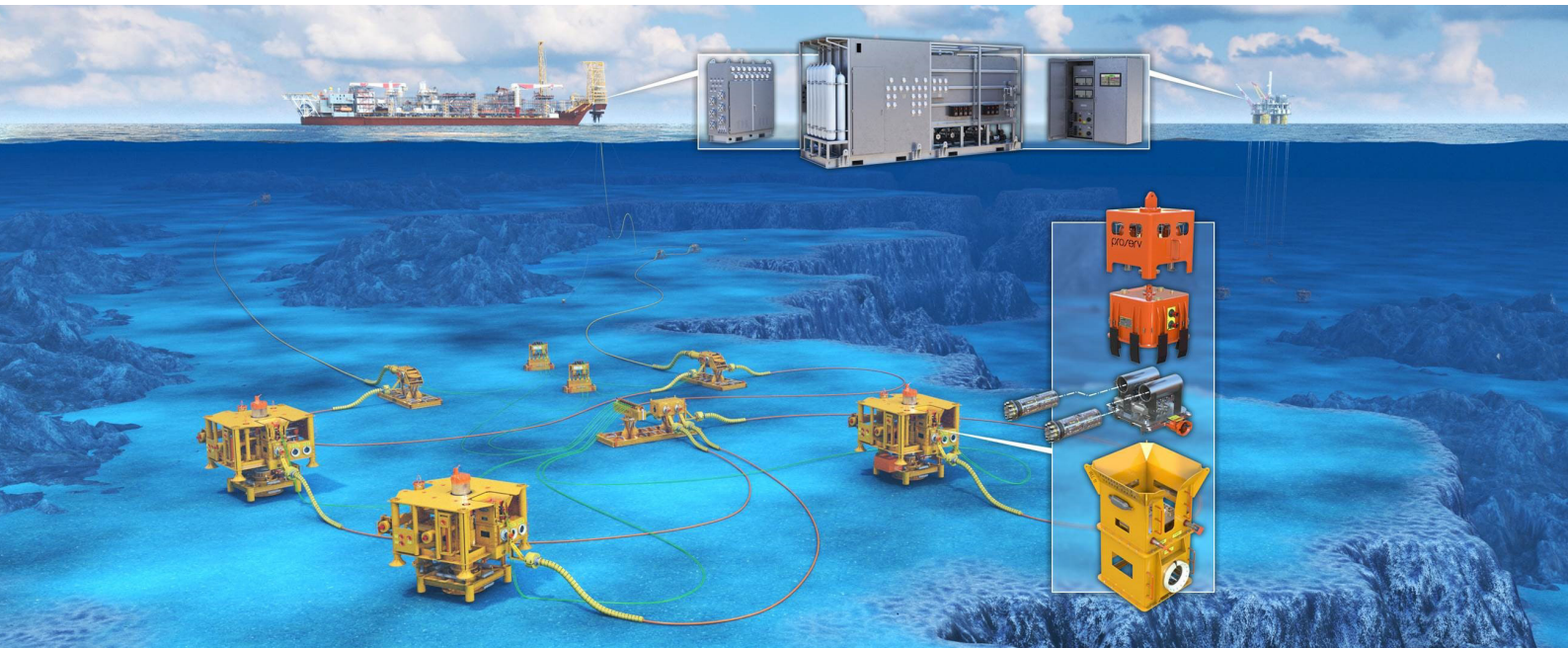


Subsea Control Systems



Proserv has been manufacturing control systems in the UK since 1976. In that time, Proserv has gained considerable experience in subsea engineering and control system design. Proserv acquired Brisco Engineering in August 2003 combining over 35 years' established experience in topside and subsea wellhead controls.

