



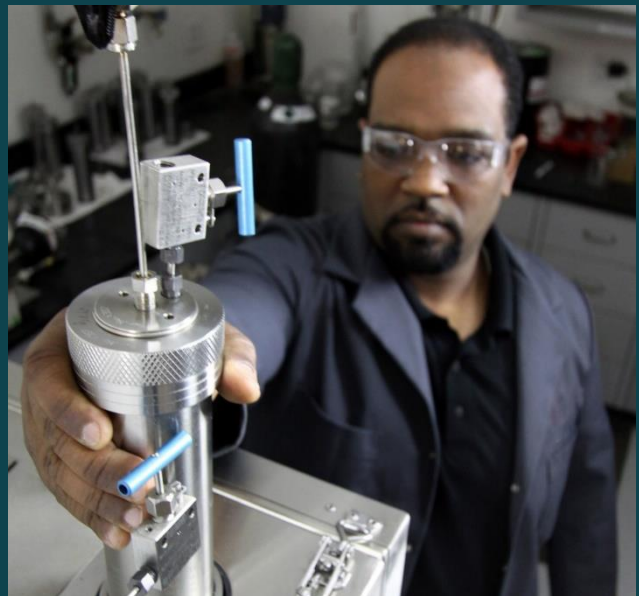
STRATUM RESERVOIR

WE ARE STRATUM RESERVOIR

We began our journey by assembling a group of market leading laboratories and equipment providers. Today, we are a unified organization focused on excellence and collaboration to deliver an unparalleled customer experience.

In 2019, Stratum Reservoir, formerly Weatherford Laboratories, became an independent and dynamic organization. Operating customer- focused laboratories and leveraging our expertise, we enable the discovery and sustainable development of energy resources through applied geosciences.

Our commitment is to deliver an exceptional experience from the field to the laboratory, and from challenges to solutions. Our worldwide laboratories offer a wide range of services including field handling, sample management, lab analyses, and interpretive and advisor solutions.



SERVICES

Our analyses and interpretations help our clients confidently assess resource potential, and understand the fundamental elements and physics governing the asset's economic viability.



SOFTWARE

Our software portfolio enables the integration and visualization of data. These powerful tools allow teams to work within a collaborative environment and get a complete view of the reservoir.



EQUIPMENT

Our offering includes core transport systems, core and fluid analysis instruments, and our industry-leading Isotech® sampling products.

WELLSITE

Location: Brazil, Colombia, Mexico

As the cost of drilling for oil and gas increases, so too does the need for exact downhole data. Stratum Reservoir Laboratories excels at retrieving, stabilizing, and preserving wellsite samples for uncompromised laboratory testing.

We understand sample acquisition and handling have a critical impact on laboratory results. Our field personnel ensure that your samples are managed to always preserve integrity for maximum accuracy.



EQUIPMENT

- | | |
|-------------------------------|--|
| State-of-the-Art Tools | Automated band saws cut cores precisely and efficiently. High-speed drills handle plugging on site. |
| Transport Containers | Customized containers ensure safe, secure transport of valuable cores. Fragile samples are stabilized in temperature-controlled containers. |
| Mobile Laboratories | Offshore processing units feature plugging, core stabilization and photography capabilities. Onshore mobile units perform well test and gas desorption testing, plus PVT sampling for subsequent oil, gas and condensate analyses. |
| GeoJars™ | Gas impermeable containers preserve the integrity of cuttings over time. Since there is no loss of methane, accurate measurement of gas composition and |

PERSONNEL

Experienced wellsite professionals including geologists, engineers and technicians oversee sample retrieval and provide total quality assurance. Their extensive training in safety procedures protects your investment. carbon isotopes is ensured.

