CAPABILITY STATEMENT ONSHORE







BLUE OCEAN MARINE SERVICES

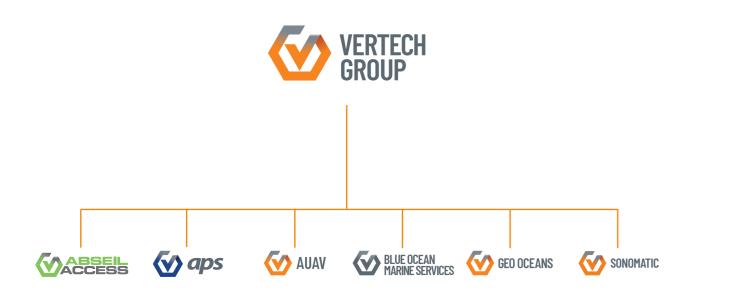
THE PURPOSE

This document is composed to assist our clients and the supply chain in understanding our group operating structure along with a high-level understanding of the benefits, services and specialist packages associated with our capabilities.

COMBINED SERVICES

Vertech Australia, NZ, and USA deliver a comprehensive array of Inspection, Non-Destructive Testing (NDT) and Maintenance packages all underpinned by Innovative Specialist Access Systems.

Our group is made up of complementary and specialist service providers assisting us to innovate in project delivery across multiple market verticals. They include; Geo Oceans an industry leader in Mini-ROV IRM and Subsea Inspection services, Sonomatic who are recognised as a global leader in Specialised NDT, AUAV a specialist Drone and Data Analytics company, APS Industrial Services who deliver Construction, Access and Engineering Services, Blue Ocean Marine Services experts in Offshore Surveys and AUVs as well as Abseil Access in New Zealand who are a Specialist Infrastructure, Engineering and Geotechnical providers.



ONSHORE OVERVIEW

A blend of technical innovation and expert execution marks Vertech Group's Onshore Capabilities in the onshore sector. Specialising in advanced and conventional Non-Destructive Testing (NDT), our services extend to aerial and robotic inspection, ensuring thorough and efficient asset integrity assessments. This focus on cutting-edge methodologies is coupled with a commitment to safety and sustainability, underlining our role as leaders in the industry.

Our services also include comprehensive maintenance and repair solutions and tailoring strategies to meet the unique demands of onshore facilities. By prioritising customised and efficient solutions, Vertech Group effectively enhances the longevity and performance of assets, setting a high standard in onshore asset management.

ACCREDITATIONS

- IRATA Rope Access Trade Associated (Operator & Trainer)
- NATA Certification for Non-Destructive Testing •
- NATA Certification for Lifting Equipment Inspections •
- NATA Certification for In-Service Inspection
- **DROPs** Certification •
- ISO 9001:2015
- ISO 29001:2010
- ISO 14001:2015
- OHSAS 45001:2018
- AS/NZS 45001:2018
- Civial Aviation Safety Authority Licensed (Drones) •



vertechgroup.com.au | sonomatic.com | geooceans.com | auav.com.au





ONSHORE SERVICES

IN-SERVICE INSPECTION



Vertech and our partners offer in-service inspection services to help manage asset integrity. Our experienced inspectors ensure industry compliance, reducing risk and cost and ensuring safety.

NON-DESTRUCTIVE TESTING

ABRIC MAINTENANCE



Vertech offers non-destructive testing services to businesses across different industries. Our team is highly experienced in NDT inspection planning and providing solutions to comply with international and Australian standards. Vertech Group is certified to ISO 17025 as an NDT inspection body by NATA, with accreditation number 18112.

REMOTE DIGITAL VISUAL INSPECTION



Vertech uses Advanced-RDVI for pre-planning and specialised execution packages, delivering high-quality data for sign-off, analysis, risk reviews, and process operational requirements. The complete remote visual inspection services guarantee the highest integrity, repeatability, and data reliability.



Vertech's Jetty Fabric Maintenance Service provides comprehensive and expert maintenance solutions for jetty infrastructure, ensuring long-term durability and operational efficiency.



Vertech offers specialist access systems and inspection services for maintenance, upgrades, repairs, and remediation. Our experienced team ensures safety, cost, and efficiency benefits for clients in various business projects.

IFTING EQUIPMENT INSPECTION & MANAGEMENT



NATA ACCREDITED INSPECTION OF LIFTING EQUIPMENT & CRANES

SPECIALIST PACKAGES



Vertech's V-COMM Decommissioning Package offers a safe, efficient, and compliant solution for offshore petroleum decommissioning.

SHUTDOWN & TURNAROUND PACKAGE (V-TAR)



Our V-TAR Package offers custom integrity, inspection, and access services for shutdown and turnaround projects.