Early involvement in the subsea arena began for Proserv in the 1980s with the design and prototype manufacture of our own subsea control module, using our in house spool-type control valves. These, whilst initially adapted and evaluated for subsea use, did not show the degree of durability of the metal to metal shear seal type valves that are mandatory for subsea controls today. A number of subsea hydraulic systems for short step-outs and subsea isolation valve controls were made, but it was the development of our Wellcon multiplexed electronic programmable control modules employing proprietary shear seal valves that established Proserv's presence in the subsea market. In 1992, our first complete multiplexed electro-hydraulic subsea control system was developed, and the first full system deployed the following year. In 1999 the first Artemis subsea control system was developed, adding deep water ROV deployment to the product line. As industry technology has advanced into locating much of the production equipment on the seabed, so Proserv has developed control and safety shutdown systems that are able to operate in this equipment, either from the surface or the subsea environment.

The Technology Partner of Choice

Proserv's commitment and reputation for providing best-in-class systems with unrivalled reliability has resulted in gaining a number of key strategic partners in recent years. In 2020, Proserv signed an historic agreement with Dril-Quip to become their sole subsea control systems provider of choice, following Dril-Quip's strategic decision to consolidate the supply and development of control systems with a dedicated subsea controls provider. In 2021, Proserv signed a Memorandum of Understanding with Trendsetter to allow the companies to incorporate Proserv's subsea controls alongside Trendsetter's state-of-the-art pressure protection systems, including its cornerstone high integrity pressure protection system (HIPPS), connection systems and manifolds.



119

74

44

36

58

4



56% LESS GREENHOUSE EMISSIONS*

A recent study* demonstrates that, by removing the need to conduct system overhauls, Proserv can reduce the emissions associated with the use of a subsea control module (SCM) by approximately **56%**, when compared to using an industry standard product. The primary source of greenhouse gas emissions savings is achieved through negating the requirement to retrieve and service the SCM during its lifespan. Eliminating the need for a support vessel to assist with the retrieval of the module saves approximately 78 tonnes CO₂e.

*Subsea Control Module Carbon Emissions Comparative Assessment, 2022 - Carbon Zero, a division of Data Engineering Projects Limited

Subsea Control Systems

Proserv has an established track record with subsea control systems. Below is a summary of recent projects completed to demonstrate our capabilities and expertise in this field.

Year	Client	Work Scope	Location
2026	GE Petrol	Zafiro West SCM & Topacio Subsea Tieback	Equatorial Guinea
2025	Anadarko	Stock 15K Tree Mounted Controls	Gulf of Mexico
2025	Anadarko	Warrior - Spare SCM	Gulf of Mexico
2025	CNR International	Thelma - SCM	North Sea
2024	Talos Energy	Stock MCS and UPS (Sunspear Design)	Gulf of Mexico
2024	Chevron	JBUP Stage 2	Australia
2024	Chevron	Gorgon Development - Siemens Spectron EFLs	Australia
2024	Hess Corp.	Tubular Bells Tree Controls Equipment - 1 x SCM, 1 x SCMMB and Harnesses	Gulf of Mexico
2024	Walter Oil & Gas Corp.	Mississippi Canyon - SCM TPCU EPU 2nd Well	Gulf of Mexico
2024	Beach Energy	OGV - SCM, SCMMBs, OCH and Sim & test MCS	Australia
2023	Petrogas	ABBEY XT Equipment - SCM, SCMMBs, XT, manifold, and SSIV instruments and long lead items	North Sea
2023	NEO Energy	FINLAGGAN F4 - SCM, SCMMB, XT instruments, EFLs	Northern North Sea
2023	Talos	VENICE - MCS, SCM and mounting base	Gulf of Mexico
2023	Talos	LIME ROCK - dual SCM	Gulf of Mexico
2023	Centrica	ROUGH - 6 x WCM drawer modules	Southern North Sea
2023	Technip FMC	TALBOT - SDU	North Sea
2023	Oxy	WARRIOR - subsea control system for F24, F26 and F27 production wells - SCM, SCMMB, electrical flying leads and LTC	Gulf of Mexico
2023	Harbour Energy	CATCHER - BFE tie-in and CP2 diagnostics - equipment and labour	Central North Sea
2022	Trident Energy	OKUME CEIBA - SDU, SAM, MUDMAT, EFL, CFL, HFL	Equatorial Guinea
2022	Shell UK	ARRAN NORTH INFILL WELL - SCM, SCMMB, XT instruments, EDU, EFLs, HFLs, PLC upgrade	Central North Sea
2022	Hess	BLACK PEARL - well control systems for Stampede tieback	Gulf of Mexico
2022	Hess	PICKEREL - well control systems for Tubular Bells tieback including a new EDU, CDU with SkoFlo, and OCH for MPM integration	Gulf of Mexico