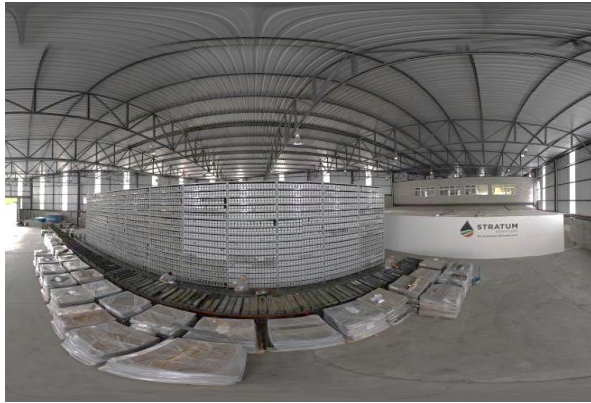
SERVICES

- Core stabilization using epoxy, foam, or dry ice as dictated by the project
- Wax dip preservation
- Core gamma
- Fluid sampling
- Documentary photography
- Transportation



SAMPLE LIFE

Location: Brazil, Colombia, Mexico



The true character of geological formations is revealed in rock, fluid and gas samples. They yield critical information whether you are prospecting for oil and gas or confirming development decisions. As such, their care and preservation are paramount. At Stratum Reservoir, we have developed sophisticated systems to store, track and protect samples. As a result, you can review and reevaluate your materials time and again as new developments occur.

STORAGE

Temperature

With thousands of meters of storage space at ambient or controlled temperature, Stratum Reservoir has the right environment to protect your samples in perpetuity. Choose from ambient, air conditioned, chilled, frozen and dry ice storage at facilities around the globe.

We offer our clients a free storage during their core analysis workflow execution.

Samples Management Tracking System

To provide maximum safety for your samples, sophisticated data management systems, including bar coding options, are used to track movement of your materials. Sample inventories can also be made available via our secured client websites.

360° PROJECT MANAGEMENT

CoreTrac, an internal project management software system, stores all project information in one dynamic database that is accessible to team members worldwide.

The result is seamless communication and maximum operational efficiency over the life of every project.

CORE VIEWING/MEDIA ROOM

Core viewing rooms are accessible 24 hours a day at all storage facilities. Each facility features private viewing and sample layout areas with both UV and natural light conditions.

Slabbing, plugging and full laboratory services on site let you re-test core samples as needed. Additionally, a state-of-the-art media room is available for client workshops.

SECURE CLIENT WEBSITE

Password-protected private websites house data from all disciplines in one central location accessible 24/7 from anywhere in the world. These websites not only supply data as it's being generated, but also serve as a data archive for completed jobs.



INITIAL SERVICES

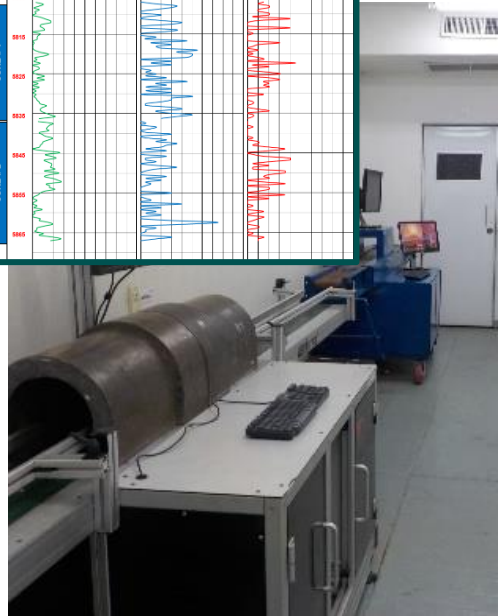
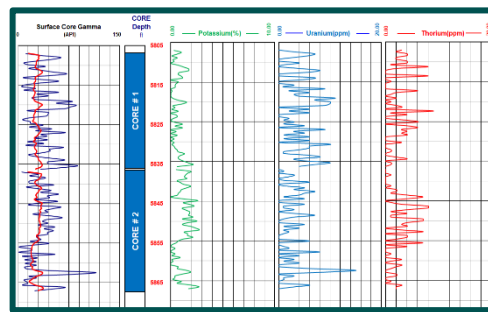
Location: Brazil, Colombia, Mexico



Sample integrity is as fundamental as the safety of our employees. We are committed to safety throughout every step of your project.

Core Gamma Ray Log

The Spectral Core Gamma determines the quantity of various isotopes of radioactive elements in the core. Normally concentrations of uranium, thorium, potassium and the total radiation are measured; the graphical output allows comparing and correlating the core with the well registrations identifying interest zones and clay zone distribution.



Core Plugging and Slabbing

Stratum Reservoir has all the experience and equipment to perform core slabbing and plugging on both, consolidates or unconsolidated cores.

