



SOPHY M. LAUGHING, PH.D., MBA
TECHNICAL CAREER DECK
PROJECT HIGHLIGHTS 2008-2025

GLOBAL LEADER. SUSTAINABLE INFRASTRUCTURE. COMMUNITY RESILIENCE.

Dr. Sophy M. Laughing is a global executive with a record of delivering infrastructure that protects both people and ecosystems. Over the course of her career, she has led critical energy, conservation, and preservation initiatives across four continents, often in settings shaped by geopolitical tension, environmental fragility, and public trust.

From securing the constitutional archives of Mexico to leading the design-build of offshore wind platforms in Southeast Asia, her work reflects a lifelong commitment to enabling communities to thrive. She has directed large-scale programs in clean energy, cultural infrastructure, and sustainable development, always with a focus on consensus-building, accountability, and long-term resilience.



DrSophy@sophylaughing.com

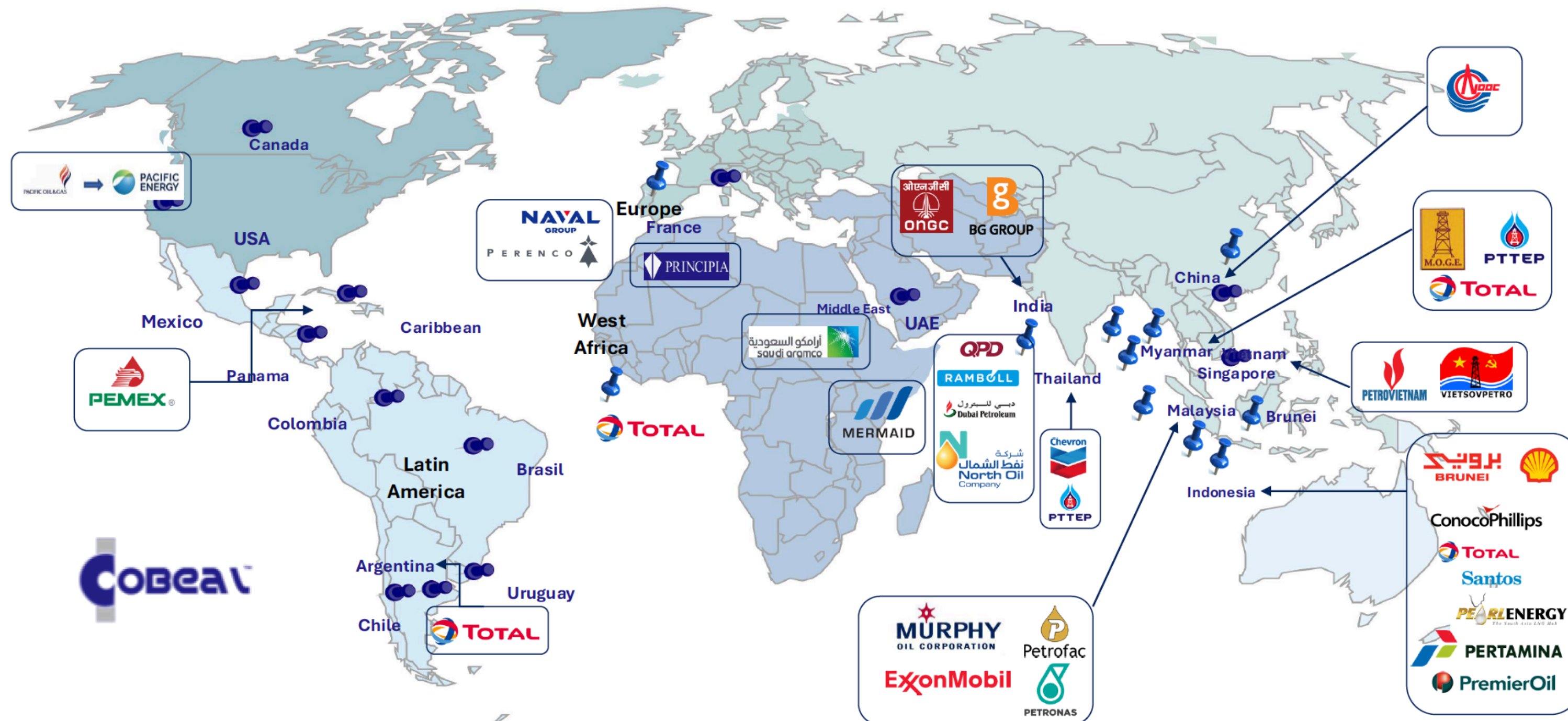


TABLE OF CONTENTS

SCALING GLOBAL OPERATIONS	03
WORKING WITH GLOBAL MAJORS	04-06
LEADING OFFSHORE PROJECTS	07-15
LEADING COMPLEX ENGINEERING PROJECTS	17-24
LEADING COMPLEX ONSHORE PROJECTS	25-32
PARTNERING WITH INDUSTRY LEADERS	33
LEADERSHIP STYLE	34
THOUGHT LEADER	35
AWARDS AND RECOGNITION	36
COMMUNITY-MINDED	37
CONNECTING WORLDS	38



SCALING GLOBAL OPERATIONS





SOPHY M. LAUGHING, PH.D., MBA

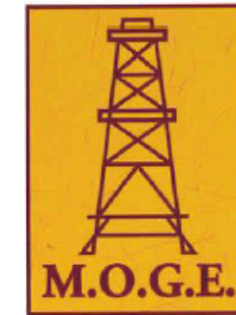
WORKING WITH GLOBAL MAJORS





SOPHY M. LAUGHING, PH.D., MBA

WORKING WITH GLOBAL MAJORS





SOPHY M. LAUGHING, PH.D., MBA

WORKING WITH GLOBAL MAJORS



P E R E N C O





In 2008, Cobeal supported the EPC delivery of a CALM Buoy mooring system for the Caspian Sea FSO under Pape Engineering, serving Murphy Oil and Petronas Carigali. Operating in one of the world's most geographically sensitive maritime corridors, this project required disciplined planning, coordinated logistics, and durable infrastructure able to withstand extreme marine conditions.

Our engineering team contributed to installation strategy to help ensure the project's operational readiness in a technically demanding region.

This work reflects our longstanding approach, which is to deliver resilient infrastructure projects through trusted partnerships, while supporting regional systems that connect energy access to economic and civil stability.

EPC of CALM Buoy for CASPIAN SEA FSO

Caspian Sea Field, Malaysia
2008



Engineering, Procurement & Construction of SPM Buoy mooring system for Caspian Sea FSO at West Patricia Field for Murphy Oil / Petronas.

Scope of Work:

- Design & Fabrication of an SPM Buoy
- Procurement of all critical components

Specifications:

- 150 MT disconnection criteria
- Diameter: 11m – Overall Height: 8m
- Single-path 8" Product Swivel Unit (PSU)
- Moored by Drag Anchors & 76 mm Stud-less Chain Legs
- Certification by Lloyd's Register (LR)

The specification of the FSO (Caspian Sea) are as follows:

- 105,000 DWT
- Double chain stopper & Hawser Arrangement

Leading Offshore Projects



In 2009, Cobeal supported the EPC of a CALM Buoy system for the East Fortune FPSO in the Kakap Field, Borneo, alongside Swiber and Pape Engineering for Star Energy.

The project required replacing a turret mooring system during active production, demanding precise anchoring, load analysis, and continuous operations.

Cobeal provided engineering support for installation sequencing, anchor spread coordination, and ABS compliance, helping the project move forward without disruption.

In one of the region's most complex offshore settings, our role underscored the importance of trusted partnerships, detailed planning, and reliable execution.

