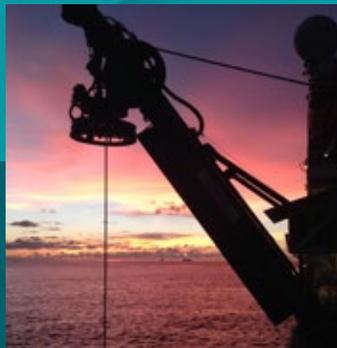


SAExploration



Safety. Acquisition. Experience.



SAExploration believes providing a safe and healthy work environment for all employees globally is not only possible but essential.

Worldwide Geophysical Services

SAExploration is a global seismic company offering geophysical services while delivering exceptional imaging solutions to the oil and gas industry.

Delivering a full range of service for onshore geophysical acquisition services; including survey design, survey services, drilling, recording, processing and field quality analysis. Camp mobilization and demobilization, environmental assessment, community relations, and logistical services are also available.

In the marine environment, SAExploration provides geophysical acquisition services specializing in ocean bottom seismic (OBS). Our OBS capabilities ranges from tidal zones, transition zone, shallow-water and deep-water to operational depths of 3,450 meters.



Established in Lima, Peru in 2006, SAExploration has expanded rapidly to address the changing landscape of the upstream oil and gas industry. Our vision of SAExploration and our rapid growth is based on the importance and vision of our prime relationships, which allows SAExploration to position our services in our client's principal regions. Prime relationships are based on mutual trust and understanding; which allows both parties to share/optimize time, effort and resources to plan and manage projects that will result in delivering a safe high-quality project that minimizes the impact on the environment.



SAExploration believes providing a safe and healthy work environment for all employees globally is not only possible but essential. Our policies, processes and procedures provide the inner workings to succeed in this market and the culture amongst our team of professionals make it possible.

Since inception, SAExploration has maintained TRIR and LTIF rates well below industry (IAGC) benchmarks. We work in some of the most challenging environments globally where our team of professionals execute our operations with personnel safety and health and protection for the environment at the top of their agenda. Furthermore, these professionals maintain a focus on managing risk through every facet of the operation.

SAExploration maintains offices and/or operations in the United States (Houston, Texas and Anchorage, Alaska), Bolivia, Brazil, Canada, Colombia, Egypt, Greece, India, Mexico, Nigeria, Peru, Saudi Arabia, Singapore, and United Kingdom.



Land Seismic Acquisition Services

At SAExploration, we bring decades of significant and specialized expertise borne from our work in a variety of unique and logistically challenging environments around the world. We have an exceptional track record across harsh terrain and heavily cultured areas. In all environments and in every professional scenario, we strive to reduce risk to all parties involved where a client's project is being acquired by recognizing and respecting that both the local communities and the local environment are stakeholders in the project.



SAExploration has been on the leading edge of High Production Vibroseismic acquisition. With our fleet of vibrators ranging from 15,000 to 80,000 pounds and using our Source Driven Shooting techniques we can average more than 10,000 VPs day. Combining this with the advancements in nodal (autonomous sensing and recording) technologies we have successfully recorded programs with trace densities exceeding five million traces/km creating true value for our customers.

SAE has further proven expertise with remote heliportable operations. Flying more than 30,000 hours incident free over the past four years with proven equipment, techniques and a focus on training to ensure project success.

Our teams share best practices across all regions to ensure maximum efficiency and consistent quality for our client projects. Most key SAExploration team members are cross trained on different projects in different regions, enabling them to bring a unique depth and diversity of experience to a given project. We are widely recognized as one of the most knowledgeable and innovative geophysical contractors in the world.

Our comprehensive geophysical acquisition services span the spectrum from planning, design and front-end services to recording and data processing. No matter the given region or challenge, we've got the most demanding client requirements covered.

PROGRAM DESIGN

Thorough planning and design of a geophysical program is critical, complex, and an area in which SAExploration excels. Our expert team brings years of experience and uses the latest software to ensure the most efficient design is employed to meet geophysical objectives.