Great care is taken to reduce sample damage during this service, slabbing and plugging process so that the cores and samples are well preserved for next analysis and evaluation.

helical CT scanning

Assess reservoir potential more accurately and reduce risk.

Helical Computed Tomography (CT) Scanning

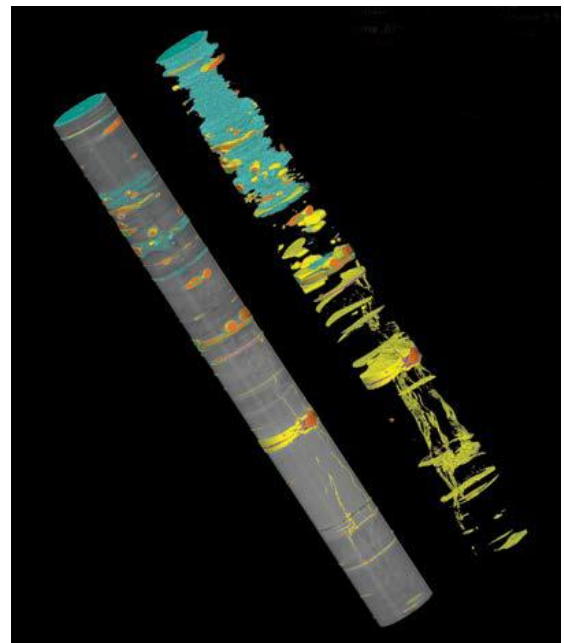
As one of the very first procedures performed on core arriving at the lab, CT scans play a critical role in all future testing and provide a longterm digital record of your asset. Stratum Reservoir employs the latest in CT scanning technology to inspect, characterize and document an entire cored interval, with greater precision and much faster processing speeds than traditional CT methods.

Advantages:

- Helps characterize reservoir types
 - Improve slab and plug orientations / sampling locations
- Obtain high-resolution image logs directly from core
- Identify fracture geometries and relationships, orientation of bedding planes and location of induced artifacts

Dual-Energy Helical CT

Dual-Energy CT scans the core at two different energies to provide density and compositional data. The two energies allow calculation of bulk density (RHOB) and photoelectric factor (PEF); screens core for major mineral components, organic material and porosity; and categorizes lithofacies. And, some select systems at Stratum Reservoir Labs do this in one pass to ensure faster turnaround times.

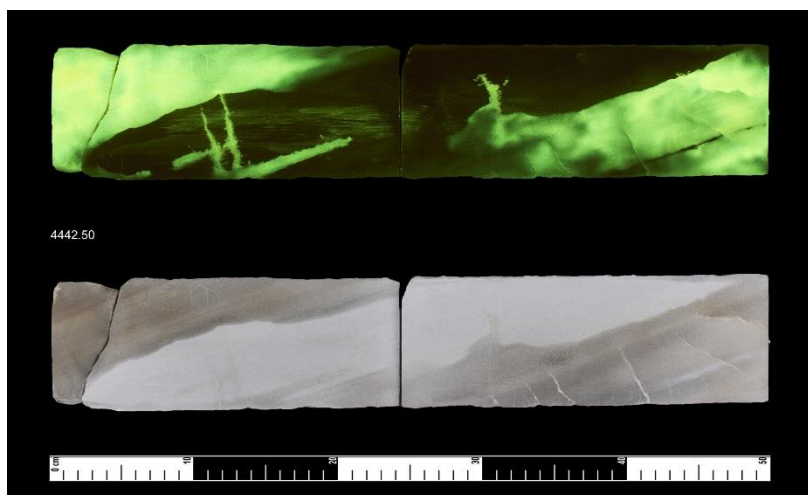


Stratum works with you to understand your objectives and customize your analytical program.

Photography (WL & UVL)

Stratum Reservoir provides clients with a high-resolution image acquisition in white light and ultraviolet light (fluorescence mode) for different techniques of core and samples photography. Our photography services include:

- Circumferential photography
- Full-diameter photography
- Slabbed core photography



Sample cleaning

Initial core analysis starts with the extraction (cleaning) of fluids contained in the pore space of rock. At Stratum Reservoir we have the capability to perform different methods of samples cleaning according to the client objective.



Dean Stark and Soxhlet extraction

This is the conventional method used for the extraction of water, oil and salt removing by distillation from plug size and full diameter core samples.