FLARE IRM PACKAGE (V-FLARE)



Our V-Flare Specialist Package provides safe and reliable flare tip services using advanced inspection and NDT methods perfected for timely delivery during shutdowns.



We provide coastal infrastructure services for export jetties and wharves, using innovative technologies for the mining and mineral sectors.



LIFTING EQUIPMENT (V-LIFT)



Customisable turnkey solutions for LNG and drilling sectors, prioritising safety, cost-efficiency, and compliance with Aussie laws.

PIPELINE INSPECTION & INTEGRITY PACKAGE (V-PIIP)



Onshore pipeline inspection and integrity management for marine, environmental, and oil & gas sectors using advanced equipment and inspectors.



We provide inspection, maintenance, and access services to the mining industry. We use advanced technology to ensure productivity and cost-effectiveness for our clients.



We provide specialised services to energy, mining, and infrastructure industries, including geotechnical services that ensure mining safety and efficiency.

CASE STUDIES

BEACH ENERGY TURNAROUND 2021 & 2022



Vertech was proud to have supported Beach Energy Australia's recent ventures into using dedicated and specialised remote digital visual inspection (RDVI) services. Both major turnarounds required a detailed review of vessels and suitability and assessments of other areas of opportunity to help Beach reduce its overall confined space entry (CSE).

On-site delivery by highly experienced and trained RDVI technicians, armed with the latest camera and crawler systems, was a vital aspect of the service provided to Beach. The team delivered numerous additional scopes of work within the original budget, safely and with high-quality and repeatable inspection data.



John Holland employed Vertech to work on the Gladstone LNG Jetty. Vertech was the first contractor approved for rope access operations on a Bechtel site in Gladstone.

The scope of work consisted of coatings repair, concrete repair, and visual inspection on the underside of the jetty. Due to the complicated nature of accessing the bottom of this structure, the client requested that Vertech develop a specialised alternative method of access.

3D JETTY INSPECTION USING AERIAL AND GROUND-BASED PHOTOGRAMMETRY



3D Model of Jetty (Top and Underside) for General Visual Inspection (GVI) Using Drones and various camera sensors to create a Photogrammetry Mesh Model is currently in progress for a major mining operator. The project is in its initial stages, with the first stage of data capture and processing completed for the tail-end jetty. This data is hosted on our proprietary web platform, inSite.

The project is currently in the work-in-progress phase, with planning underway for the second data capture stage during an upcoming shutdown. Upon completing the second stage of data capture and subsequent data processing, the two models will be merged and delivered to the client through our InSite platform.



The Moomba to Cross-Border CCS Pipeline runs east from the Santos-owned Moomba gas Plant to depleted reservoirs in the Marabooka and Strzelecki fields. At a diameter of DN250 (10") and a length of approximately 50 kilometres, Vertech was engaged to conduct radiographic inspections throughout the pipeline's construction by MPC Kinetic.

The objective of the Moomba CCS project was to capture this vented CO2 and store it underground within depleted gas reservoirs, avoiding its release into the atmosphere.



WATER BALLAST AND CARGO OIL TANK INSPECTIONS

Utilising advanced ROV inspection technologies, GVI, CVI, UTM and other NDT methods, we conduct tank inspections to meet the specific Class requirements of each asset.

Our tank inspections are performed without emptying the tank of fluid, thereby reducing facility downtime while avoiding costly and dangerous Confined Space Entry (CSE) procedures.

HULL & MOORING UWILD / IN-WATER SURVEYS

We deploy our ROVs directly from the facility, eliminating the need for costly carbon-emitting support vessels.

Periodic or special surveys are tailored to the individual assets, considering the client's age and condition, class requirements and engineering needs.

Cleaning General and Close Visual Inspections are performed and supported with cleaning, CP, UTMs, penetration isolations, sea chest blanking, angle measurements, chain gauging and other NDT inspections as required.

Remote live data feeds can be supplied to support remote inspection and class attendance.

JACKETS, RISERS, SUBSEA FIELD INSPECTION

We have extensive experience performing ROV inspections of jackets, caissons, risers, mooring systems and subsea infrastructure, including pipelines, spools, wellheads and anode skids. We can deploy directly from platforms or vessels of opportunity.

Inspections and ROV interventions include anything from GVI/CVI, freespan, CP, UTM, FMD, marine growth assessment and spot cleaning to bulk cleaning, dredging, advanced NDT inspections (e.g. corrosion mapping, crack detection) and subsea repairs.



Our Mini-ROV inspection systems include imaging technologies for accurate size and area measurements. A camera array (stereo or mono) acquires high-definition video and images that can be processed for scaled measurements and 3D modelling.