PLANNING & PERMITTING

Any successful geophysical program begins with a comprehensive project plan. At SAExploration, it is our mission to help our clients reduce the risk and cost of exploration by collaborating to develop solid strategies from the ground up — regardless of scope, geographic region or technical challenge.

LOGISTICS

Our crews excel at resources planning and logistics to ensure the best possible performance. We pay special attention to details including budget, timing, and equipment requirements to make the best geophysical survey possible, maintain high standards, and deliver superior data.

CAMP SERVICES

With many geophysical acquisition projects being undertaken in remote areas, SAExploration has streamlined processes for setting up and dismantling field camps. Camp facilities meet or exceed industry standards providing safe, comfortable working environment and accommodations for staff and clients. Qualified mechanics and technicians keep the necessary infrastructure such as communications, generators and water treatment plants operating safely and efficiently.



SURVEY

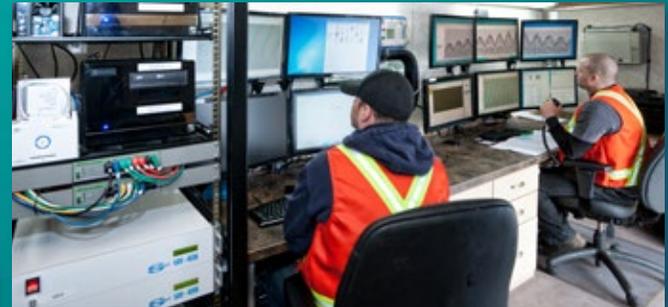
SAExploration has extensive experience in survey and line cutting services utilizing the latest tools and technologies to ensure data accuracy, safe access for field crews and minimal environmental



impact. On-site GIS staff and survey crew provide updated information and maps to support drilling and recording operations as well as project advance reporting.

DRILLING

SAExploration's specialized and experienced seismic drilling teams deliver by using innovative drilling techniques along with the most versatile equipment and efficient means possible.



RECORDING

With expertise developed across all manner of difficult and sensitive areas and by maintaining close relationships with equipment manufacturers and suppliers our teams come with the tools, training and methodologies designed to meet a vast spectrum of program requirements. SAExploration concentrates on using the specific technologies that best meet the needs of each project for our customers.

DATA PROCESSING

Working with ease and efficiency across challenging environments, our highly experienced teams provide superior quality geophysical data processing services.

Marine Geophysical Acquisition Services: OBS

SAExploration provides safe, accurate, eco-responsible and seamless full wavefield ocean bottom seismic geophysical acquisition services for all aquatic environments; tidal zones transition zone, shallow-water and deep-water marine conditions.

Dedicated to an uncompromising HSE program, SAExploration, offers decades of knowledge and expertise garnered from operating in unique and logistically challenging marine environments all around the world. With the utilization of the latest OBN technology, SAExploration can acquire 2D, 3D, 4D full azimuth, Long-offset refractions and full wavefield geophysical datasets, with either single-component (1C), two-component (2C) or four-component (4C) sensing technology, in water depths ranging from 1 to 3,450 meters.

Our crews share best practices across all regions to ensure safe operating methods, maximum efficiency and consistent high-quality data for all projects. Many of our team members, as with our onshore division, are cross trained for different projects in different regions of the world, enabling them to bring experience and knowledge diversity to your project. Thus, SAExploration is recognized as one of the safest, and the most knowledgeable and innovative geophysical surveying contractors in the world.

Our comprehensive geophysical acquisition services span the spectrum from survey design through data processing and imaging solutions. No matter the region or environment.

SURVEY DESIGN

Meticulous attention to survey design and finding the delicate balance between geophysical imaging requirements and project economics, continue to be at the forefront of SAExploration's core day to day business principles. The process of thoroughly designing a geophysical survey is considered the foundation to mitigating exploration risk and uncertainty. This is a challenging and complex process that requires a great deal of planning, coordination and collaboration, and it's a discipline that SAExploration demonstrates and delivers on its expertise and know-how.





From the transition zone and into the deep-water marine environments, SAExploration can provide a complete solution to your geophysical survey design needs.

