

Woodrow Straley

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Professional Summary

Deepwater hydrographic specialist with 20+ years in marine survey, oil & gas, and offshore operations, specializing in INS integration, subsea sensor deployment, and test/evaluation programs. Extensive expertise in integrating navigation, propulsion, sensors, and communication subsystems for autonomous underwater vehicles (AUVs) and ROVs, with hands-on troubleshooting, field testing, and data analysis in maritime environments. Held high-level roles in mission execution as Offshore Manager and Party Chief on major construction projects worldwide, leading multi-day offshore test operations, ensuring compliance with government standards, and reducing downtime through rigorous integration and verification. Proficient in AI stack development using Ollama, AnythingLLM, and multiple APIs to build automated workflows for ROV and survey companies, enhancing data processing and operational efficiency. Deep understanding of USBL and LBL operations, with experience designing deepwater systems and networks achieving 20cm accuracy in over 3000 meters of water; collaborated closely with Sonardyne on developmental systems, conducting test comparisons for enhanced performance. Extensive knowledge of Schilling, Perry, and Kyst Design ROVs communication systems and integrations, including topside-to-subsea networking, sensor interfacing, and troubleshooting for high-reliability offshore deployments. Excel in multidisciplinary teams to deliver high-reliability subsea solutions, aligning with innovative defense and autonomy missions.

Certifications / Documents

- Passport: USA (Exp. June 2033)
- Offshore Survival: BOSIET w/CA-EBS (Exp. Feb 2026)
- Offshore Medical: DGUK (Exp. Jan 2026)
- RigPass / SafeGulf / BP LTGO (No Exp.)
- TWIC Certification (Exp. Dec 2028)

Training / Education

- Fusion 2 Course SPRINT INS (2025)
- Fusion Operator Course (2017)
- Blu3D at Depth LiDAR Certification (2019)
- QPS QINSy Software Training Course (2015)
- Kongsberg Geoswath System Training Course (2012)
- EIVA Training Courses (2017)
- CODA Echoscope Training Course (2012)
- Veripos DGPS Training Course (2012)
- Electronics Course from United States Marine Corps

Software & Hardware Proficiency (1 = General Knowledge, 5 = Proficient)

- **Software (Acquisition & Integration):** EIVA NaviPac 4 (5), 4D Nav (5), Winfrog (5), Fusion (4), Ranger (5), DataLOG (5), Visual Soft (4), Makai (2), Loki (3), QINSy (3), Hypack (2), Edgetech Discover (2), Kongsberg HiPAP (5)
- **Software (Processing, Analysis & Testing):** Fledermaus (2), Cyclone (4), AutoCAD (3), Caris (2), Navi Edit (2); Proficient in data analysis tools for test metrics (e.g., Python, MATLAB equivalents via custom scripts) (4)
- **Hardware & Systems Integration:** Subsea Sensors (Valeport SVS/SVX2 all types, Paro Depth Sensors, Tritreck Bathy & Sonar) (5), Inertial Navigation Systems (INS, LOADSTAR INS, SPRINT INS, FOG Gyros, Octans) (5), Doppler Velocity Logs (DVLs: XLX, XLS, UHD, HD) (5), USBL/LBL (Sonardyne Equipment, C-nodes, ROVNAV, Minitits) (5), DGPS/RTK (CNAV, Navcomm, VeriPos, Trimble) (5), Gyrocompasses (SG Brown) (4), Multiplexers (4), Camera Systems (4), Loadstars (4). Expertise in topside networking to subsea/ROV/AUV installation, sensor calibration, and system troubleshooting using basic test equipment (5).
- **Specialization:** INS Integration (5), Subsea Sensor Integration (5), USBL/LBL Calibration (5), LiDAR Operations (5), Test Planning/Reporting (5), Maritime Offshore Operations (5), Electronics Troubleshooting (5).
- **AI & Workflow Development:** Ollama for local LLM deployment (4), AnythingLLM for RAG-enhanced AI stacks (4), Integration of multiple APIs (e.g., voice recognition, data processing) (4), Building automated workflows for ROV/survey companies (e.g., sonar GUIs, voice chat systems, multi-camera AI processing) (4).

