Topsides through August is approximately 88% complete.
- . Continuing Kick-Off Meetings with Fabricators.
- . Meeting with Vendors either weekly or bi-weekly if necessary to ensure that equipment deliveries are still on time.
- . Ongoing reviews of Vendor Data Packages.
- . Issuing Piping & Instrumentation Diagrams for Design / Construction.
- . Closing out HAZOP items.
- . Issuing Plate Penetration Drawings to Kiewit.
- . Producing Issued for Construction Isometric Drawings. Approximately 2886 out of 3250 (89 %) (Revised estimated total) have been issued.
- . Incorporating vendor packages into the 3D model as they are received.
- . Coordinating with BP for the Gas Pipeline Requirements.
- . Coordinating with Shell for the Oil Pipeline Requirements.
- . Continued HMI/PLC development.
- . Receiving Automation hardware and packaging for delivery to panel vendor.
- . Ongoing submittals to DNV.
- . Continue Interfaces between Kiewit, Exmar, and Pinnacle.

## Procurement:

- . Approximately 103 total Topsides Purchase Orders will be completed at the end of the project.
- . 93 Purchase Orders (90%) have been issued (5 issued in August).
- . 5 Request for Quotation Packages are out for bid (1 issued in August).
- . 5 Packages are in Technical Development.

# Production Equipment Fabrication

Below is a snapshot of current activities that our inspectors are overseeing:

**General Marine Leasing** continues to make progress on the 38 Man Quarters Building. On Levels 1 and 2, installation continues on electrical, plumbing, duct work and rough in of walls. We are also insulating interior walls, installing wall panels, tile on galley and dry storage floors. We have completed installing a stair landing on the roof level and continue to weld support columns and diagonals for heliport supports.

The interior of the Workshop Building at **Stallion Offshore** has been fabricated and is being outfitted. The emergency lighting is the final component needed before final inspection and shipment to Kiewit.

Fabrication of the Emergency Generator Building has started at **Point Eight**. The floor, roof, vertical tubular supports and all crimp plate walls are 98% welded.

In Poland, **NOREQ** has fabricated and welded the Davit Arm for the Fast Rescue Boat. It is ready for internal components to be installed.

The Launcher/Receiver skids sit in the staging area at **Dynamic Industries**. Once all of the piping and components are on location the assembly process will begin.



Davit Arm for the Fast Rescue Boat

At **Petrex**, the IP Separator is complete and shipped to Kiewit on August 14th. Fabrication continues on Separator 2 and Separator 3. They are about 95% complete and ship out shortly. Separator 1 and the Test Separator are about 85% complete. The Gas Dehydration Skid has been blasted and primed. Fabrication is complete of pipe supports, handrails and access platform. The Inlet Filter Separator has 15 of 16 nozzles installed and 12 are welded out. The support ring has been fitted onto the separator and we are installing the 4" ss filter tubes in the tubesheet. The Glycol Contactor has 13 of 14 nozzles installed and 3 are welded out. We installed the Gas Distributor inside the Glycol Contactor and started framing up the Condensate Stabilization Skid. Received 4 vessel cylinders, 1 cone, 1 re-pad and 2 skirts. Two Coalescing Filters at Jamison Manufacturers are 70% complete. Vessel Heads at Uniform Components are 80% complete. NGL Pipeline Pumps at NOV Houston are 95% complete and waiting on run test.

The Instrument Air Skid has two compressor units that are in the assembly stage at **Airdyne**. Both are 80% complete. The main skid is 100% welded, including the deck plating. All major components are coated.

The Main Frame skid for the Potable Water system is being fabricated at **H2O**. The final paint inspection has been done and it will be outfitted with equipment shortly.

At **Blanchard Contractors**, the AFF Storage Skid's frame fabrication & welding is complete. The skid is 35% complete. Once complete, it will be sent to blast and paint. The Deluge Manifold Skid's piping and structural fabrication is complete. The skid is 75% complete. The next phase is coating the structural skid followed by assembly. The structural fabrication of the Open Drain Sump Tanks is complete and they have moved into the blast & coating process. The skid is 90% complete.

At **Heat Recovery Solution**, the Waste Heat Recovery Units are having the insulation blankets & sheeting installed inside the upper, lower and base coil casing units. Tube coils are in the pressure testing stage. Dampener frames are being installed in the (3)-base units.

Fabrication of the Glycol Regeneration Skid and the Heat Media Skid is in progress at **Integrated Flow Solutions**. The Glycol Overhead Cooler Fan fabrication is complete and ready for inclusion on the Glycol Skid. Fabrication of the Glycol Surge Drum, Charcoal Filter, and Cartridge Filters is also complete. The Expansion Tank, Circulation Pumps and Pump Motors are nearing completion.

**Pecofacet** has completed the Fuel Gas Coalescing Filters and Fuel Gas Preheater. Both are being shipped to **Moore Controls** where the Fuel Gas Skid will be assembled. The Fuel Gas Scrubber is 90% complete and will ship shortly.

The kingpost is in the fabrication area at **Wagner Plateworks**. The transition section is the final component to be welded to the kingpost. Once complete, the kingpost structure will be shipped to blast and paint followed by to shipment to **Seatrx**.



Compressor Unit at Airdyne



Emergency Generator Building



Cooler for the Glycol Regeneration Skid

## Lower Level Framing:

The lower level framing center box was floated to the skid ways and then the East and West sides were lifted into position onto the center box. Once secured, the Northeast and Northwest corners were installed and tied into the main structure. The South end, Southeast and Southwest corners will be installed after the upper level framing float. Some of the handrails are being installed on the lower level.