PROJECT MANAGEMENT & PLANNING

Conduct your geophysical program safely with greater efficiency, cost effectiveness and risk mitigation through comprehensive project management and planning. All successful geophysical programs start with a comprehensive survey design and project plan.



At SAExploration, we help our clients develop the right strategies – regardless of scope, region or challenge. Our team has specific experience in planning geophysical programs in transition zones, in shallow-water, deep-water and producing fields.

We work closely with all stakeholders to meet the requirements and address specific concerns. We provide advanced 2D, 3D and 4D survey design. We assess and recommend acquisition parameters and technologies that best delineate your geological objectives, within budget and per project plan.

Our project plan will address all aspects of a geophysical acquisition program, such as the working conditions, safety, health and environmental concerns or restrictions, regulatory requirements, an Emergency Response Plan, and operational logistics.



Marine Geophysical Acquisition Services: Technology

At SAExploration, our market niche is logistically challenging geophysical acquisition programs. As such, we realize that our progressive technologies – coupled with the ability of our teams to use them to their full capabilities – are critical to your geophysical program's success. We continually monitor technological developments, and we use our real-world field expertise to discover and implement unique operational techniques always ensuring safety and any new risks are managed.



SENSING AND RECORDING TECHNOLOGY

Data quality on your program is paramount, subsequently receiver technology decisions are critical. Our technical experts will advise you on the benefits of wireless Ocean Bottom Node (OBN) systems based on your project objectives and parameters. We have experience with both single- (1C), dual- (2C) and multi-component (4C) surveying methods. Depending upon a client's project objectives, environment and parameters, we offer experience with a variety of OBN deployment techniques, including ROV deployment in and around both surface and subsea facilities and infrastructure, and Node-On-A-Rope (NOAR) handling methods.

SEISMIC SOURCE TECHNOLOGY

Our goal on every single SAE project is to leverage the right technologies that meet the specific economic and imaging needs of a given project. Detailed airgun array modeling is available for ultra-shallow-water or deep-water exploration requirements. Source arrays can be designed and supplied to specifically enhance the low or high frequency signature content.

Source steering solutions can be implemented to improve positioning repeatability coupled with advanced source near-field recording techniques are employed for real-time source performance QC and sophisticated data processing measures to further improve signal preservation and to ultimately to enhance the 4D signal.

The seismic survey's source effort can be designed for optimum data quality and improved surveying efficiencies, including the more traditional single and dual (flip-flop) source methods as well as triple source techniques, or the latest simultaneous, or time-distributed source acquisition techniques, providing flexibility in survey acquisition geometries for better coverage in obstructed areas; greater azimuthal diversity for all types of marine geophysical surveys; tighter source spatial sampling, resulting in improved imaging results with significant cost savings.



Containerized source systems can also be specifically designed, manufactured and supplied for installation on vessels of opportunity.

GEODETTIC SUPPORT (NAVIGATION / POSITIONING SOLUTIONS)

Applying a comprehensive navigation and positioning solution to precisely derive positions for all deployed assets for OBN geophysical surveying is critical to the overall survey operations and data quality assurance. Safely navigating vessels and assets in the survey area as well as the ability to accurately position the seismic source events and receivers in real-time is vital for geophysical data excellence. A variety of technologies and methods are available today to enable and achieve excellent geodetic control for any survey.