Subsea Control Systems

Year	Client	Work Scope	Location
2022	Apache	CALLATER - Two subsea control well sets	Northern North Sea
2022	PetroRio	WAHOO - subsea control system co-exist with existing system	South America
2022	Oxy	WARRIOR - subsea HIPPS control system	Gulf of Mexico
2022	Chevron	GORGON - subsea OCH data system	Australia
2022	QuarterNorth Energy	GUNFLINT - subsea control system expansion	Gulf of Mexico
2022	Hess	CONGER - SCM, SCMMB, sensor harness and SAM	Gulf of Mexico
2021	Neo Energy	FINLAGGAN - subsea control system expansion	Northern North Sea
2021	Harbour Energy	TOLMOUNT - subsea control system	Southern North Sea
2021	OneSubsea	JACK AND ST. MALO - multiphase flow module distribution unit (MFDU)	Gulf of Mexico
2021	BHP	SHENZI NORTH - subsea controls and HIPPS subsea systems: christmas tree mounted subsea control system on Dril-Quip tree, including subsea control modules, SCMMBs, SFLs, EFLs, CIMVs etc.	Gulf of Mexico
2021	ENI	ALLEGHENY - TUTA on Seastar platform for subsea control system	Gulf of Mexico
2020	Trident Energy	CEIBA - Hydraulic subsea control module	West Africa
2020	IOG	ELGOOD - subsea controls	Southern North Sea
2020	Serica Energy	COLUMBUS - subsea well control	Central North Sea
2020	Apache	GARTEN / CALLATER / BACCHUS - subsea well control	North Sea
2020	Talos	TYPHOON 1 AND 2 - SDU, EDU, SUTU, SCMMB/SCM, SAM	Gulf of Mexico
2020	Talos	TORNADO 4 - SUTU, SCMMB/SCM	Gulf of Mexico
2020	Independent Oil & Gas North Sea Ltd	ELGOOD - single subsea well tie-back including HPU, MCS, TUTU, SUTU, SDU, SCM, SCMMB, instruments and jumpers	Southern North Sea
2020	Pemex	RUBY - WHCP for Angostura subsea control system	South America
2019	Talos	BULLEIT - MCS, HPU, TUTA, UTH, SFL, EFL, SAM, SCMMB and SCM	Gulf of Mexico
2019	QuarterNorth Energy	ORLOV - hydraulic power unit for subsea control system	Gulf of Mexico
2019	Apache North Sea Ltd	Various projects - six off tree sets including SCM, SCMMB, tree instruments and jumpers per set	Northern North Sea
2019	Talos	BULLEIT - subsea control system tieback to Whistler platform	Gulf of Mexico
2019	Hess	ESOX - SCM, SCMMB, sensor harness and SAM for Tubular Bells tieback	Gulf of Mexico
2019	Aker Solutions	WHITE ROSE - WHCP for Searose platform	Canada
2018	LLOG	CLAIBORNE - HPU and TUTA on Coelacanth platform	Gulf of Mexico