EPC of CALM Buoy for FSO

Kakap Field, Borneo
2009



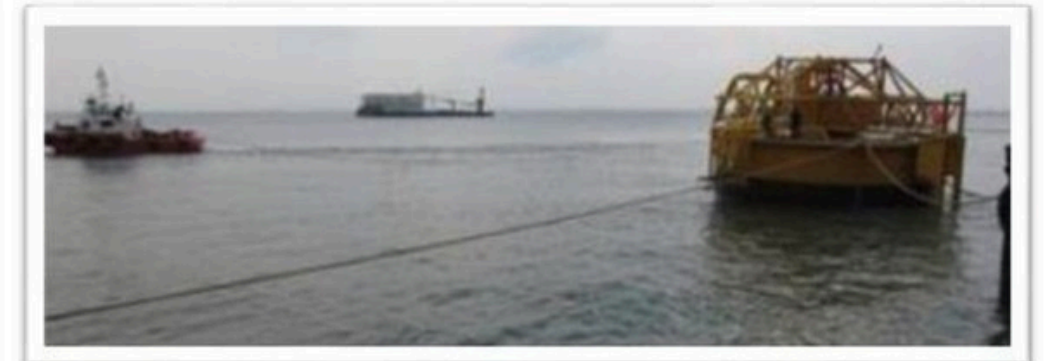
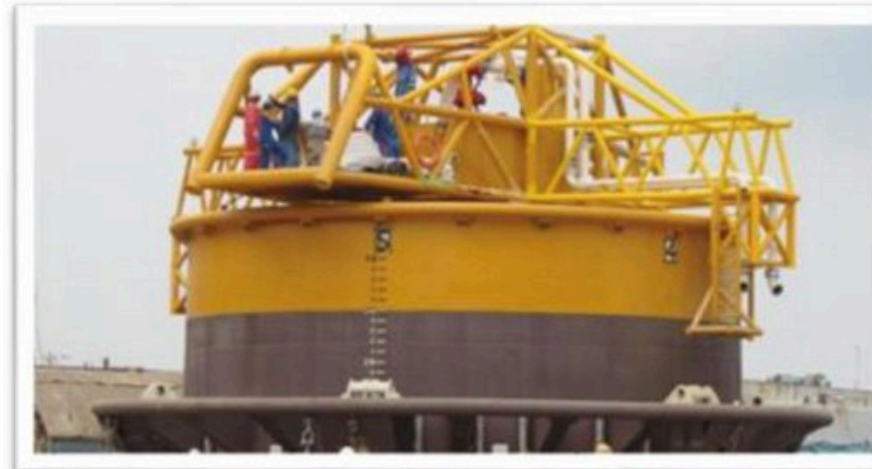
Engineering, Procurement & Construction of CALM Buoy for EAST FORTUNE FPSO. Replacement of KAKAP NATUNA existing turret mooring system. Installation of new SPM Buoy and hook-up to EAST FORTUNE FPSO.

Specifications:

- Diameter: 11m – Overall Height: 8m
- Moored by Drag Anchors & Stud-less Chain Legs
- Certified by American Bureau of Shipping (ABS)

The specification of the FSO (East Fortune FSO) are as follows:

- 55,000 DWT
- Single chain stopper & Hawser Arrangement



Leading Offshore Projects



The offshore projects for ONGC and Brunei Shell represent Cobeal's contributions under Swiber and Pape Engineering, while our onshore infrastructure developments were executed directly through Cobeal's leadership.

From the float-over installation of ONGC's B193 process platform in India to the multi-year platform and pipeline installations for Brunei Shell Petroleum, these efforts demonstrate the strategic importance of engineering leadership in delivering resilient infrastructure.

Operating at water depths ranging from 40 to 75 meters, each project demanded technical accuracy, coordinated execution, and long-term operational reliability.



FLOAT-OVER INSTALLATION



Client	ONGC
Project	B193 Process Platform
Location	India
Period	2011 – 2012
WD	75 meters



PLATFORM & PIPELINE INSTALLATION



Client	Brunei Shell Petroleum
Project	Various platform & pipeline installation projects
Location	Brunei
Period	2007 – 2014
WD	40 to 60 meters

Leading Offshore Projects



In 2012, Cobeal supported Swiber in the EPCI of two CALM Buoys for the Sabah Oil & Gas Terminal in Kimanis, Malaysia.

These offloading systems enabled continuous crude transfer from storage to international tankers in a high-traffic maritime corridor.

Cobeal provided interface engineering, fabrication oversight, and execution support, ensuring safe mooring and operational continuity.

This project advanced regional energy access while reinforcing the role of precise, accountable engineering in high-impact environments.

EPCI of 2 CALM Buoys for OFFLOADING TANKERS

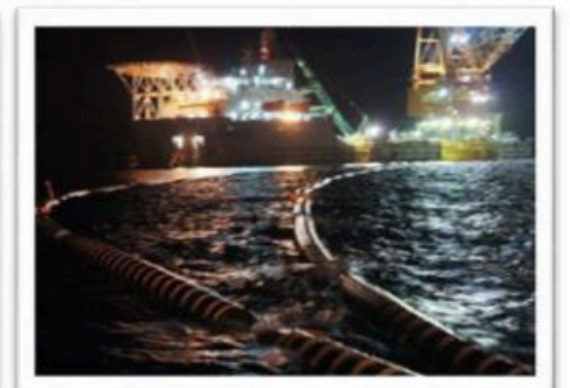
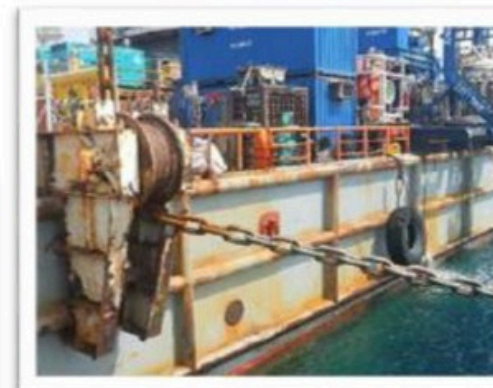
Sabah Oil & Gas Terminal (SOGT), Kimanis
Completion 2012



Simultaneous Engineering, Procurement, Construction & Installation (EPCI) of two CALM Buoys aimed at berthing shuttle tankers at Kimanis Field.

Specifications of SPM Buoy:

- [SPM1] 250,000 DWT export tankers with a flowrate of 50,000 bbl/hour
- [SPM2] 120,000 DWT export tankers with a flowrate of 25,000 bbl/hour
- 29m water depth
- ABS Classification
- 2 x 20" 300m long under-buoy hoses



The installation campaign consisted of the following:

- Coordination of logistics and clearances of all installation equipment
- Transportation of all major assets South Kimanis
- Chain prelay & Pull test at design tension using anchored construction barge
- PLEM Installation
- Transportation of SPM Buoys and hookup to mooring chain legs
- Riser tie-in & Floating hose installation
- Pre-Commissioning as per ABS requirements

Leading Offshore Projects

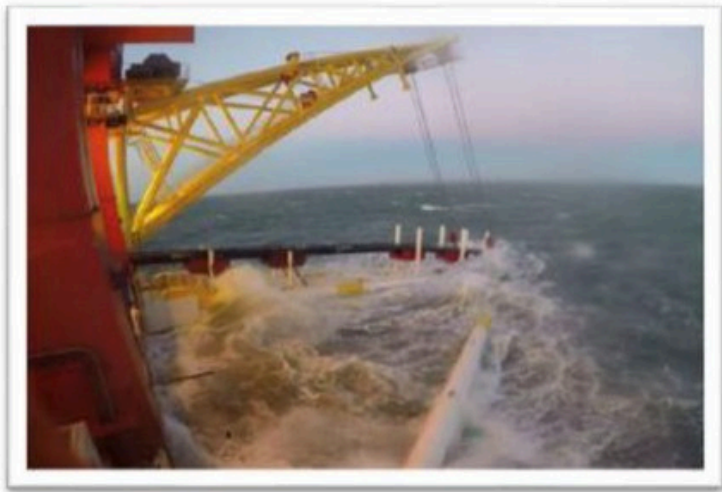


Cobeal was brought in to provide basic engineering for these projects.