## Upper Level Framing:

The upper level framing continues, as well as, installing light stanchions, deck plate, drain troughs, combing, pipe supports and bearing pads. The South end will be removed for the lift of the upper level. The upper level will be raised to a higher level once the painting is complete. This will allow for installation of pipe supports and piping below the framing prior to floating over the lower level. Blasting and priming has begun on sections of the upper level.

## Miscellaneous:

Pipe spooling is in progress at a sub-contractors site. Pipe spools are soon to start arriving at the fabrication site. The spools will come complete including painting.

The production module upper level framing is being fabricated in the shop. Most of the beams have been completed and deck plate and drain troughs are being installed. The mezzanine level of the production module has been moved to the yard with only a few intercostal beams to be installed. Also, light stanchions, pipe supports and bearing pads are being installed in preparation for blasting and painting.

Pipe supports continue to be fabricated, blasted and painted.

The framing of the compression module has begun in the shop.

Pipe racks #1, 3 and 4 have been fabricated and painted. Pipe racks #5 and 6 have been fabricated and are being painted. This completes the pipe racks.

The ADCP skid has been outfitted with winch and pulleys. Only 2 handrails and grating remain to be installed on the skid.

Assembly of skids and vessels is in progress. Pumps were installed on the flare scrubber skid, platforms and ladders were installed on the oil treater vessels, and legs and braces were installed on the coolers.

Valves, vessels and miscellaneous company supplied items continue to arrive weekly. The valves and miscellaneous items are being painted weekly.



Lower Level Framing



Upper Level Framing



Legs and bracing installed on four large coolers

## TOPSIDES

### Chemical Injection Module:

- Held fabrication kickoff meeting with Omega on 8/5/13. Issued AFC drawings to Omega, and fabrication of the module is currently in progress.
- Fabrication of the Methanol Distribution Panels is in progress. Projected completion is mid-September.
- Successfully completed the function test and hydrotest of the Hammelmann pumps on 8/16/13. Pumps were shipped to Omega.
- Received and approved structural analysis from AGI Industries for the Chemical Tank. Received and reviewing piping and tank drawings from AGI Industries. They are currently ordering materials.
- Received and approved drawings from Tech-Quip for the Chemical Storage Tank Level Gauges and Transmitters. Fabrication is in progress, and projected completion is mid-October.
- Projected delivery for the Chemical Injection Skid is 12/15/13.



Hammelmann Pump

### Hydraulic Power Unit (HPU) and Toppides Umbilical Termination Assembly (TUTA):

- Received approval drawings from Omega. Waiting on structural analysis report for review and approval. Pumps and filters have been ordered.
- Working on getting hydraulic system information package together to send to DNV for approval.
- Issued AFC P&ID drawings to Omega.
- Projected delivery for the HPU and TUTAs is 12/15/13.

### VK 817 Receiver and Launcher:

- Issued revised P&ID drawings and SAFE Chart to Shell and Enterprise. Received preliminary approval from Shell and are currently reviewing comments from Enterprise.
- Confirming VK 817 launcher and receiver setup and operation with LLOG before responding to Shell and Enterprise.

## SUBSEA

- Preparing the Deepwater Operations Plan (DWOP) attachments.
- The first shipment of pipe from Sumitomo (8" SCR pipe, 8" line pipe, 12" SCR pipe) arrived in New Orleans on 9/1/13. The second shipment (6" SCR pipe, 16" SCR pipe, partial 6" line pipe) departed Japan 8/20/13 and is scheduled to arrive in New Orleans on 10/12/13. Production of the remainder 6" line pipe is almost complete and is scheduled to ship mid-September. We are working with Sumitomo to ship via air freight 12 joints of 6" line pipe for early September delivery for weld qualifications.
- V&M has completed 15% of the 16" line pipe fabrication. The first shipment of the 16" line pipe is scheduled to leave Germany on 10/4/13 and arrive in the US in mid-November.
- LLOG and pipeline installation contractor finalized the amendment to the Master Construction Contract. Award will be executed once contractor submits a final proposal. Contractor is continuing to progress the pull-in Orcaflex analysis. They have reviewed and commented on the first draft of the proposed pipe delivery and coating schedule. Developing the proposed welding and NDE matrix.
- RTI began forging titanium components of the stress joints and are performing their FEA (finite element analysis) and developing the manufacturing ITP (inspection and test procedure). 2H is still pricing the steel components elsewhere, and expect to issue Purchase Orders in early September. Expected delivery on steel components is mid-January 2014.
- Held third pull-in meeting with LLOG, Versabar, Exmar, pipelay contractor, and Audubon. Exmar has completed design of the steering winch padeyes and issued AFC drawings to Hyundai. Versabar has finalized the main winch and turndown sheaves. Exmar is working on detail of sheave to deck attachments. Versabar sent out their latest pull-in model to the team on 8/6/13.
- Issued Purchase Orders to Duco for subsea umbilical fabrication.
- Received and approved electrical analysis from FMC using 16 mm quad size.
- Performed an onsite inspection of Callon Petroleum's existing VIV strakes to be used for the 12" oil pipeline. Currently negotiating terms of the purchase from Callon. Issued Purchase Orders to AIMS for the remaining riser VIV strakes.



Railcar Loadout of 16in Line Pipe in Germany