Subsea Control Systems

Year	Client	Work Scope	Location
2018	Shell UK	ARRAN - five well sets including HPU, MCS, TUTU, SDUs, SAMs, OCHs, EDUs, SCMs, SCMMBs, instruments and flying leads	Central North Sea
2018	Black Sea Oil and Gas	MIDIA GAS - single subsea well tie-back including HPU, MCS, TUTU, SUTU, SDU, SCM, SCMMB, instruments and jumpers	Offshore Romania
2018	Talos	TORNADO 3 - subsea distribution and control system: two SCMs, christmas tree instrumentation, SUTUs and steel flying leads	Gulf of Mexico
2018	Hess	TUBULAR BELLS - software upgrade	Gulf of Mexico
2018	Aker Solutions	HEBRON - injection control module and WHCP	Canada
2018	Aker Solutions	HIBERNIA - WHCP for subsea control system	Canada
2018	Walter Oil & Gas	EAST BREAKS 430 - MCS and SUTU with SCM refurbishment	Gulf of Mexico
2018	LLOG	STONEFLY - HPU and TUTA on Ram Powell for subsea control system	Gulf of Mexico
2017	Zennor	FINLAGGAN - full subsea control system, including topside SCU, HPU and EPU on each platform, three production SCMs and tree instrumentation	Central North Sea
2017	Talos	TYPHOON AND BORIS - topside expansion MCS within the existing MCS PLC rack with EPU and TPCUs for the system	Gulf of Mexico
2017	Premier Oil	BIGP - full subsea control system, including topside SCU, HPU and EPU on each platform, three production SCMs and tree instrumentation	Natuna Sea, Indonesia
2017	Talos	TORNADO 2 - compact OCH for subsea power and communications for multiphase metering	Gulf of Mexico
2016	Ineos (Dong)	SIRI - subsea control module refurbishment	Denmark
2016	CNR	NINIAN - replacement MCS, EPU, umbilical and SCM with flying leads for SSIV control	Northern North Sea
2016	Hess	CONGER - SCM	Gulf of Mexico
2016	Hess	STAMPEDE - subsea control system for the development of 12 subsea wells	Gulf of Mexico
2015	Equinor	TROLL C - SeaHawk subsea camera for leakage monitoring on export riser including subsea video camera for monitoring on export riser solution, monitoring base for the camera on export riser structure and topside integration including software suite	North Sea - Norwegian Sector
2015	Apache	CALLATER - surface MCS, HPU, TUTU, subsea SDU/EDU, SCMs, SCMMBs, SAMs	Central North Sea
2015	BP	SHAH DENIZ - hydrate remediation skid	Caspian Sea
2015	Erin Energy	OYO	West Africa

Subsea Control Systems

Year	Client	Work Scope	Location
2015	Equinor	GULLFAKS A - one EA wellhead HPU with options for five more	North Sea - Norwegian Sector
2015	QuarterNorth Energy	GUNFLINT - subsea control system and topside upgrade: surface MCS with remote station, HPU and TUTU, SUTU and distribution including mudmat, dual SEM SCM with fibre optic communications to OCH	Gulf of Mexico
2015	Talos	TORNADO 1 - MCS, HPU, TUTU, SUTU, SCMs, SCMMBs	Gulf of Mexico
2014	OneSubsea	JACK AND ST. MALO - multiphase flow module distribution unit (MFDU)	Gulf of Mexico
2014	Apache	AVIAT - surface MCS, HPU, TUTU, subsea SDU/EDU, SCMs, SCMMBs, SAMs	Central North Sea
2014	Apache	FORTIES - surface MCS, HPU, TUTU, subsea SDU/EDU, SCMs, SCMMBs, SAMs	Central North Sea
2014	ENI	LONGHORN - refurbished and new EDU	Gulf of Mexico
2013	Perenco	LEMAN	Southern North Sea
2013	Petrobras	DPR nine off systems each comprising LER, HPU, subsea SAM and SCM module	South America
2013	CNR	TONI - surface MCS, subsea SCMs and SCMMBs	Central North Sea
2012	TAQA	CLADHAN - surface MCS, HPU, TUTU, subsea SDU/EDU, SCMs, SCMMBs, SAMs	Northern North Sea
2012	Repsol (Talisman)	CAYLEY AND SHAW - surface MCS, HPU, TUTU, subsea SDU/EDU, SCMs, SCMMBs, SAMs, OCH	Central North Sea
2012	Maersk Oil and Gas	FLYNDRE / CAWDOR - surface MCS, HPU and TUTU, subsea manifold mounted SCMs and SCMMB	Central North Sea
2012	Iona Energy	ORLANDO - surface MCS, HPU, TUTU, subsea manifold mounted SCMs and SCMMB	Northern North Sea
2012	Premier Oil Vietnam Offshore (POVO)	DUA - surface MCS, HPU and TUTU, subsea manifold mounted SCMs and SCMMB with CMIV on each SCMMB	Vietnam (Nam Con Son Basin)
2012	Perenco	WELL 53/02A-14A TIE BACK - one well subsea control system	Southern North Sea
2012	Hess Corporation	TUBULAR BELLS - subsea control system comprising surface MCS, HPU and TUTU, subsea tree mounted SCMs and SCMMB with ROV recoverable SAM and tree transmitters	Gulf of Mexico
2012	Equinor	Spare parts	North Sea - British Sector