Flow Through Cleaning (miscible cleaning)

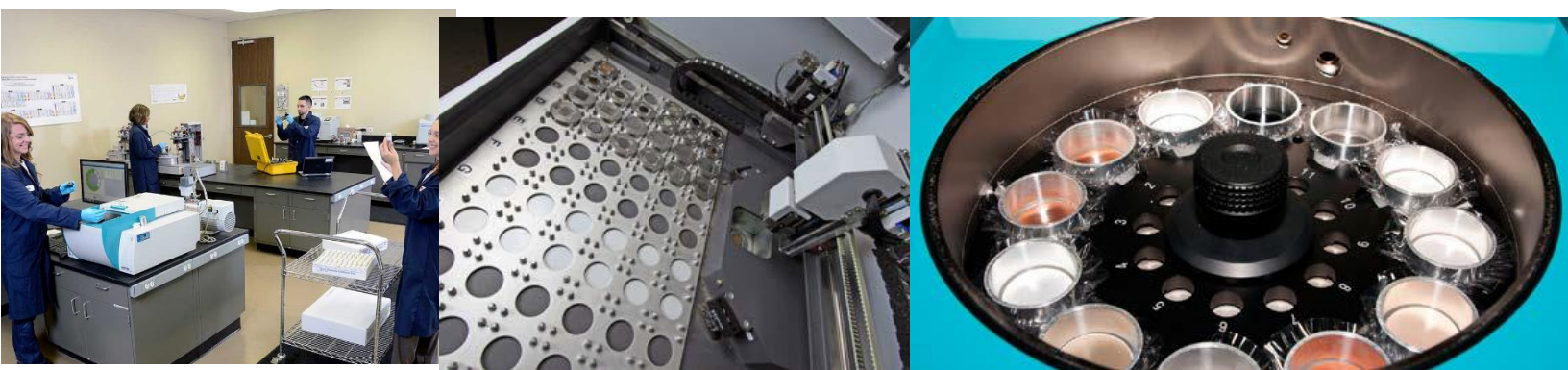
This method is recommended for core samples with a heavy oil component such as asphaltenes, resins and paraffins, the method involves the sequential flow of miscible solvents through the core sample to remove hydrocarbons and aqueous fluids. Unconsolidated or friable samples should be mounted in heat shrinkable Teflon, or similar solvent resistant elastomer, before loading into the core holder.

Pressure Cleaning

Pressure cleaning helps the client to reduce flow through cleaning process time, cleaning first the outside part of the plugs applying pore pressure, in order to remove drilling mud, residual oil and paraffins/asphaltenes the rock may have. As well is use to clean end trims and cuttings if needed. Harder solvents as THF can be use in this service.

GEOLOGY SERVICES

Location: Brazil, Mexico



X-Ray Diffraction (XRD) – Whole Rock & Clay Mineralogy

Stratum Reservoir Laboratories' X-ray diffraction (XRD) service is the industry standard for providing direct measurement of formation mineralogy through an analysis of core and drill cuttings. These high-quality data sets identify the relative amounts of bulk (whole rock) and clay minerals within the formation.

Advantages:

- Increase accuracy of lithological assessments and more informed stratigraphic correlations
- Direct knowledge of variations in sample mineralogy, which may facilitate optimal choice of drilling, completion and stimulation fluids
- Screens for the most brittle zones for vertical completions or lateral drilling targets
- Improved log calibration; allows calculation of grain density and illite crystallinity (for thermal maturity assessment)

X-Ray Fluorescence (XRF) – Elemental Analysis

A fundamental understanding of the mineralogy of the rock at an elemental level can vastly improve the operator's understanding of stratigraphy, depositional environment and the likelihood that hydrocarbon is present in economically viable quantities.