Each required early-phase technical modeling and design coordination in marine environments marked by seismic, logistical, and geopolitical complexity.

Our role was to lay the groundwork for infrastructure that would deliver long-term regional energy access while adhering to strict environmental and safety criteria.

By working closely with local teams, Cobeal's enabled these multi-year programs to move forward with clarity, precision, and resilience.



PIPELINE & PLATFORM OFFSHORE INSTALLATION



Client	TOTAL EP
Project	Vega Pleyade
Location	Argentina
Period	2014 - 2015
WD	75 meters



EPCI OF 24” PIPELINE FROM SHORE TO 160M (230KM)



Client	PTTEP International Limited
Project	Zawtika Development Project Phase 1A
Location	Myanmar
Period	2012 - 2013
WD	0 – 160 meters

Leading Offshore Projects



Cobeal has supported critical subsea pipeline infrastructure for decades, with deep roots in Mexico and long-standing collaborations across Southeast Asia.

For the PEMEX L5 pipeline project, Cobeal led technical planning and interface engineering, ensuring safe and efficient subsea execution.

In Brunei, we were engaged under Pape Engineering to support flexible pipeline installation as part of Brunei Shell’s EPCI campaign.

These projects reflect our evolution from technical consultants to long-term partners, trusted to safeguard essential energy delivery systems.

Throughout each engagement, environmental compliance, technical adaptability, and seamless stakeholder coordination remained non-negotiable.



36” PIPELINE EPCI

Client	PEMEX
Project	L5 pipeline EPCI (77km of 36” pipeline, incl. HDD)
Location	Mexico
Period	2014
WD	0– 30 meters



EPCI OF FLEXIBLE PIPELINE; UMBILICAL & POWER CABLE

Client	Brunei Shell Petroleum
Project	Champion Water Floor Project • 12 Flexible Flowlines *8”, 12”, 16”) – 20km • 8 Umbilicals • 4 Composite Cables
Location	Brunei
Period	2012 – 2014
WD	40 meters



Leading Offshore Projects



In 2014, Cobeal supported Swiber in the EPCI of a CALM Buoy system for the Manora FSO in the Gulf of Thailand.

Our team contributed to marine interface engineering and mooring system integration, supporting uninterrupted offshore operations.

The project surpassed global safety benchmarks with over 200,000 incident-free man-hours, reflecting a strong culture of precision and zero-harm execution.

Cobeal's role reinforced the importance of aligned teams and resilient infrastructure in complex marine environments.

EPCI of CALM Buoy for MANORA FSO

Manora Field, Gulf of Thailand

Completion 2014

Engineering, Procurement, Construction & Installation of CALM Buoy and associated mooring system and subsea components for Pearl Energy's Mannora Field.

As part of the development of Manora Field offshore Thailand – design and fabricate an ABS-classified SPM Buoy, supply mooring as well as provide services for the installation of the mooring system, 2 (two) NOS flexible risers and floating hose strings.

The SPM Buoy specifications were as follows:

- 200 MT disconnection criteria
- Tropical Environment
- Diam. 11m; Overall Height 8m
- Two-path 8" Product Swivel Unit (PSU) – Piggable
- Moored using Drag Anchors & Stud-less Chains
- Fabrication of SPM Buoy in Batam, Indonesia

The FSO specifications were as follows:

- 96,000 DWT MANORA FSO
- Double chain stopper



Installation executed mid-2014 using a work accommodation barge with air and saturation diving, including the following SOW:

- Transportation & Installation of all assets to Manora Field
- Obtain Marine Warranty Surveying & ABS approval
- Coordination of logistics and clearances of all installation equipment
- Chain pre-lay using construction barge for a pull test up to the required tension of 160 MT
- Wet-tow and positioning of an SPM Buoy
- Subsea riser and floating hoses leak test and installation
- Installation of mooring hawsers and hookup to FSO



No incident reported during the entire installation campaign for a total of more than 200,000 man-hours

Leading Offshore Projects



The EPCI of the CALM Buoy for the Vantage FSO in Thailand's Wassana Field was completed just five months after contract award.

As Swiber's technical partner, Cobeal supported basic engineering, marine interface design, and planning.

With over 135,000 incident-free man-hours, the project delivered safe, high-performance mooring under extreme tropical conditions.

Cobeal's role reflected our commitment to timely execution, safety, and dependable offshore infrastructure in critical energy zones.

EPCI of CALM Buoy for VANTAGE FSO

Wassana Field (Block G10/48), Gulf of Thailand
Completion 2015



EPCI of a BV-classified SPM Buoy, mooring chains legs, drag anchors, floating hoses and installation of all items procured, including 2 x 2km of flexible hoses, stabilizing mattresses and positioning of production jack-up (MOPU Ingenium).

The SPM Buoy specifications were as follows:

- 200 MT disconnection criteria
- Diam. 11m; Overall Height 8m
- Tropical environment with 100-year RP Hs of 4.7m
- Two-path 6"/4" PSU
- Moored by 12-MT Drag Anchors & 76 Stud-less Chains

The FSO (Vantage) specifications were as follows:

- 72,000 DWT
- Single chain stopper



The installation campaign consisted of the following:

- Transportation & Installation of all assets to Wassana Field
- Obtain Marine Warranty Surveying & BV approval
- Coordination of logistics and clearances of all installation equipment
- Anchor prelay carried out with AHT 220 MT BP AHT at a tension of 150 MT
- Dry tow, lifting and hookup of an SPM Buoy
- Transportation of 2 x 2km of flexible hoses, including buoyancy module and 63 concrete mattresses
- SPM Buoy, flexible line and MOPU installation campaign carried out with crane barge with 1.100Mt capacity and 5 AHTs

The installation of all the field assets, including the procurement of all items were completed 5 months after contract award.



No incident reported during the entire installation campaign for a total of more than 135,000 man-hours

Leading Offshore Projects



For the EPCI of a CALM Buoy in Sharjah, UAE, Cobeal supported Swiber with basic engineering, structural review, and interface coordination.

The result was a BV-certified SPM Buoy with enhanced durability and performance for harsh marine conditions.

Our contributions in early-phase design and fabrication oversight helped ensure smooth integration into one of the region's busiest offloading zones.

This project reflects Cobeal's ability to deliver technical value and support sustainable offshore logistics through innovation and collaboration.

EPCI of CALM Buoy for OFFLOADING TANKERS

Sharjah Stock, UAE
Completion 2016

Engineering, Procurement, and Supervision of fabrication of an offloading SPM Buoy in Sharjah (UAE).