Subsea Control Systems

Year	Client	Work Scope	Location
2012	Framo Engineering / CNR	LYELL - OCH for one subsea multiplexer system with power line modem communication for interfacing of process transmitters and control of direct control valves on the Lyell subsea multiphase booster pump. Non-redundant system, TPCU rack	Northern North Sea
2012	EnQuest	GORM - nine well control systems over two umbilicals from the Usi Gorm FPSO	Central North Sea - Denmark
2012	Repsol (Talisman)	CAYLEY AND SHAW - MCS, HPU, three SSIV panels, three TUTUs - each drill centre includes SDU, OCH, manifold mounted SCMs, pressure, temperature transmitters, gas lift flow meter, water injection flow meter	Central North Sea
2012	Iona Energy	ORLANDO - surface MCS, HPU and TUTU, subsea manifold mounted SCMs and SCMMB. Suspected it was never used	Northern North Sea
2012	EnQuest	DON	Central North Sea
2012	Valient Petroleum	CAUSEWAY - three well control systems over two umbilicals from the Cormorant platform	Central North Sea
2012	Petrofac	Six slot subsea distribution within over-trawl protective structure. Surface control system on Northern Producer FPSO. SCMs located on FMC trees	Central North Sea
2012	Bluewater Industries	Extension to Perenco Davy system with subsea SUTU, jumpers and SCM	Southern North Sea
2011	Equinor	SNORRE B - provide communication from topside system to subsea via DSL communication direct to a SeaHawk subsea camera unit for observation of possible leakage on template. Achieved bandwidth approx up to 10 mb/sec.	North Sea - Norwegian Sector
2011	Ithica Energy UK Ltd	ATHENA - Up to eight well subsea control systems with five wells developed in the first phase	Central North Sea
2011	MPM, Cameron, Chevron	JACK AND ST. MALO - four off SMIM for connection to four MPFM flow meters. Four topside cabinets for power and communication to up to 40 MPFM (MPM) flow meters. Redundant topside controller station for storage and data hand-off to production automation system	Gulf of Mexico
2011	BG Group	GAUPE - two wells in Norwegian waters tied back to a UK platform with subsea distribution and manifolds at its base	North Sea Norwegian Sector
2011	GDF Suez	JULIET - two well subsea control system plus manifold SCM	Southern North Sea
2011	Apache North Sea Ltd	BACCHUS - four well subsea control system plus manifold SCM in a pipeline bundle step out	Central North Sea
2011	Petrobras	EPR control system for WOCS in 2,500 m water, 40 electro-hydraulic functions using three pressure levels, topside control cabin with HPU and LER	South America
2011	Addax	OKWORI	West Africa
2011	Talisman	AUK NORTH	Central North Sea