Advantages:

- Chemostratigraphy afforded by XRF enhances and improves stratigraphic correlations, leading to better understanding of reservoir extent, continuity and architecture
- Crosscheck of stratigraphic models, which are routinely performed to verify maximum flooding surfaces, identify carbonate discontinuity surfaces and recognize provenance changes
- Improved understanding of depositional environments
- Calibration or validation of wireline elemental capture tools, used to calculate mineralogy by petrophysicists

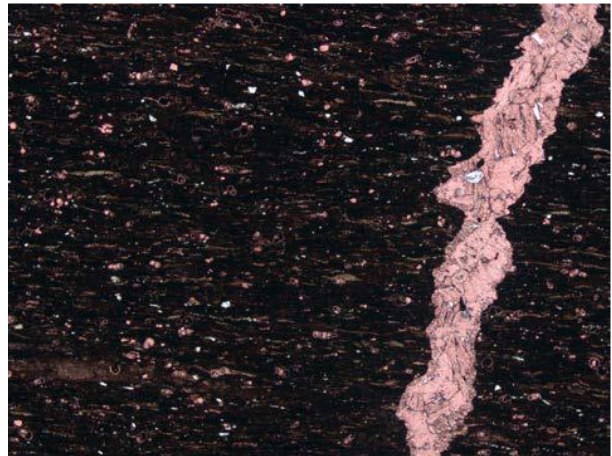
thin section petrography

Location: Brazil, Mexico

Precise characterization of rock types, depositional environment and diagenesis.

Stratum Reservoir Labs' petrographers have in-depth expertise in conducting thin section petrographic analysis to directly identify grain types and sizes, matrix, cement types and porosity types.

Thin section analyses ultimately benefit the client by providing accurate information about rock types, depositional environment and diagenesis of the reservoir, for both crystalline and non-crystalline (amorphous) materials. We offer a wide variety of preparation options best suited to your individual needs.



Advantages:

- Best way to characterize rock fabric, texture, and sample quality
- Evaluates the nature of porosity
- Assists in determining reservoir sensitivity to fluids, pressure, and mechanical stability
- Applicable to a wide range of sample material (cuttings, PSWC, RSWC, conventional, etc.)
- Evaluates the distribution of micropores with epifluorescence microscopy
- Better understanding of provenance, diagenetic history porosity evaluation and reservoir quality

Grain Size Point Count Analysis

Grain size characterization is critical when evaluating depositional processes and controls on reservoir quality. While grain size of unconsolidated sediments can be determined by laser grain size techniques, thin section point count methods must be used on consolidated rock types.

Compositional Point Count Analysis

Our petrographers integrate all available information from a reservoir rock sample through the statistical technique of point counting. By carefully analyzing a matrix of analytic points (typically between 300 and 400) on a thin section of reservoir material under a microscope, we provide a statistically rigorous, quantitative characterization of mineralogy and porosity in conventional rock types.

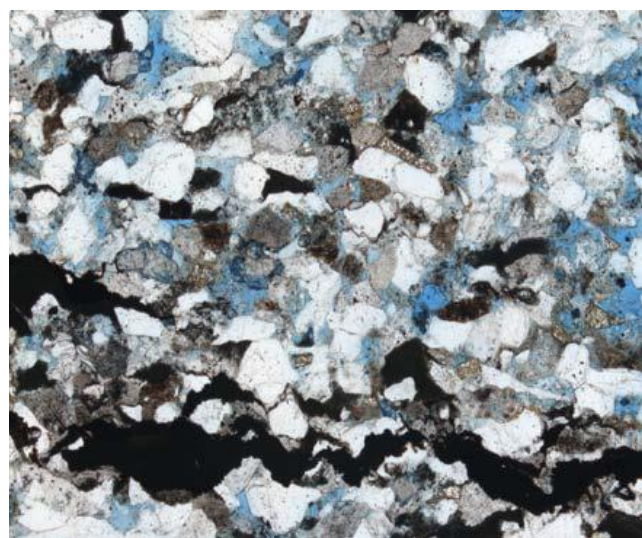
This data may then aid in a variety of interpretations, including the provenance and diagenetic history of the sediments.



Armed with this analysis, the client can make a more informed decision about the field's short- and long-term development, whether they are in the early stages of appraising a prospect, developing a promising region or exploiting an identified or existing field.

The nature of data typically collected and analyzed via point counting analysis includes:

- Basic mineralogy by volume, such as the percentage of various minerals, detrital and authigenic clays and cement in the sample
- Percentage of skeletal and non-skeletal allochem types
- Fabric and texture
- Average grain size and range
- Porosity evaluation, such as the percentage of microporosity associated with clays (estimated based on clay content)
- How the reservoir rock is expected to respond to well logging runs such as density, resistivity and gamma ray
- Any anticipated formation sensitivity concerns
- Diagenetic history



Data can be provided in a Touchstone™-compatible format, which the client can use to potentially predict reservoir quality in future wells.