The generic specifications of the SPM Buoy supplied are as follows:

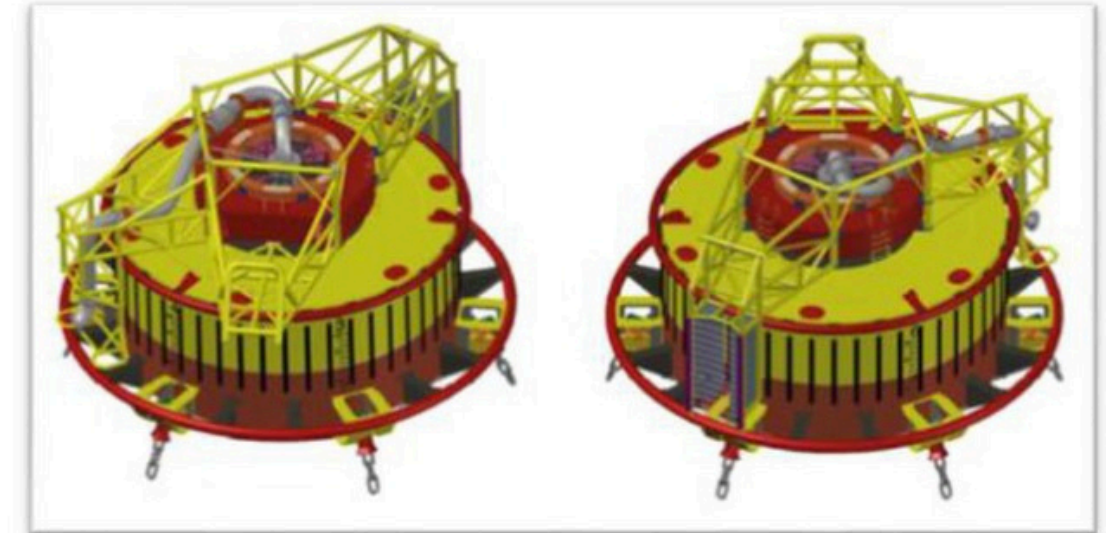
- 100 MT disconnection criteria
- Diam. 9.5m; Overall Height 6m
- Operating environment with Hs of 2.5m
- Single-path 16" PSU
- Moored by 4.5-MT Drag Anchors & 64mm Stud-less Chains

The generic offloading tanker specifications were as follows:

- 40,000 DWT
- Single chain stopper

Scope of Work:

- Design of a BV-certified SPM Buoy
- Procurement of critical items, including main slewing roller bearing, etc.
- Supervision of the fabrication and testing



Leading Offshore Projects



Founded by Sophy in Singapore, Hollsten Enterprises (HE) provided offshore engineering support to Principia in France, delivering projects across Asia, Europe, and the Middle East from 2016 to 2023.

HE focused on early-phase design and technical consulting for complex marine infrastructure. After its acquisition by The Cobeal Group in 2023, its expertise and partnerships were reintegrated into Mexico and LATAM.

Projects required structural design, risk analysis, and procurement interface, coordinated with global experts to support long-term offshore resilience.



Support for onshore OTEC project

Phase 1

- Provide a description of installation & construction steps (means, aids, required vessels, preliminary prep work) for 3 concepts.
- Pros & Cons of 3 concepts for installation and construction requirements.
- Assessment of key risks and consequences during installation & identification of possible mitigation.
- Confirmation of feasibility of installation supported by calculations.

Phase 2

- Schedule for installation procedures outlined in P1.
- Cost estimation for installation and construction steps.
- Support during the estimation of costs related to the design/procurement.
- Deliverables Technical report summarizing outcomes Phases 1 & 2. Sketches of installation procedures.

Intervention on the NEMO-SPAR TOURET project for DCNS

- Provision of budget and sketches.
- Support Principia for DCNS for NEMO-SPAR TOURET anchored system, including mechanical characteristics, fatigue behavior, operating limits, and EF-driven interface.



SPM Third-Party Design Review

- Engineering contract supporting Principia for DPE in the SPM Third Party Design Review, with upgrade recommendations, including commentary on relevant technical documents.
- Calculation notes for the input data and hypothesis.
- Options Site Survey, Repair Proposal, Repair/up-grades design, and site supervision.



Basic Concept for Jack-Up Barges 38M & 60M

- Basic Concept for JUB 38M & 60M
- Performance of 3D drawings for JUB 38M & 60M concept / basic phase

Detail and Overall Design of Jack-Up Barges 38M & 60M

- Detail and overall design for JUB 38M & 60M
- Performance of 3D drawings for JUB 38M & 60M

Leading Complex Engineering Projects



HE partnered with Principia Group (France) to accelerate offshore design development and validation in support of projects for Dubai Petroleum, Perenco, and Naval Group. In each engagement, speed to execution was critical—but never at the expense of precision or safety.

By coordinating third-party reviews, feasibility modeling, and cost estimation in parallel, our teams helped reduce lead times while maintaining technical and regulatory rigor. This integrated approach enabled the timely advancement of high-stakes marine infrastructure in rapidly evolving operational contexts.



Support for onshore OTEC project

Phase 1

- Provide a description of installation & construction steps (means, aids, required vessels, preliminary prep work) for 3 concepts.
- Pros & Cons of 3 concepts for installation and construction requirements.
- Assessment of key risks and consequences during installation & identification of possible mitigation.
- Confirmation of feasibility of installation supported by calculations.

Phase 2

- Schedule for installation procedures outlined in P1.
- Cost estimation for installation and construction steps.
- Support during the estimation of costs related to the design/procurement.
- Deliverables Technical report summarizing outcomes Phases 1 & 2. Sketches of installation procedures.

Intervention on the NEMO-SPAR TOURET project for DCNS

- Provision of budget and sketches.
- Support Principia for DCNS for NEMO-SPAR TOURET anchored system, including mechanical characteristics, fatigue behavior, operating limits, and EF-driven interface.



SPM Third-Party Design Review

- Engineering contract supporting Principia for DPE in the SPM Third Party Design Review, with upgrade recommendations, including commentary on relevant technical documents.
- Calculation notes for the input data and hypothesis.
- Options Site Survey, Repair Proposal, Repair/up-grades design, and site supervision.



Basic Concept for Jack-Up Barges 38M & 60M

- Basic Concept for JUB 38M & 60M
- Performance of 3D drawings for JUB 38M & 60M concept / basic phase

Detail and Overall Design of Jack-Up Barges 38M & 60M

- Detail and overall design for JUB 38M & 60M
- Performance of 3D drawings for JUB 38M & 60M

Leading Complex Engineering Projects



Delivering offshore systems requires strong technical leadership and cross-border coordination.

For the Al Shaheen field in Qatar, Hollsten Enterprises supported Principia in detailed engineering review for North Oil Company and Mermaid.

HE validated mooring designs, assessed structural integrity, and supported mobilization planning to ensure safe, compliant execution.

These contributions enabled timely refurbishment and operational continuity in one of the region’s key fields, reflecting my focus on disciplined, collaborative delivery.



SMP BUOY – BLUE WATER Al Shaheen Project for NOC

- “Call for Tender” for the repair/overhauling work, and the offshore operations, including removal from the site, towing to and from the Dry-Docking Yard, and installation.
- Disconnect blue water type, tow to refurbishing yard in Qatar, and reconnect for Al Shaheen project for NOC (North Oil Company).
- NKom Qatar teamed up with MERMAID Subsea Qatar to carry out the onshore-refurbishment of the buoys and MERMAID Subsea took the lead on the project, developing and performing the Offshore operation request, including the Pre-Engineering package.
- In the context of a CCFT, MERMAID prepared the Pre-Engineering and requested Engineering Services Support. MERMAID to prepare and submit relevant work procedures, descriptions, and drawings.



Detail Engineering Review and Analysis for Al Shaheen Project for NOC

Phase 1

- Review of MERMAID Procedures to disconnect floating hoses, the mooring hawser, and the under-buoy flex hoses.
- Review of MERMAID Procedures to install the towing bridle and the SPM Buoy to the Yard.
- Review of MERMAID Procedures to tow and reinstall the SMP on-site.

Phase 2

- P2 Inspection of the SPM.
- P2 Floating hose disconnection, excluding crude oil and cleaning of water return lines.
- P2 Tanker mooring line disconnection.
- P2 Under-buoy, 2 flexible lines disconnection, and recovery, excluding PLEM valves, closing, and saturation diving procedures.
- P2 Step-by-step 9x anchor chains disconnection and the laying/abandonment on the sea bottom.
- Installation of towing gears.
- Towing Tug, main characteristics.
- Buoy tow to refurbishing yard.
- Forecasted mobilization under DeepLines software (static and dynamic simulations).

Leading Complex Engineering Projects



Long-duration offshore projects require technical precision and strong coordination over time.

For the QPD MOL 10” Pigging Project, Hollsten Enterprises supported Principia across 13 phases, working with QPD and Ramboll.