Employment History

Deepwater Hydrographic Specialist / Consulting Surveyor & Party Chief (IMCA Senior) OARS Group, Houston, TX, USA (2020 – Present)

- Led integration and test operations for subsea systems on multiple vessels, including AUV deployments; authored test plans, procedures, and reports, ensuring zero downtime in 800+ operational days across 30+ projects.
- Integrated INS, DVLs, and subsea sensors (e.g., Valeport SVX2) into AUV/ROV platforms; conducted pre-mission diagnostics, field troubleshooting, and post-mission data analysis, reducing integration issues by 20% through rigorous verification.
- Managed multi-day offshore test campaigns in the Gulf of Mexico and international waters, handling launch/recovery, vehicle tasking, and logistics for AUV operations; supported government-equivalent T&E standards with operational metrics refinement.
- Developed AI stacks using Ollama and AnythingLLM with multiple APIs to automate workflows for ROV and survey companies, including sonar data visualization GUIs and voice-activated systems for real-time offshore communications.

Senior LiDAR Specialist 3D@Depth, USA (2019 – 2020)

- Directed global LiDAR integration projects, installing subsea sensors and INS systems on AUV/ROV platforms; conducted acquisition, processing, and test reporting, delivering client deliverables with 100% compliance.
- Performed hands-on troubleshooting and maintenance of integrated systems (e.g., IXBLUE INS, NAVI Scan) during offshore operations, including multi-week field tests in Egypt, GOM, and Brunei.

UTEC Business Development Manager Houston, TX, USA (2018 – 2019)

- Designed efficient survey systems integrating modern technologies like INS and subsea navigation; quoted projects and collaborated on test/evaluation programs for maritime clients.

Survey Manager C-Innovations, Mandeville, LA, USA (2014 – 2018)

- Designed survey spreads for 7 vessels, integrating sensors, INS, and communication systems; prepared test data, finalized deliverables, and managed personnel, achieving 66%+ margins on high-value projects.
- Led INS integration for mooring line changeouts and HIPPS installations; developed test plans for LBL arrays and subsea assets, conducting field operations with minimal downtime.

UTEC Party Chief Houston, TX, USA (2009 – 2014)

- Managed offshore construction survey projects, integrating USBL/LBL and INS systems; led test operations for pipeline installations and array deployments, including 40+ compatt arrays.

Bisso Marine Party Chief Houston, TX, USA (2004 – 2009)

- Oversaw survey projects with focus on subsea integration and testing; handled electronics troubleshooting and system verification in dynamic maritime environments.

Project History (Comprehensive – Tailored to AUV/Integration & AI Focus)

- **Survey Party Chief for DOF Subsea (Dec 2025):** In charge of all Survey operations for Woodside Energy. Conducted a 36 compatt LBL array in 2600 meters of water with over 200+ meters of elevation change, completing a subsea acoustic network achieving 20 cm of accuracy.
- **Survey Party Chief for DOF Subsea (Aug-Sept 2025):** In charge of all Survey operations onboard the Skandi Implementer for ENI USA. Project included mooring line surveys and blockage detection. 4D Nav, APOS, Fusion, INS, ROV Integration, Reporting, USBL Calibrations, Leadership.
- **Survey Party Chief for DOF Subsea (June-July 2025):** In charge of all Survey operations onboard the Chloe Candies for OXY USA. Project included surveying of

multi mooring lines and asset installation. 4D Nav, Ranger 2, APOS, Fusion, INS, ROV Integration, Reporting, USBL Calibrations, Leadership.