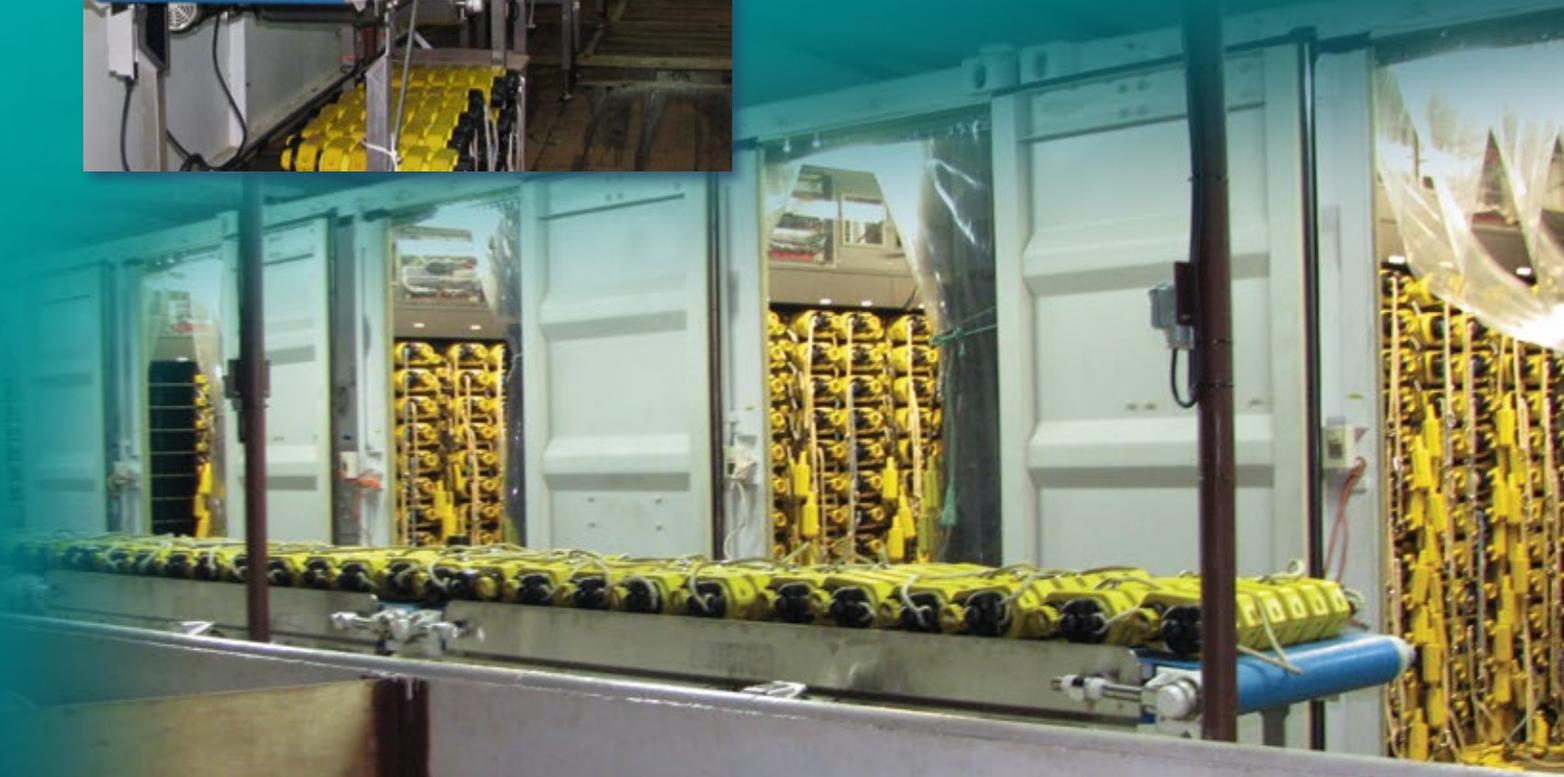
IN FIELD QUALITY CONTROL (IFQC)

Our IFQC teams are tasked with the management of data, from the initial deployment of nodes, through to the delivery of final products to the client. The primary objective for the IFQC team is to ensure that project deliverables meet expectations outlined in the scope of work.



Paramount of the analyses are the following: Validation of recording parameters from SEG-D trace headers; Data integrity check; Visual check of the seismic gathers; Geometry generation for positioning control; Source and receiver attributes check; Anomaly investigation. In addition, they will perform QC specifically designed for the project, that may include detailed attribute maps, blending ratios, as well as investigation of the dataset in a variety of domains.

Further our team of experienced field geophysicists can generate additional deliverables including, data rotation, clock drift analysis and corrections, brute stacks and Post Stack Time Migrations.