HE’s role included planning, barge and diving interface reviews, and procedural design to ensure regulatory compliance and operational continuity.

These efforts helped sustain safety, clarity, and infrastructure integrity throughout the project lifecycle.



**QPD MOL 10” PIGGING – Procedure for PLEM and Flexible & Rigid Pipe Handling
Phase 1**

- SPLIT QPD / RAMBOLL Project
- Develop the work procedures, drawings, and related documents for the technical offer.
- All activities performed onsite with high level of coordination between the barge Superintendent/crew, and the diving team through the Diving Superintendent and Diving Supervisor.
- Permanent communication contact was maintained with QPD Representatives and the GIP Platform Production Manager due to the pipeline being in operation.
- Relevant work permit(s) requests submitted to GIP Production Manager and HSE Manager to obtain the necessary authorization(s) to proceed.
- Procedure for handling PLEM, the flexible line and/or rigid pipe that will cover the preparation on the barge of the items to be connected to the PLEM, such as precautions for lifting, lifting from the barge, lowering, and connecting to PLEM, and then leak testing the connections prior to opening valves to start pigging operations.
- Specific devices described in order to avoid oil spillages.
- PLEM subsea preparation, detail description, including diver familiarization with workplace, environment, access to the valves, flanges, etc.
- Detailed diving work procedures, focusing on safe work execution, tools to be used and related contingencies. Diver work observed using the ROV.
- Clean the PLEM prior to starting the work. ROW available on the barge to perform inspection upon barge arrival and onsite setup.
- Procedures to handle the flexible lines, rigid pipes/riser, manifold, filter and other components on barge – to be connected, disconnected, cleaned, stored, etc. = developed with the idea to avoid spillage.
- H2S in Crude Oil addressed for Safety.
- Detailed methods for keeping flexible line steady to avoid excessive motion, kicks, and/or damages.
- Precautions and Recommendations concerning the safety of the people working on the barge, in direct relation, with the work and in consideration of the Crude Oil fluid to be handled, including pressure, temperature, and H2S content.



**QPD MOL 10” PIGGING – Barge Specification & General Arrangement Drawings
Phase 2**

- SPLIT QPD / RAMBOLL Project
- P2 JACK-UP Barge to be used as support for the pigging operation. Eight-point moored barge analyzed given the drawback of being in motion as an effect of waves. Effect may provide detrimental to safety of the operations in consideration of the connection made between the surface and the subsea PLEM.
- P2 Specifications and Requirements specific to the Pigging Work and Location to be established
 - Free work surface area, deck load/sqm.
 - Lifting capacity and crane(s) location
- P2 Barge Specific data
 - Lifesaving equipment
 - Communication equipment
 - Navigation aids
 - Lighting
 - Power requirements for pigging activities
 - Access to/from the barge
 - Helideck
- P2 General and Detailed Arrangement of the deck presented in drawings, indicating the location of the equipment, diving equipment, ROV, control cabins, access, safe muster point, and the areas where equipment sea fastening/lashing is required.
- P2 Multipurpose Self Elevating Platform used as drilling support.

Leading Complex Engineering Projects



QPD MOL 10" PIGGING – Filter Handling Procedure on Barge

Phase 3

- SPLIT QPD / RAMBOLL Project
- Deliver filter consisting of pressure vessel with two (2) flanged connections fitted with ball valves, pressure gauges, level gauges, vents, and lifting pad-eyes, with support welded into it.
- Access for samplings (located on the bottom).
- Filter in line, positioned after pig receiver. Add a by-pass to isolate the filter.
- Detailed pigging analysis to indicate whether two (2) identical filters are to be provided.
- Every precaution is implemented to avoid spills during connection/disconnection/sampling and handling activities.
- Spill containment tray installed under filter unit.
- Mobilize and install filter and secure on the barge deck prior to moving the barge into location.

QPD MOL 10" PIGGING – Design of Filter System

Phase 4

- SPLIT QPD / RAMBOLL Project
- Design filter unit as a pressure vessel, its internal volume to contain the debris, to be evaluated on the sound assumptions according to the fouling inside the 10" x 40km pipeline. It will be connected in line, after the pig receiver on the barge.
- Basic Design to avoid the need to interrupt the pigging operations, and to avoid the necessity of requiring access to the filter elements during operations.
- Design filtering units to recover the debris once categorization classification is identified.
- Connect to bring the filter inline, performed by flanges with isolating valves. Pressure and level gages and vents added.
- Sampling devices fitted at the top and at the bottom.
- Bypass piping and valves are included as part of the system.



QPD MOL 10" PIGGING – Debris Handling Procedure

Phase 5

- SPLIT QPD / RAMBOLL Project
- Develop procedures to safely extract the debris from the filters.
- Develop storage and disposal procedures.
- Safety precautions were identified considering the Crude Oil and H2S content.
- Debris was handled after the barge returned to port at the quayside.
- Deliver debris samples to a specialized laboratory for analyses, determined by QPD, with corresponding instructions passed along to the Contractor.

QPD MOL 10" PIGGING – Work Pack for ILI Contractor

Phase 6

- SPLIT QPD / RAMBOLL Project
- Prepare 'Work Pack' instructions to Bidders' package based on the engineering studies, approved by QPD, sent to pre-selected Inline Inspection Companies (INI).
- Work Pack Contents:
 - Technical documentation available within the MOL 10" cleaning and inspection engineering study.
 - Terms, conditions, and contractual aspects as standard component for QPD.
 - Technical section of after related engineering work is ready.
 - Manage company performing MOL 10" cleaning and inspection engineering study.
 - Analyze the submitted ILI Contractor bids.

Leading Complex Engineering Projects



QPD MOL 10" PIGGING – Contingency Plans

Phase 7

- SPLIT QPD / RAMBOLL Project
- Deliver contingency plans considering the following risks:
 - **Oil spillage:** Floating oil boom deployed permanently around the work area; dispersant will be ready to spread, if necessary.
 - **Pig stuck in the pipeline:** Bi-directional pigs will be used. Discussions during engineering study to decide if a pump must be installed on the barge to reverse the flow in the MOL 10: pipeline to free the pig and send it back to the GIP platform. Prepare procedure in the event of platform production shut down.
 - **Filter full of debris:** Installation of a redundancy filtration system – two filters, one in operation, one on standby. Empty and clean the filter vessel.
 - **Flexible lines kicked:** Secure/reroute the flex lines, dependent on site current and waves conditions. Select Jack-Up Barge vs. Moored Barge (preferred).
 - **Bad weather, storms, squalls:** Contract a reliable weather forecast company with suitable scope of services.
 - **Other risks:** Prepare emergency response procedure for all possible risks, with a bridging document that includes the existing emergency procedures for the Field by QPD.
- Interface between QPD, ILL Contractor, and HSE Managers.

QPD MOL 10" PIGGING – Design of Safety and Environmental Equipment on Barge

Phase 8

- SPLIT QPD / RAMBOLL Project
- Risk assessment with mitigation measures to serve as the basis for designing the safety and environmental equipment on the barge.
- Design, specifications, and operating manuals for the safety material and equipment; catering to H2S presence, to prevent/minimize/contain oil spillage, and to avoid incidents.
- "Strong" Recommendations for all personnel training to be set.
- HSE officers to inspect the workplace so that necessary safety rules can be fully implemented.
- Devote specific attention to subsea work performed by the divers.



QPD MOL 10" PIGGING – Fabrication Work Pack and MTO

Phase 9

- SPLIT QPD / RAMBOLL Project
- Detailed drawings with MTOs, specifications, and descriptions for each equipment fabricated:
 - Steel material
 - Welding specifications
 - Valve specification (if not standard)
 - Filter / pressure vessel specifications
 - Piping, riser, flanges (to match PLEM flanges)
 - Pig launcher and receiver
 - Miscellaneous items, to be fabricated for handling
 - QA-QC and Fabrication Acceptance Testing requirements
 - Certificates
 - NOTE: Excluding Marine Warranty Surveyor (MWS) and CLASS.