- **Survey Party Chief for DOF Subsea (Mar-May 2025):** In charge of all Survey operations onboard the Skandi Implementer for Exxon USA. Project included removal of multiple Subsea assets. 4D Nav, Ranger 2, APOS, Fusion, INS, ROV Integration, Reporting, USBL Calibrations, Leadership.
- **Senior LBL Surveyor for DOF (Mar 2025):** Senior Survey duties onboard the Connor Bordelon. Conducted all the LBL operations for 2 Shell LBL arrays. Using Fusion 1 and Nav View.
- **Survey Senior Survey for DOF Subsea (Feb-Mar 2025):** Help Build and design the survey installation of the Skandi Implementer. Software's- 4D Nav Nav View, Visual Soft, HiPAP, Fugro GPS. Survey Integration with Kist Design ROV's.
- **Survey Party Chief for ROPOS (Nov & Dec 2024):** Conducting design surveyor and navigation operations for ROPOS ROV out of Canada. Work consisted of Subsea Scientific network development survey operation DTM development. Handle all communications for ROPOS ROV. Work was 360 miles off the coast of Guam. EIVA 4, USBL, ROV Pilot, ROV Electronics Tech.
- **Survey Party Chief for DOF Subsea (Aug-Oct 2024):** In charge of all Survey operations onboard the Ross Candies for Chevron USA. Project included inspection and installation of multiple Subsea assets. 4D Nav, Ranger 2, APOS, Fusion, INS, ROV Integration, Reporting, USBL Calibrations, Leadership.
- **Survey Party Chief for DOF Subsea (June-July 2024):** In charge of all Survey operations onboard the Ross Candies for Chevron USA. Project included inspection and installation of multiple Subsea assets. 4D Nav, Ranger 2, APOS, Fusion, INS, ROV Integration, Reporting, USBL Calibrations, Leadership.
- **Survey Party Chief for DOF Subsea (May-Apr 2024):** In charge of all Survey operations onboard the Ross Candies for Chevron USA. Project included inspection and installation of multiple Subsea assets. 4D Nav, Ranger 2, APOS, Fusion, INS, ROV Integration, Reporting, USBL Calibrations, Leadership.
- **Survey Party Chief for DOF Subsea (Nov-Dec 2023):** In charge of all Survey operations onboard the Ross Candies for Chevron USA. Project included inspection and installation of multiple Subsea assets. 4D Nav, Ranger 2, APOS, Fusion, INS, ROV Integration, Reporting, USBL Calibrations, Leadership.
- **Survey Party Chief for DOF Subsea (Sept-Oct 2023):** In charge of all Survey operations onboard the Skandi Skansen for Shell Trinidad. Project included inspection and installation of multiple Shell Subsea assets.
- **Survey Party Chief for ROPOS (Aug & Sept 2023):** Conducting design surveyor and navigation operations for ROPOS ROV out of Canada. Work consisted of Subsea Scientific network development survey operation DTM development. Handle all communications for ROPOS ROV. Work was 360 miles off the coast of Guam.
- **LBL Company Rep for Chevron Whale Development (May-June 2023):** Working for Chevron in the GOM onboard the Seven Artic. I was in charge of all survey operations for the installation of 1 UMB and LBL array populations.
- **Senior LBL Surveyor for DOF Subsea (May 2023):** Working onboard the Ross Candies working as a Senior Surveyor on IRM projects for OXY. Using 4D Nav and started LBL ROV kit.

- **Survey Party Chief for ROPOS (March & April 2023):** Conducting design surveyor and navigation operations for ROPOS ROV out of Canada. Work consisted of Subsea Scientific network development survey operation DTM development. Handle all communications for ROPOS ROV. Work was in the Indian Ocean working in Highly Volcanic area testing gas sights and collecting samples.
- **Survey Party Chief for ROPOS (Nov & Dec 2022):** Conducting design surveyor and navigation operations for ROPOS ROV out of Canada. Work consisted of Subsea Scientific network development survey operation DTM development. Handle all communications for ROPOS ROV. Work was in the Indian Ocean working in Highly Volcanic area testing gas sights and collecting samples.
- **Survey Party Chief for ROPOS (Aug & Sept 2022):** Conducting design surveyor and navigation operations for ROPOS ROV out of Canada. Work consisted of Subsea Scientific array placement for subsea volcanic and seismic area off the coast of Oregon.
- **Senior LBL Surveyor for DOF (July 2022):** Senior Survey duties onboard the Ross Candies. Conducted all the LBL operations for 2 Shell LBL arrays.
- **Senior LBL Surveyor for DOF (May & June 2022):** Senior Survey duties onboard the Ross Candies. Conducted all the LBL operations for 13 arrays and the installation of 500+ subsea mattresses.
- **Party Chief for Oceaneering (April 2022):** Conducted all Supervision of survey duties for Oceaneering onboard the Grant Candies. Client Exxon type of work USBL & LBL.
- **Offshore Manager for Ocean Infinity (Feb-March 2022):** Conducted Offshore manager duties for Ocean Infinity on board the R/V Atlantis. In charge of all operations and safety for all operations during AUV operations.
- **Client Rep for Ocean Infinity (Oct-Dec 2021):** Managing reporting and survey timelines for MMT Ocean Infinity for Avangrid for the whole MBES survey of the Kitty Hawk development. Software's QINSy, Global mapper, and office.
- **Senior Survey Engineer CSA (Aug-Sept 2021):** Conducting Sampling and testing onboard the Deep Helder for MMT. Using drop camera, Operating ROV sled, winch operations, QINSy, Valeport.
- **Senior Surveyor DOF Sub Sea (April-June 2021):** Conducting Subsea Installations for multiple clients in the GOM. Using 4D Nav, Fusion, and HiPap.
- **Cable Lay surveyor/Acoustic specialist (Feb 2021):** Conducted Cable Lay for IT Telicom for the Navy off the coast California. Using Winfrog, Makai, and Ranger 2.
- **Survey Engineer Subsea 7 GOM (Feb 2021):** on the Brandon Bordelon. Conducting new full mobilization for Oceaneering. I was POC.
- **Oceaneering GOM (Dec 2020):** Senior Survey Engineer on the Grant Candies. Conducting new full mobilization for Oceaneering. I was POC.
- **Oceaneering, GOM (Nov 2020):** Party Chief on the Cade Candies. Conducting Subsea installation operations for Chevron. Using NaviPac and HiPAP.
- **Seaworks, Milwaukee (Aug-Sept 2020):** Conducted Multibeam Survey in Milwaukee Bay, Worked as surveyor and Data Processor. Using Hypack and R2 Sonic.
- **Senior LiDAR Specialist, 3D@D, Egypt (Mar 2020):** Conducted Metrology on 4 Jumpers off the coast of Alexandria, Egypt. Using LiDAR, Provided Procedures and Processed all data. Provide all clients Deliverables.

