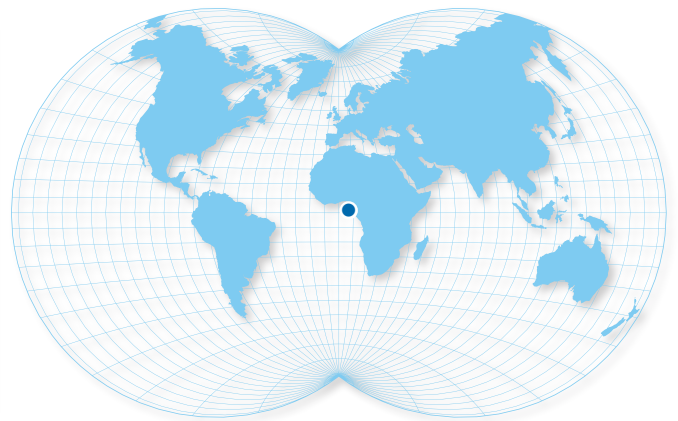


## ESCRAVOS FIELD, NIGERIA:

# FSO Escravos LPG External Turret



### Scope of Work

SOFEC designed and constructed an external turret mooring system for a MODEC purpose-built FSO installed in 42m water depth. The FSO handles the refrigeration and depressurization of LPG for Chevron Nigeria Ltd.

This SOFEC external turret mooring system is ABS classed.

### General Description

Client Name:	Chevron Nigeria, Ltd.
Contract Award:	February 1995
Installation Date:	June 1997
Vessel Size:	37,100 dwt
Storage Capacity:	54,000 m <sup>3</sup>
Water Depth:	42.4m (139ft)
Fabrication:	Turret - Houston, Texas, USA Vessel - Japan

### Design Environmental Criteria (100-year storm)

Significant Wave Height:	3m (10ft)
Wind Velocity:	30m/s (55.6 knots)
Current:	1.2m/s (2.2 knots)

### Mooring System

- 6-leg Asymmetric catenary:
- 3-in. ORQ chain
- Anchor pile

### Turret

External Cantilevered Bow

### Fluid Swivel Assembly

LPG:	2 x 8-in. piggable toroids (690 psi design / 1,035 psi test) Hydraulic Control
Swivel:	8 passes (3,000 psi operating, 4,500 psi test)

### Riser System

2 x 8-in. Flexible riser

### Comments

The purpose of this project was the Nigerian government's decree to stop flaring gas from offshore fields. The LPG FSO converts ethane, propane and butane components of the gas stream into liquid products. The liquid products are stored in tanks of the FSO hull prior to being offloaded to LPG tankers that are used to transport the LPG to the market.