QPD MOL 10" PIGGING – Kick-Off Meeting, Progress Meetings, Final Presentation and Clarifications (C)

Phases 10, 11, 12, 13

- SPLIT QPD / RAMBOLL Project
- Meetings and final presentation in Doha
- Classifications after final acceptance

Leading Complex Engineering Projects



Under Principia, HE provided technical engineering support across seven project phases, including structural design for berthing platforms, floating storage and transfer (FST) integration, and jackets-based mooring foundations.

Designed to adapt to steep seabed contours and deep-water environmental loads, the infrastructure required precise modeling and long-term stability planning.

HE's work contributed to the development of scalable marine systems that balance engineering innovation with environmental integrity.



Pacific Oil & Gas, Woodfibre LNG Marine Terminal – Jackets-based solution related to berthing, loading & FST Platforms, FST Mooring

P1: Subsidiary of Royal Golden Eagle Group (RGE) planning to develop a Natural Gas Liquefaction plant in Canada, at the WOODFIBRE location where a paper mill was previously operating, at the coastline. The site is close to the city of Squamish, British Columbia, 50km North of Vancouver. Natural gas will be produced and processed onshore and piped to the WOODFIBRE Plant where it will be liquefied, stored, and then exported via a Marine Terminal designed for 175,000 cu m capacity LNG Carriers.

- Note: Standard TFDE carriers of 155,000 – 180,000 cu m are considered directly in the assessment but may be normalized to a 160,000 cu m standard.
- Expected yearly production of LNG is 2,2 million T, over a period of 25 years; meaning an avg. of 25 LNG 175,000 cu m carriers will call the Marine Terminal every year.
- PO&G commissioned engineering company KBR to propose an LNG Marine Terminal overall concept facilities to export LNG, that includes LNG storage on board 2 X 125,000 cu m converted LNG gas carriers type MOSS (RGE group) to be permanently moored at the Terminal, a berthing and mooring system with separate support for the loading arms platform.
- **SOW P1:** Submit an offer to further develop and optimize the concept to permanently moor the two floating storage vessels and temporary mooring of the LNG export carrier, propose sound technical solutions, and evaluate the relevant construction and installation budgets and time schedules.
- The most challenging aspect of this Marine Terminal construction is the steep slope of the sea floor which is almost 45 degrees. Further, the soil consists of rock with an uneven sea bottom and water depth of 80 – 100m at the berthing and loading facilities. The topography is typical of a fjord.
- The environmental conditions to consider for the LNG carrier berthing and mooring are mild: almost no waves, no waves, no current.



Pacific Oil & Gas, Woodfibre LNG Marine Terminal – Jackets based solution related to berthing, loading & FST Platforms, FST Mooring

P2.1: Construction Challenges: The main challenge for the jacket foundations design is the steep slope of the seabed and rock bottom, as the Marine Terminal facilities comprises various structures to be secured to the sea bottom. These structures are designed to:

- Permanently moor 2 LNG floating storage converted 125,000 cu m carriers
- Allow berthing and loading the export LNG 175,000 cu m carrier
- SOW: Design foundations sufficient to resist the vessel impact load and mooring loads, noting berthing and loading “jacket type” fixed steel structures that are pinned to the rocky sloppy sea bottom at a location where water depths vary from 80m to 100m.
- SOW: Topsides/battery limit for each jacket design is at the (assumed welded) connection between the topsides and the jacket structure.
 - Data from POC related to foundation design and topsides are escalated to meet client’s swift engineering concept start requirement.
 - Evaluate berthing impact loads.
 - Design concept.
 - Remote: As the Marine Terminal location is remote, the construction and installation of the marine facilities will have to be brought on-site from far away, which implies high costs for mobilization and demobilization. Provide solutions.
 - The quantity of produced LNG 2,1 million T per annum is relatively low, which calls for the optimization of the marine facilities design to make them cost-effective and at the same time, safe and viable to operate and maintain over the required period of 25 years.

Leading Complex Engineering Projects



Pacific Oil & Gas, Woodfibre LNG Marine Terminal – Jackets-based solution related to berthing, loading & FST Platforms, FST Mooring
Phase 3: Technical concept/pre-design/misc. Scope of Work

- Evaluations to optimize the overall LNG Marine Terminal (REV 01)
- Berthing, mooring (1 jacket) LNG carrier
- Loading 1 jacket supporting the 3 loading arms to load the expert LNG carrier
- Typical 1 jacket located at the deepest water depth to permanently moor the 2 FSTs.
 - The present design from PO&G is with 4 mooring posts for each FST.
 - Fenders and connections from the jacket to the FSTs are excluded.
- Preliminary design: Intermediate structure to support the loading and offloading arms for the FSTs. (The intermediate jacket and the loading arm jacket are separate structures. In case they are joined, they are still considered as 2.

Pacific Oil & Gas, Woodfibre LNG Marine Terminal – Jackets-based solution related to berthing, loading & FST Platforms, FST Mooring
Phase 4: Detail Scope of Work & Split-PRI Project

- SOW: (LNG 175,000 cu m, carrier berthing impact loads evaluations against the berthing jacket with fender type selection)
 - Structural calculations by expert engineers to confirm the 4 jackets preliminary structural sizing using suitable/recognized FEA software (REV 01)
 - Overall definition of the anchoring/foundation design in the roc
 - Confirmation of foundations sizing by calculations.
 - Related PRELIMINARY drawings, sketches, diagrams, reports.
 - Local coordination in Singapore with PO&G (REV 01)
 - Progress meetings using conference calls, excluding:
 - Seismic analysis, Fatigue analysis, Corrosion protection: only anodes weight estimates
 - Technical Kick-Off Meeting, in La Ciotat (France)

Pacific Oil & Gas, Woodfibre LNG Marine Terminal – Jackets based solution related to berthing, loading & FST Platforms, FST Mooring
P5: Budget evaluation for construction, transportation and site installation of 2 identical berthing jacket structures and 1 loading support jacket: OPTIONAL

- The budget to be evaluated on:
 - Cost of the Project Management Team
 - Cost of Engineering & Detail Design
 - Cost of *Engineering Certification* by CLASS (BV)
 - Jackets Fabrication in suitable yards, such as yards involved in offshore Oil & Gas heavy fabrications, with quality
 - Transportation on a dry tow vessel
 - Installation on site, connect to the seabed anchoring structures assumed pre-set
 - Cost of Final CLASS (BV) classification
 - Budget Evaluation Excluding:
 - Piping, access, equipment mounted on the jackets structure, anodes and anchoring the structure to the seabed.

Leading Complex Engineering Projects



Pacific Oil & Gas, Woodfibre LNG Marine Terminal – Jackets-based solution related to berthing, loading & FST Platforms, FST Mooring

Phase 6: Commercial Proposal to Perform Concept/Pre-Design & Cost Evaluations

- Perform the concept/pre-design, for the 4 jackets acc. to P4
- Performed in Singapore. One month in La Ciotat (two-period increments).
- Local coordination meetings with Client in Singapore, included.

Pacific Oil & Gas, Woodfibre LNG Marine Terminal – Jackets-based solution related to berthing, loading & FST Platforms, FST Mooring

Phase 7: Clarifications

- Present Commercial Proposal for CONCEPTUAL/PRE-DESIGN of the 4 jacket structures.
- Mobilize team:
 - 1 Senior Engineer/expert in charge of Project Management & Technical
 - 1 Project Engineer and 2 Draftsmen
 - 1 Structural Engineer
 - 1 Marine Offshore Installation Specialist
 - 1 Advisor for cemented piles foundations for the problems linked with this type of technique to highlights the difficulties to achieve sound results
- Develop preliminary cemented piles foundation concept for the berthing dolphin jacket
- Draw typical cemented pile foundation for 3 other jackets
- Foundations concept subcontracted to specialized company UTEC-Geomarine in Singapore
- One document revision, according to comments
- Software for structural calculations, not included
- Insurance Professional Limited Liability covers up to 500,000 SGD per event.

