



## OFFSHORE ENGINEERING

INDUSTRY EXPERIENCE
YOU CAN LEVERAGE

EDG HAS 40 PLUS YEARS OF EXPERIENCE WITH THE ENGINEERING AND DESIGN OF OFFSHORE FACILITIES BOTH DOMESTICALLY IN THE GULF OF MEXICO AND INTERNATIONALLY.

#### INTEGRATED SOLUTIONS TO HELP SUPPORT ALL PHASES OF PROJECT DELIVERY

EDG tailors integrated customer solutions, pairing necessary expertise with budget requirements and project schedules to tackle project objectives and improve performance. We help customers reduce risk, improve safety, and save on operating costs with integrated solutions that maximize asset performance, optimize existing resources, and enhance project delivery.

#### INTEGRATED SOLUTIONS





### FULL-SERVICE ENGINEERING

- Process
- Mechanical
- Civil and Structural
- Architectural
- Electrical
- Instrumentation
- · Automation and Controls
- Design and Drafting

## PROJECT SUPPORT

- SERVICES

   Project Controls
- Procurement and Contracting
- Document Control
- Vendor Surveillance
- Technology Services
- Regulatory and Permitting
- Commissioning and Startup Support

#### MANAGEMENT SERVICES

- Portfolio and Project Management
- Construction Management
- Safety Management
- Risk Management
- Information Management
- Asset Management
- Integrity Management





#### **FIXED STRUCTURES**

#### FIELD DEVELOPMENTS

Offering solutions for balancing total installed costs, operability, and project cycle time including considerations for SIMOPS & TARs.

#### **TOPSIDES DESIGN**

Extensive experience with facility layout including equipment design, power and control systems, space and weight control while maintaining operability considerations in all engineering decisions.

#### **JACKET DESIGN**

Minimal Structure, deep and shallow water jacket design in various water and soil conditions.

#### **PROCUREMENT**

Strong knowledge and relationships with key industry suppliers and contractors to maximize benefits to our clients

#### **TECHNOLOGY SELECTION**

#### FLOATING STRUCTURES









**MODULE DESIGN** 



**SUBSEA TIEBACK EXPERIENCE** 

#### FLOATING STRUCTURE EXPERIENCE

#### **FPSO**

- BW Pioneer
- ESSO Zafiro Producer
- ESSO Kizomba A & B
- Chevron (SBM) Kuito
- Hess Ceiba
- Petrobras Barracuda
- Petrobras Caratinga
- Petrobas Sepetiba

#### **TLP**

- · Chevron Bigfoot
- Chevron Typhoon
- · ConocoPhilips Magnolia
- Talos Ram Powell
- Shell URSA
- Shell Mars
- OXY Marlin
- ENI Morpeth
- ENI Allegheny
- Hass Okume/Ebano
- Hess Oveng

#### **SEMI**

- · Chevron Jack St. Malo
- SBM Thunderhawk
- LLOG Who Dat
- Murphy Delta House
- Murphy Kings Quay
- · Hess Stampede

#### **SPAR**

- Chevron Tahiti
- Chevron Genesis
- Murphy Medusa
- Murphy Front Runner
- OXY Holstein
- OXY Horn Mountain
- ENI Devils Tower
- Williams Gulfstar
- HESS Tubular Belts



#### SUBSEA TIEBACK EXPERIENCE

CLIENT	DEVELOPMENT	WATER DEPTH
Williams / Noble	Gunflint	6,082
Williams / Mariner	Bass Lite	6,000
Murphy	Thunder Bird	5,724
LLOG	Taggart	5,610
Dominion / ENI	Triton/Goldfinger	5,600
Occidental	KQQV	5,455
Shell	Kaikias	4,600
Occidental	Holstein Deep	4,300
Chevron	TUSD	4,100
Chevron	TVEX	4,100
Shell	Princess 3rd Flowline	3,625

CLIENT	DEVELOPMENT	WATER DEPTH
ENI	Pegasus	3,600
APT / Bennu	Clipper	3,500
Walter Oil & Gas	GC 338 #9	3,500
Chevron / Noble	Raton South Development	3,400
Murphy	Medusa 5	2,515
Walter Oil and Gas	MC583	2,500
Fieldwood	Katmai	2,200
LLOG	Spruance	1,575
Stone Energy	Amethyst	1,300
Stone Energy	Cardona	1,300
Talos	Praline	1,300

IN THE EARLY 90S, EDG EXECUTED THE FIRST SUBSEA TIEBACK IN THE GOM. SINCE THEN, WE HAVE EXECUTED OVER 25 PROJECTS FOR OVER 15 CLIENTS.

Our services include Topsides Engineering, Procurement Support, Construction Planning, Subsea Interface & Regulatory Support.

Significant experience with subsea hardware and controls. Directly relevant know how with chemical injection and high-pressure piping systems. Keen understanding of host facility weight control and center of gravity changes.

## PRODUCTION SYSTEM DEBOTTLENECKING

Equipment / Process Engineering, Vent, Relief, & Flare Analysis.

#### STRUCTURAL MODIFICATIONS

Deck Extensions, Riser & Umbilical Pull Ins Assessments.

#### SIMOPS DESIGN

Design to eliminate or limit production downtime Offshore execution planning.

#### **REGULATORY COMPLIANCE**

BSEE, USCG, and ABS Experience P&ID Walkdowns & Validations.

# BROWNFIELD OPERATION SUPPORT PROJECT SOLUTIONS

EDG'S PRESENCE FOR GOM OPERATIONS SUPPORT

EDG has the Operations Support capabilities to ensure our client facilities run smoothly. We take an active role in operations on a full-time or as-needed basis with prompt engineering and design responses. Our active participation includes participating in weekly operations meetings, managing MOC processes, and involvement in process troubleshooting and optimization. EDG communicates routinely with BSEE, ABS, and USCG for regulatory issues. We ultimately become an extension of staff to the operators.

Automation and Technology Upgrades

Life extensions

Process Hazards Analysis

Facility Expansions

Optimization Upgrades

Debottlenecking Studies

Management of Change (MOC)

Owner's Engineering

Equipment Verification

Work Pack Development

Inspection

Codes and Standards

Conformity

Decommissioning /

Abandonment

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