A CASE STUDY
CASIM INSTALLATION OF SUCTION PILE AND MANIFOLD

Abstract
During 2009, InterMoor personnel provided heave compensation services using the CASIM (Compensated Anchor-handler Subsea Installation Method) system for installation of a subsea foundation and manifold. The system performed admirably and allowed the pile to be landed within 9 in of the target at a depth of 4,851 ft.

Field Information
The Rockefeller field is a portion of the Hoover/Diana Spar Subsea interface. This well, located 120 miles offshore, contains reserves in excess of 100 million barrels of oil equivalents in two zones. The manifold allowed the tie-in of the Rockefeller well to the existing Madison well infrastructure.

Mobilization
Mobilization took place from InterMoor’s Port Fourchon dock because of the ready access to the 880 ton “Cajun Lifter” crane. The suction pile and manifold were delivered by material barge the morning of March 12 and loaded onto the Emerald for departure at 11 p.m.

Transit to Work Site
Transit to the job site took approximately 33 hours and was broken up by a test ROV dive about halfway there at Vermilion Block 395. The vessel arrived at Alaminos Canyon Block 24 at 8:15 a.m. March 14 and immediately set to work deploying the survey equipment. By 8 a.m. March 15, the survey team was ready for operation.
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Overboarding the Suction Pile

The morning and early afternoon of March 15 were spent preparing the CASIM units for deployment and hooking up the rigging. At 3:10 p.m., the suction pile was overboarded with the knuckle-boom crane in preparation for subsea transfer to the tower crane and CASIM rigging. Once the subsea transfer had occurred, it took about three hours to lower the pile into position and touch down at the sea floor. Self-weight penetration was 24.5 ft into the seabed. CASIM units allowed such precise control of the payload that the pile was landed within 9 in of the precise location it was intended to go. The final inclination of the pile was less than 1 degree from vertical in all directions. This was well within the allowed tolerance of ± 3 degrees from vertical.

Overdeploying the Manifold

The CASIM units were recovered to the deck and the pressure adjusted for the lighter manifold payload. After adjustment, the rigging assembly was again suspended from the tower and lowered through the moon pool. At 1:35 p.m., the manifold entered the water, and by 1:40 p.m., the subsea transfer to the tower crane rigging was complete. By 4:56 p.m., the manifold had landed on the suction pile. The manifold was secured on the pile using ROV manipulated locking bolts.

Summary

Once on site, the installation of the foundation pile and manifold well was completed within a 48-hour period. The final alignment and location of the manifold was within the required specification. Later the same year, InterMoor installed the jumpers for the manifold completing the tie-in.

Conclusion

When precise package control is required and the schedule is tight, InterMoor delivers the package that is right. Representatives from the client company were pleased with the work done and contracted InterMoor to complete the jumper installation and hookup later that year.

Subsequent successes with the client further strengthened the client-customer relationship. Contact InterMoor and give us the opportunity to succeed on your next installation project. You won’t regret it.

InterMoor is the leading global mooring, foundations and subsea services company, providing innovative solutions for rig moves, mooring services and offshore operations including engineering and design, survey and positioning, fabrication and subsea installation.

Deploying the CASIM units in series from the tower crane

Making the subsea rigging transfer

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