Haiphong Ding Vu Petroleum Terminal

Alternative Pre-Design Analysis & Fabrication/Transportation/Installation

- First evaluation.

Hexicon-PRI: Engineering Assistance for Turret Pre-Feed (Rotating Systems)

- SOW: Develop the Pre-Feed of 2 types of turret systems which differentiate technically by the way the rotation is organized, using Main Roller Slewing Bearing (MRSB) for one type and Plain Self-Lubricating Bearing (PSLB) for the other type.
- Features to include: (apart from the bearing systems) Turret Parts which are integrated to the weather-vanning main structure and the chain table which is “fixed” in rotation, on which the mooring chains are connected.
- **P1: Rotation Using Main Roller Slewing Bearing**
 - Single heavy-duty MRSB located at the top of the chain table bolted on machined steel structures. Designed to resist the mooring horizontal forces and the weight of chains as well as the moment due to the lever arm length between the chain stoppers at the chain table bottom and the bearing location. Located above the water line. Seals to enclose the bearing to avoid water projection ingress. Bearing lubrication provided.
- **P2: Rotation Using Plain Shelf Lubricating Bearing**
 - Provide a combination of 3 PSLBs, one on top of the chain table to resist the vertical axial downforce, and 2 to resist the horizontal radial forces, one on top of the chain table, the other at the bottom. Design for seawater, 25 years, protected from water ingress, allows for rotation, includes assembly drawings.

Leading Complex Engineering Projects



SOPHY M. LAUGHING, PH.D., MBA

This onshore project at CCC Tuxpan Phase I Power Station in Mexico is an active Cobeal project (2024-2025), being executed with a focus on efficiency, precision, and long-term sustainability.

Ensuring the reliability and longevity of the turbine generators requires a meticulous commissioning process, integrating air quality monitoring, thermal regulation, and humidity control to optimize system performance.

With a commitment to safety, compliance, and operational excellence, every component undergoes rigorous testing to meet performance and regulatory standards.

Leading Complex Onshore Projects



CCC Tuxpan Phase I Power Station

- Contracted by Kiewit Corporation to commission the environmental control system.
- The environmental control systems and dehumidifiers are essential for this state-of-the-art combined cycle facility currently under construction (2024-2025).
- SOW: Ensure all systems are designed, installed, tested, operated, and maintained in accordance with operational requirements. Guarantee efficiency and reliability of the power station.
- The plant runs on natural gas, has a capacity of 1,086 MW, making it a significant addition to Mexico's energy landscape.
- The facility is owned by the Comisión Federal de Electricidad (CFE).



SOPHY M. LAUGHING, PH.D., MBA

Cobeal successfully retrofitted the Palacio del Ayuntamiento, one of Mexico's most historically significant buildings, to achieve LEED Platinum certification, the highest global standard in sustainable building performance.

This project was a masterclass in balancing historical integrity with cutting-edge environmental engineering, ensuring that a structure dating back to 1526 met the highest energy efficiency and indoor air quality standards of the modern era.

Leading Complex Onshore Projects



Palacio del Ayuntamiento (City Hall)

Mexico City

- Design-Build Indoor Air Quality / Environmental Retrofit to achieve LEED Platinum certification (80 points+).
- Historical building compliance in accordance with INAH.
- Includes proprietary air handling units to filter gases and suspended particles, with 99% efficiency, for 0.3 microns, and MERV-8 Pre-Filters.
- Gas filtration with activated alumina and potassium permanganate (KMnO₄). Second stage of gas filtration with activated charcoal. Third stage HEPA.

Related Projects:

- Jumex Museum
- State Archive of Guanajuato, Mexico (Alhondiga de Granaditas, Historical Monument)
- La Ceiba Grafica, Veracruz Arts Center
- Manuel Álvarez Bravo Museum
- Preservation Vault for MUAC Museum



SOPHY M. LAUGHING, PH.D., MBA

Cobeal's commitment to preserving global cultural heritage is reflected in Sophy's leadership on projects for the National Archives of Mexico and the Dominican Republic.

Through these initiatives, Sophy reinforces her role as a global leader in sustainable infrastructure, bridging engineering expertise with cultural stewardship.

Her dedication to archival preservation underscores her broader vision: leveraging technology and innovation to protect history, ensuring that invaluable records remain accessible for generations to come.

Leading Complex Onshore Projects



Preservation Facility National Archives of Mexico

- Turn-Key, Full-Scale Construction.
- Construction of a climate-controlled building for the safe preservation of photography and archives, transformers, and substations, including electric and utility works.
- Complex engineering and design work for high-risk flood and earthquake zones (the area is sinking).
- Plan for handling construction waste in an environmentally friendly manner.
- Integration of environmental controls and technology for preservation and security.
- Compliance with health and safety standards, including training for all workers and staff involved in the project.

Related Projects:

- Archive of the Nation, Dominican Republic



SOPHY M. LAUGHING, PH.D., MBA

The art and artifacts Sophy has helped protect across institutions like the Palace of Fine Arts, the Frida Kahlo Museum, and the Museo de Antropología are valued at over \$10 billion USD, with individual pieces by Frida Kahlo, Diego Rivera, and Andy Warhol worth \$30M–\$100M USD each.

By integrating climate control, façade restoration, and sustainable conservation, Sophy's teams have set new standards in preservation, securing artistic and historical continuity for future scholars, artists, and the global community.

Leading Complex Onshore Projects



Palace of Fine Arts Museum, Rojo Mexicano Exhibit

- Turn-Key, Façade restoration & environmental systems.
- Dehumidification for exhibition rooms.
- Use of sustainable construction materials.
- Compliance with health and safety standards, including training for all workers and staff involved in the project.

Related Projects:

- Frida Kahlo Museo
- Fundación ICA
- Fundación Jumex, Andy Warhol Exhibit
- Fundación Televisa
- Instituto Nacional de Antropología e Historia
- Gobierno del Estado de Oaxaca, State Museum
- Gobierno Monterrey, Nave Lewis Expo Building
- Museo Álvarez Bravo
- Museo CD-MX
- Museo Histórico Nacional
- Museo Arte Moderno



SOPHY M. LAUGHING, PH.D., MBA

Sophy's leadership in historical preservation and climate-controlled infrastructure extends to some of the most significant cultural institutions in the Americas.

The Preservation Vault for the National Monument of Guanajuato and the Biblioteca Palafoxiana in Puebla, the first lending library in the Americas, represent milestones in global intellectual history. The preservation of national monuments ensures that future generations can access the written knowledge that has shaped human civilization.

These efforts reflect technical expertise and a deep commitment to preserving global cultural heritage.

Leading Complex Onshore Projects



Preservation Vault for National Monument of Guanajuato

- Full-scale, Design-Build-Install
- 300m² Free-standing building by historical preservation regulations
- Laboratory and archive for State School, including admin and support spaces
- Circuit breakers, spark-free cabling, Novec fire suppression, wireless alarm, smart environmental thermostats/humidistats
- 8°C +/-2°C, 35%RH +/-5%RH
- Moisture barriers to external and internal walls

Related Projects:

- Biblioteca Nacional Mariano Moreno, Buenos Aires
- Museo Pintores Oaxaqueños
- Gobierno de Puebla, Biblioteca Palafoxiana

Cobeal is committed to elevating the human experience by designing and implementing state-of-the-art environmental, acoustic, and preservation systems for institutions dedicated to art, music, science, and history.

From the Ollín Yoliztli Concert Hall to the National Dance and Music Schools, these spaces now offer world-class environments for artistic expression, intellectual exploration, and cultural preservation.