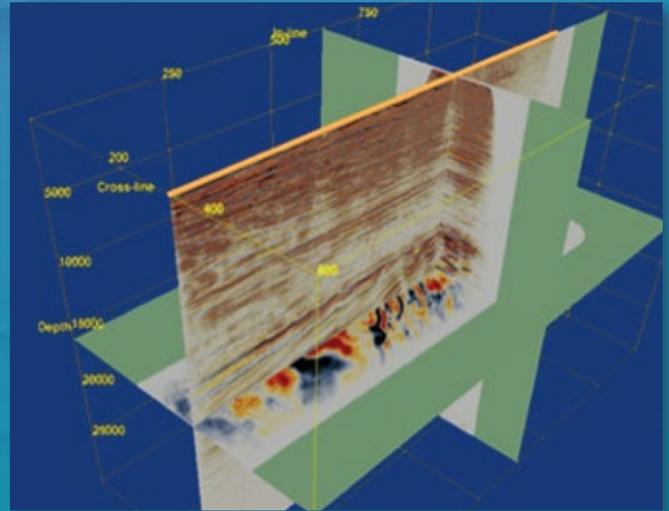


Seismic Data Processing and Imaging Solutions

SAE has experience processing seismic data in very diverse regions. We specialize in Wavefield Modeling and Wave-Equation Depth Imaging, providing three migrated volumes: Up-coming wavefield; Down-going wavefield; and the Sum of Direct and Mirror Migrations.

Whether it is the Jungles of South America, the mountainous regions of PNG and New Zealand, the arctic tundra in Alaska, offshore Brazil, SAE have produced exceptional products for our clients. We have experience in different acquisition geometries as well as a wide variety of source types and acquisition equipment. Combining this with a seamless integration with our acquisition crews and design geophysicists SAE can package together an excellent finished product.

The seismic data processing group expertise and our integrated technologies deliver seismic imaging and reservoir quantitative studies in, Land, TZ, and both shallow and deep-water environments. Our specialists provide significant and reliable quality control of all data recorded and delivers fast-track full wave-equation imaging in weeks following data acquisition. Our Houston processing center furnishes value-added Cloud processing services, providing additional data processing resources.

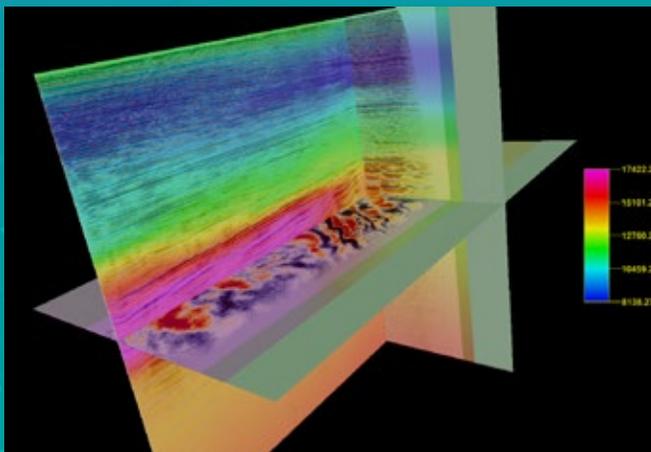


Several processing techniques specifically for OBN data were developed by our geoscience team which consists of four-component quality assessment and pre-processing, shot-record binning, source deblending, wave-field separation, 3D multiple attenuation, PP and PS wave-equation depth imaging and velocity model construction. Additional third-party industry's most advance software is present in our processing workflow to guarantee a variety of processing techniques.

SEISMIC DATA IMAGING SOLUTIONS

- Wavefield Separation
- Depth Focusing Velocity Determination
- 3D Pre-Stack PSPI Migration
- 3D Wave-Equation Multiple Attenuation
- Isotropic and Anisotropic Converted-Wave Imaging

Our commitment is to maximize the quality of seismic processing for complex geology, irregular and sparse survey geometries. SAExploration's infield quality control and data processing capabilities are focused on ensuring the highest quality data is acquired at the field level and processing that is tuned to provide the highest quality with a significantly reduced delivery time.







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