- **Senior LiDAR Specialist, 3D@D, GOM (Jan 2020):** Conducted LiDAR Motion Scan Genesis Platform in the GOM. Using IXBLUE INS, and NAVI Scan, Provided Procedures and Processed all data. Provide all clients Deliverables.
- **Senior LiDAR Specialist, 3D@D, Brunei (Nov 2019):** Conducted LiDAR Motion Scan Platform Crater in Brunei. Using IXBLUE INS, and NAVI Scan, Provided Procedures and Processed all data. Provide all clients Deliverables.
- **BP IRM Contract Survey Manager for C-Innovation:** Mobilized over 6 Vessels and conducted over 800 operational days of work with only 1 hour of down time. I conducted over 30 project and 40 installations of subsea assets for BP.
- **Shell Auger Mooring line Change out Survey Manager for C-Innovation:** I designed a multi vessel network using one master vessel to change 12 anchor cables and installation 12 suction piles. The project generated over 600k, and I was able to keep the margin over 66%.
- **Exxon Julia HIPPS installation Survey Manager for C-Innovation:** We took the LBL project with 3 days notice and conducted a full 10 compatt array with installation and Metrologies for Jumpers and HIPPS units. I conducted all the project design and budgeting and LBL work.
- **Shell Stones FPSO Turrillia Mooring Party Chief on the OSV Keith Cowan:** The project consisted of setting the FPSO Turrillia on location and cutting mooring chains, and building LBL arrays.
- **Noble Gunflint (OSV Adriatic):** Responsibilities included Party Chief and Survey Engineer. The project consisted of the installation of Current surveys on the Olympus Eddy Loop Current.
- **Furie Kitchen Lights (Cook Inlet, Alaska) Phase 2:** Responsibilities included Project Coordinator, Party Chief and Survey Engineer over 6 vessels. The project consisted of the installation of a Monopod Platform and a 14-mile pipeline.
- **GDT Out Of Straightness Surveys (Bay of Campeche):** Responsibilities included Party Chief and Survey Engineer on Survey Vessel in Mexico. The project consisted of Out of Straightness surveys on Multiple Mexico Pipelines.
- **Furie Kitchen Lights (Cook Inlet, Alaska):** Responsibilities included Project Coordinator, Party Chief and Survey Engineer over 6 vessels. The project consisted of the installation of a Monopod Platform and a 14-mile pipeline.
- **Hess Tubular Bells Party Chief with a crew of 4 surveyors on the Normand Commander for Technip:** Changed out 28 compatt shackles in 7 arrays due to faulty shackles, and also conducted baseline checks on all arrays.
- **BP Thunder Horse Party Chief on the Global Orion prepping the field for two new pipeline installations:** Built arrays and set marker buoys for crossings and touchdown boxes. On this project we conducted 2 40 compatt extent arrays.
- **Party Chief, Gabon Africa, a crew of 4 surveyors on the Lewek Express for EMAS:** Project consisted of laying 4 pipelines and re-routing 3 pipelines for the field.