The 3D models can calculate size and area measurements for localised corrosion mapping purposes or quantitative assessment of the remaining anode percentages. These 3D models can also be compared against the 'as built' (baseline) model of the anodes to create a 'deviation' model that displays the level of material loss.

Geo Oceans has an award-winning benthic habitat mapping and monitoring capability utilising the GO VisionsTM software to support regulatory environmental approvals for new construction projects (wharves, jetties, pipelines, offshore wind farms) or for decommissioning projects (pipelines, subsea cables, wells, jackets, nearshore infrastructure).

SUBSEA ADVANCED NDT INSPECTION

Working in collaboration with Sonomatic, Geo Oceans has extensive experience in the development and ROV deployment of miniaturised subsea advanced NDT inspection tools to create high-accuracy corrosion maps of sections of pipelines, spools, hulls, infrastructure or to survey critical welds.

METROLOGY AND PHOTOGRAMMETRY

MARINE HABITAT SURVEYS USING GO VISIONS™



SUBSEA INSPECTION

Sonomatic Subsea is a leading provider of advanced subsea inspection technologies, including ROV and diver-deployed robotic systems. With 30+ years of experience, we design, develop, and build our inspection systems and scanners to meet specific client requirements.

Our unique and innovative inspection solutions enable clients to manage the integrity of aging assets while making informed and cost-effective decisions crucial to plant safety and longevity. We have a proven track record of safely delivering subsea inspection services for over three decades.

PIPELINE INSPECTION

Sonomatic specialises in pipeline inspections to deliver high-quality data. We offer topside and subsea services to ensure pipeline integrity. We provide innovative statistical analysis methods to help operators make informed decisions regarding pipeline inspection and integrity assessments.

Sonomatic's advanced subsea pipeline inspection services utilise cutting-edge technology to effectively detect potential issues, collect precise data, and assess pipeline conditions to ensure the integrity and reliability of underwater energy infrastructure. This reduces downtime, maintenance costs, and enhances safety and environmental protection.

BESPOKE INSPECTION SOULTIONS

Sonomatic is a relationship-driven company that constantly provides its clients with the best possible service using the most specialised technology. We always offer a bespoke solution to individual projects by selecting the most appropriate products and techniques from our wide range of equipment and software.

This can range from the total planning-to-reporting package offered by our Integrity Support Services division to one-off inspection reports by specialist engineers using the most sophisticated and advanced flaw detection methodologies.



TANK CLEANING & INSPECTION

Storage tanks typically contain large volumes of valuable but potentially hazardous fluids. As such, inspection is a critical element of the integrity management of storage tanks. The objective of the inspection is to provide information on the tank's condition. This information should be used to support effective integrity management decisions. Historically, storage tank inspection has relied on entry with the tank out of service. Opening storage tanks for internal inspection is a lengthy and challenging process.

The tank will be unavailable during the internal inspection and must be drained and cleaned before entry is possible. There are also safety hazards associated with personnel entry for inspection. Remote Internal Inspection (RII) methods offer an attractive alternative as they can be conducted whilst the tank is in-service and do not require vessel entry. Sonomatic's technicians are experienced in using various inspection techniques on numerous assets in many environments.

Sonomatic's Integrity Services Department provides engineering and operational support to clients, combining experience in the field with specialised engineering, planning, execution, data analytics, statistical methods, and custom software development. We specialise in advanced, non-intrusive inspections and provide objective analysis through effective planning. Sonomatic's practical statistical methods for inspection planning through simulation position us to support the integrity management sector's transition to increased data-driven decision-making.

NON-INTRUSIVE INSPECTION

Sonomatic is a pioneer in Non-Intrusive Inspection (NII) with global implementation. Our experienced team combines advanced data science and cutting-edge engineering capabilities to offer complete NII campaign services worldwide. We are committed to providing quality solutions that meet the highest safety and efficiency standards while ensuring an auditable trail for each department. NII is becoming an alternative approach to traditional Internal Visual Inspection (IVI) for pressure vessels, with some organizations aiming to eliminate vessel entry by 2026.

INTEGRITY ENGINEERING



AERIAL SURVEY & MAPPING

AUAV offers top-tier aerial surveying and mapping services using state-of-the-art drones and skilled surveyors. We aim to provide the highest quality results with centimetre-level accuracy, enabling our clients to make agile decisions. Our maps and survey data have a 1-3cm resolution per pixel, and our 3D terrain models are accurate to approximately 50mm horizontally and 50-80mm vertically.

3D DIGITAL TWINS (InSite)

AUAV's InSite software is a cloud-based drone data presentation and asset inspection platform. Its features include 3D site capture, integration with other systems, customisable options, and versatile data display capabilities. The software is geared towards clear data capture, essential for in-depth analysis and informed decision-making in drone operations and data processing services.