Subsea Control Systems

Year	Client	Work Scope	Location
2010	EnQuest	DON - two manifolds retrofitted with Skoflo chemical metering valves controlled from existing subsea control system	Northern North Sea
2010	Oxy	CAESAR TONGA two OCHs for up to eight flow meters, one topside cabinet for data hand-off and storage test equipment	Gulf of Mexico
2010	Kangean Energy Indonesia	TSB PROJECT - two phase project with Terang manifold installed in the first phase of five wells and the extension to Batur and Sirasun included in the second phase of another four wells	Indonesia
2010	GDF Suez	JULIET	Southern North Sea
2007	Bluewater Industries/ Granby	TRISTAN NW - extension to Perenco Davy system with subsea SUTU, jumpers and SCM	Southern North Sea
2009	Perenco	BURE - upgrade EPU and SCM with SUTU and jumpers	Southern North Sea
2009	Centrica	WEST SOLE - subsea multiplexed electro-hydraulic control system with three SCMs including replacement for current BP Newsham system	Southern North Sea
2009	Talisman	AUK NORTH - subsea multiplexed electro-hydraulic control system with four SCMs, HPU, MCS, EDU and subsea distribution	Central North Sea
2009	Nexan/Equinor	One OCH with two electrical and two fibre optic ROV connectors interfaces integrated on Nexan's CEM	North Sea - Norwegian Sector
2009	Bluewater Industries	TELEMARK - single well subsea control system. Proserv stock SCM and mounting base modification to suit project requirements allowing a fast track delivery	Gulf of Mexico
2008	Technip or Bridge Resources	DURANGO - single well SCM control system c/w topside HPU, MCS and subsea christmas tree transmitters	Southern North Sea
2008	RWE	TOPAZ - single well SCM control system christmas tree set c/w subsea christmas tree transmitters	Southern North Sea
2007	CNR	LYELL/KYLE - surface control unit and subsea data module for MPFM and analogues	North Sea
2007	Tullow	WISSEY - tie into the Horn and Wren platform for a single well control system	Southern North Sea
2007	Petrofac	DON - six slot subsea distribution within over-trawl protective structure. Surface control system on Northern Producer FPSO. SCMs located on FMC trees	Northern North Sea
2007	Framo Engineering / BHP Billiton	Communication system for up to 36 multiphase flow meters	West Australia
2007	Framo Engineering / Woodside	Powerline modems for power and communication infrastructure to Framo's instrumentation on this delivery	West Australia

Subsea Control Systems

Year	Client	Work Scope	Location
2006	GDF	MINKE - MCS, EPU hydraulic and electrical jumpers, SCM	Southern North Sea
2006	BG Tunisia	MISKAR - hydraulic and electrical jumpers, SCM, SCMMB, SDU, subsea instrumentation	North Africa
2006	Addax	OKWORI - topside MCS, EPU, HPU modifications, TUTU and subsea hydraulic and electrical jumpers, SCM, subsea mud mat and protective frame	West Africa
2006	Perenco	DAVY EAST - MCS, EPU, HPU modifications to existing system, hydraulic and electrical jumpers, SCM, SDU	Southern North Sea
2006	Talisman	DUART - MCS hardware and software modifications, hydraulic and electrical jumpers, SCM	Central North Sea
2006	BG International	SEYMOUR - topside EPU, HPU modifications to NW Seymour, TUTU, hydraulic and electrical jumpers, SCM, SCMMB, SDU, subsea instrumentation	Central North Sea
2005	BG International	SEYMOUR - hydraulic and electrical jumpers, SUTU, SCM, SCMMB, SDU, subsea instrumentation	Central North Sea
2005	Walter Oil	EAST BREAKS 430 - subsea controls system: topside MCS and EPU and subsea SCM, SCMMB	Gulf of Mexico
2004	BP	THUNDER HORSE - subsea riser monitoring system. Delivery in cooperation with Force Technology in Norway	Gulf of Mexico
2004	Framo Engineering / Santos	MUTINER AND EXETER - subsea open communication and power system for subsea multiphase meters	West Australia
2004	Framo Engineering / Amerada Hess	CEIBA - subsea open communication and power system for subsea multiphase meters	Equatorial Guinea
2004	Ineos (Dong)	SIRI - topside MCS, EPU, HPU, TUTU and subsea hydraulic and electrical jumpers, SUTU, SCM, SCMMB, SDU, subsea instrumentation	Denmark
2004	CNR	KYLE - HPU, MCS, EPU test stands and test HPU subsea electro-hydraulic distribution SCM electro-hydraulic jumpers	Central North Sea
2004	Talisman	TARTAN - MCS, EPU, HPU, hydraulic and electrical jumpers, SCM	Central North Sea
2003	Centrica	ROSE - topside MCS, EPU, HPU, TUTU and subsea hydraulic and electrical jumpers, SCM, SCMMB, UTDA tree instrumentation	Southern North Sea
2002	Marathon	BRAEMAR - topside MCS, UPU, HPU, TUTU and subsea hydraulic and electrical jumpers, SCM, SCMMB, subsea instrumentation	Central North Sea
2002	Equinor	SNORRE UPA - subsea power line communication system for DIACS	North Sea - Norwegian Sector
2002	Talisman	HANNAY - topside MCS, EPU, HPU, TUTU and subsea hydraulic and electrical jumpers, SCM	Central North Sea