Whether safeguarding historical archives, fine arts, or live performances, Sophy's leadership continues to shape the future of human creativity and shared heritage.

Leading Complex Onshore Projects



Ollin Yoliztli Music Rooms and Concert Hall

- Turn-Key, environmental systems 12,000m²
- Architectural/construction acoustics, plus utilities
- IAQ Auditorium lighting, audio-visual spaces
- Main collector for storm water, redirect to underground aquifer
- Use of sustainable construction materials.
- Compliance with health and safety standards, including training for all workers and staff involved in the project.

Related Projects:

- Facultad de Arquitectura, UNAM
- Facultad de Medicina, UNAM
- Instituto Estéticas, UNAM
- Instituto de Investigaciones Históricas, UNAM
- Gobierno Monterrey, Nave Lewis
- El Museo Universitario Arte Contemporáneo (MUAC)
- Lanies, Laboratorio Nacional de Innovación Ecotecnológica, Michoacán



SOPHY M. LAUGHING, PH.D., MBA

The ISO 7 Facility for Centro de Investigaciones en Óptica represents a critical advancement in optics research and development while aligning with other cutting-edge scientific and industrial research facilities, including the National Ignition Facility at Lawrence Livermore's National Laboratory.

By delivering precision-engineered facilities that support global scientific advancements, Sophy reinforces her leadership in turnkey solutions for high-tech infrastructure.

These projects not only push the boundaries of engineering and sustainability but also provide world-class research environments that drive innovation across multiple disciplines.

Leading Complex Onshore Projects



ISO 7 & ISO 8 Facility for Centro de Investigaciones en Optica

- Turn-Key, Full-Scale Construction.
- Construction of an ISO 7 & ISO 8 cleanroom facility for optics research & development.
- Strict provisions to safeguard the local environment.
- Designed, installed, and tested lab, HVAC, dehumidifiers, and exhaust systems.
- Special Permits for high-demand, high-voltage transformer and substation.
- FF&E.
- Use of sustainable construction materials.
- Plan for handling construction waste in an environmentally friendly manner.
- Compliance with health and safety standards, including training for all workers and staff involved in the project.

Related Projects:

- Lawrence Livermore National Ignition Facility
- Instituto Politécnico Nacional, Marine Laboratory Sinaloa
- ININ, Mexico Institute for Nuclear Research
- Centro Nacional Para la Salud de la Infancia y la Adolescencia (CeNSIA)



SOPHY M. LAUGHING, PH.D., MBA

The CFE Los Azufres Geothermal Facility, ININ's National Institute for Nuclear Research, and the LANIES Ecotechnological Innovation Lab represent leadership in onshore environmental engineering.

Each project tackled unique challenges, from mitigating corrosive geothermal fluids to integrating biohazard HVAC filtration with precision-controlled sustainability.

Leading all three projects required cross-disciplinary coordination, ensuring regulatory compliance, advanced technical solutions, and sustainable infrastructure.

Leading Complex Onshore Projects



National Institute for Nuclear Research, BSL-3

- Design, install, and build BSL-3 Facility to safeguard workers and the environment in preparing nuclear medicine. The application involved implanting traceable radioisotopes via imaging systems.
- Integrate complex facility with biohazard HVAC equipment, including cabinets, bag-in/bag-out filter systems to remove contaminated particulate filters, and gas absorbers for purifying the air in hazardous environments.



Laboratorio Nacional de Innovación Ecotecnológica para la Sostenibilidad, LANIES

- Full-scale, design, engineer, build, install, and commission direct expansion refrigeration system, and chemical dehumidification.
- The lab requires a conditioned space with 19°C +/- 2°C, with 30% RH, +/- 2%.



CFE Los Azufres Geothermal Facility

- Full-scale design, engineer, build, install environmental equipment for geothermal facility, remove H₂S and H₂SO₄ from the atmosphere to protect copper wiring.
- Facility challenge included low pH waters, corroded carbon steel, corrosion cracking in stainless steels, chloride ions accelerated corrosion of metallic surfaces, resulting in pitting as well as uniform corrosion. Sulphate was the primary aggressive ion in geothermal fluid.
- High humidity and high corrosion rates required a desiccant dehumidification system to lower moisture levels (40% RH). Processing airflows at 500 CFM, unit was manufactured of fully welded, strain-hardened aluminum to ensure zero air leakage.
- An activated carbon pressurization unit was installed to provide clean air.
- Combined both equipment eliminated moisture and humidity, preventing moisture damage and corrosion.
- Required all electrical control systems to meet UL and NEC standards.



SOPHY M. LAUGHING, PH.D., MBA

PARTNERING WITH INDUSTRY LEADERS

Sophy works with clients at the forefront of infrastructure and energy transformation, shaping the communities and industries of tomorrow. From global developers to government agencies, Sophy brings a collaborative mindset to the organizations that drive progress, innovation, and long-term sustainability.

Whether delivering high-performance projects, executing large-scale EPCIC contracts, or designing sustainable industrial facilities, Sophy forges partnerships built on precision, efficiency, trust, and a shared commitment to excellence.





SOPHY M. LAUGHING, PH.D., MBA

LEADERSHIP STYLE

Sophy leads with a balance of strategic clarity and grounded collaboration. She sets clear goals, aligns teams around shared outcomes, and holds space for different perspectives to come together productively.

Her leadership is data-informed and financially disciplined, focused on risk, resilience, and long-term value. At the same time she stays attuned to people, context, and culture. She prides herself on building relationships that last and in making decisions that move projects forward with integrity. And whenever possible, she hitches a ride on a helicopter to make arriving to an offshore platform safer and more exciting!





SOPHY M. LAUGHING, PH.D., MBA

THOUGHT LEADER

Sophy is a prolific author and thought leader, publishing extensively on clean energy, foreign direct investment, and infrastructure innovation.

Notable works include:

- Enemy Particles: Why LLNL's NIF Project was Novel for the IAQ Industry
- Foreign Direct Investment in Mexico: Historical Perspectives, Current Dynamics, and Future Prospects
- The EV Effect: A Guidebook for Investing in Today's Clean Energy Transition
- Leveraging PEMEX Offshore Assets for Rare Earth Element (REE) Mining and Renewable Energy Expansion
- Adopting Green Energy in the Oil & Gas Industry: Opportunities in the Gulf of Mexico





SOPHY M. LAUGHING, PH.D., MBA

AWARDS AND RECOGNITION

Under Sophy's leadership, Cobeal was honored with a Humanitarian Aid Award from the State of Mexico for providing medicine/aid to local inhabitants of Amecameca and Ozumba, following the September 19th, 2017 earthquake.

The earthquake occurred on the morning of the 32nd anniversary of Mexico's September 19, 1985 earthquake.

Cobeal sent over 1,000 volunteers, whilst supplying clothes, medicine, and back-up generators. Cobeal's emergency efforts included the fast-deployment of two field hospitals, and temporary housing for more than 10,000 displaced inhabitants.





SOPHY M. LAUGHING, PH.D., MBA

COMMUNITY-MINDED

Sophy's career is defined by global leadership, cultural insight, and industry transformation. Standing alongside international communities, Sophy is committed to fostering collaboration, and redefining industry standards with a deep commitment to people and progress.

From offshore engineering and infrastructure projects to historic preservation, scientific innovation, and sustainability, Sophy's work transcends borders, bringing together diverse expertise to solve global challenges. Her ability to bridge industries, cultures, and generations has made her a trusted leader in international development.





SOPHY M. LAUGHING, PH.D., MBA

CONNECTING WORLDS



More than a strategist, Sophy is a connector of worlds, ensuring that innovation is not only about technology but also about human impact, education, and cultural preservation. Sophy's passion for cultural diversity reflects her legacy, which is one of evolving vision, excellence, and meaningful engagement with communities worldwide.