DETAILED CLOSE VISUAL INSPECTION

Drones are crucial for detailed, safe, and efficient visual inspections in infrastructure maintenance, construction, and energy. With high-resolution cameras and advanced stabilisation technologies, drones can inspect structures like bridges, wind turbines, and high-rise buildings, reducing the need for human inspectors in dangerous or hard-to-reach areas. The agility of drones captures a wide range of angles and perspectives, providing comprehensive visual data that speeds up the inspection process, increases accuracy, and improves maintenance decisions. Using drones exemplifies the integration of technology in modernising and optimising industrial and maintenance practices, making them safer, more efficient, and cost-effective.



Aerial thermography provides an efficient method for capturing temperature anomaly data over large areas. Typical uses include the identification of underground fires, solar farm defects, gas leaks and potential water ingress behind concrete structures. The most widespread use of drone-based thermal capture is on grid-scale solar assets, where data on up to 700,000 panels can be captured in a week.

LIDAR

Drone-based LiDAR is an aerial surveying technique for generating point cloud data for topographical surveys. AUAV has extensive experience in collecting, processing and delivering LiDAR data for mining, engineering power sector and environmental clients. With hundreds of points per square meter, the data is beneficial for surveying areas with vegetation, analysing power line infrastructure and landslip analysis.

THERMAL

AERIAL PHOTOGRAMMETRY

Photogrammetry is the term used for creating very accurate 3D data from photographs. This is a speciality of AUAV, where our team routinely captures and processes models with 100,000 high-resolution images to create digital twins of assets. These digital twins have resolutions between 1cm and 1mm, enabling the engineering inspection of assets, tendering for remediation or demolition, facilitating design works or various virtual reality applications. AUAV have developed a bespoke online platform, inSite,



SITE INVESTIGATION

We deliver comprehensive site investigation and appraisal services, including detailed surveys and advanced monitoring systems. We specialize in habitat mapping and use autonomous underwater vehicles (AUVs) equipped with the latest sensors and imaging technology to conduct thorough surveys, even in inaccessible marine environments. Our commitment to providing accurate, actionable data for marine projects sets us apart.

SUBSEA POSITIONING

We utilise advanced Ultra Short Baseline (USBL) systems to accurately control and manage AUV surveys. These systems determine the position of dynamic subsea targets by transmitting and receiving acoustic signals between a submerged transceiver and a target beacon. Our services extend beyond supporting our AUV activities and provide precise navigational and positional support for various other applications, including ROV inspection, sediment and water sampling, drop-camera surveys, towed instrumentation surveys, and search and recovery exercises.

METOCEAN SURVEYS

Blue Ocean Marine Services offers a comprehensive metocean service for offshore projects. Our specialised monitoring services cater to shallow and deep marine environments, evaluating directional waves, currents, water quality, and more. We provide water level monitoring, advanced weather forecasting, sediment sampling, and real-time monitoring systems, ensuring up-to-date data for immediate decision-making. Our services also include visual surveys and hydrographic surveys to map underwater topography. All our services are tailored to deliver detailed and reliable metocean data for our clients' offshore projects.



REGULATORY COMPLIANCE

Increased marine activity and environmental accountability have increased the demand for ocean monitoring programs. Ocean robotic platforms have proven highly effective in enhancing ocean survey techniques. Blue Ocean Marine Services has executed numerous data acquisition campaigns to ensure offshore compliance. Our services include PFW discharge monitoring, dredging and spoil disposal monitoring, PAM, UXO surveys, water and sediment testing, scour monitoring, real-time monitoring, and data harvesting.

SUBSEA INSPECTION

Blue Ocean Marine Service offers cost-effective and efficient subsea inspection surveys using Autonomous Underwater Vehicles (AUV) and Remotely Operated Vehicles (ROV). These portable technologies require only a small specialist team and can be mobilised quickly. Our successful pipeline inspections demonstrate that these vehicles can deliver exceptional survey results while reducing project costs, schedules, logistical efforts, and risks. Our subsea inspection services include pipeline inspection, infrastructure position surveys, cable route surveys, leak detection surveys, general visual inspections (GVI), and scour monitoring.

EMERGENCY RESPONSE

Blue Ocean Marine Services provides efficient emergency response services for environmental and infrastructural crises. Our expert technicians are trained for rapid deployment, while our AUV fleet enables quick mobilisation. Our services include oil spill response, infrastructure surveys, and pollution monitoring. We also provide scour monitoring and water and sediment testing for thorough environmental assessment. Our emergency response offers comprehensive solutions for safeguarding the environment and marine infrastructure.

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