Subsea Control Systems

Year	Client	Work Scope	Location
2001	Brovig	CHESTNUT - topside MCS, EPU, HPU, TUTU and subsea hydraulic and electrical jumpers, SCM, SCMMB	Central North Sea
2001	Talisman	HANNAY - SCMs incorporating smart well technology, electro-hydraulic termination and distribution units, SAM, HPU, MCS and TUTU	Central North Sea
2001	CNR	KYLE - HPU, MCS, EPU test stands and test HPU subsea electro-hydraulic distribution SCM electro-hydraulic jumpers	Central North Sea
2000	Equinor	SNORRE B - DIACS topside integration with SAS and information management system, SCRAMS Smartwell software for Halliburton	North Sea - Norwegian Sector
2000	Equinor	SNORRE B - power line modems for production system, DIACS EDU and DIACS downhole control modules via GE O&G in Stavanger	North Sea - Norwegian Sector
2000	Shell	SHELL SRI LANKA	Asia Pacific
1998	Petrobras	ENCHOVA SAC - MCS and HPU, SCM and electro-hydraulic termination and distribution units	South America
1999	Talisman	ROSS - MCS, EEx p Zone 1 rated EPUs, HPU, SCM test stand, test HPU electro-hydraulic distribution units, umbilical termination units, electro-hydraulic jumpers, 10 off SCMs, SAM, subsea instrumentation	Central North Sea
1999	Amerada Hess	FIFE AND FLORA - MCS, EPU, SCMs, electro-hydraulic termination and distribution units	Central North Sea
1997	CNR	BANFF - HPU, MCS, EPU test stands and test HPU subsea electro-hydraulic distribution SCMs electro-hydraulic jumpers	Central North Sea
1997	NSP	MACCULLOCH	Central North Sea
1994	BP	NEWSHAM - integrated control and fire/gas system with telemetry interface and microwave link to land base HPU and TUTU, SDU, SCMs, instrumentation and interface, stab plates	Southern North Sea

List of Abbreviations

ATS	array temperature sensing	OCH	open communications hub
CMIV	chemical metering injection valve	ROV	remote operated vehicle
DSL	digital subscriber line	SDU	subsea distribution unit
DTS	distributed temperature sensing	SAM	subsea accumulator module
EDU	electrical distribution unit	SCM	subsea control module
EPU	electrical power unit	SCMMB	subsea control module mounting base
FPSO	floating production storage and offloading	SMIM	subsea meter interface module
HPU	hydraulic power unit	SSIV	subsea isolation valve
IWIS	intelligent well interface standardisation	STFL	steel tube flying lead
LER	local equipment room	SUTU	subsea umbilical termination unit
MCS	master control station	TPCU	topside power communication unit
MPFM	multiphase flow meter	TUTU	topside umbilical termination unit

last updated: 24/03/2026