Thin Section Mosaic Imaging

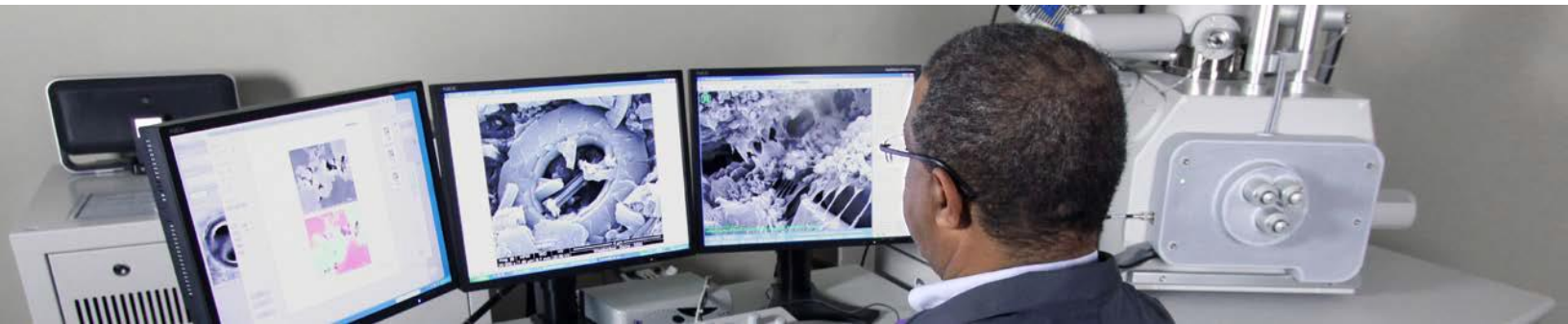
Stratum Reservoir Labs' newest technology, known as thin section mosaic imaging, incorporates a high magnification petrographic microscope capable of stitching thousands of individual images into one all-encompassing view. As a microscope, it is capable of generating multiple views, including plain polarized light (PPL), crossed polarized light (XPL), reflected white light and reflected UV.

Advantages:

- Great for archiving new and old thin sections
- Provides a near virtual microscope for the client
- Offers an ideal way to share slides with partners or government agencies
- Insures against the loss or breakage of shared slides, which is particularly beneficial when sharing with partners or utilizing long-term storage

scanning electron microscopy

Location: Only Mexico



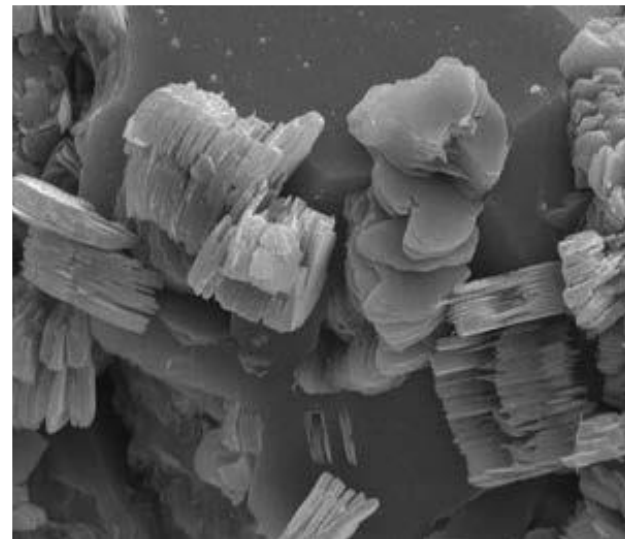
Scanning Electron Microscopy (SEM)

SEM analysis is a high-magnification technique for microcharacterization of conventional rock types. Stratum Reservoir Labs' petrography specialists deploy cutting edge SEM technologies and analysis expertise to better understand clay origin, micropore systems and microcomposition. SEM analysis identifies the reservoir rock's mineral morphology and characterizes pore geometry and flow paths.

This helps to not only define mineral relationship and origin, but it also determines the relationship of the minerals (particularly clays) to the reservoir's pore network. An X-ray energy dispersive spectrometer attachment is also available, which provides comprehensive chemical and elemental analysis during the SEM evaluation.

Advantages:

- Identifies the location of potentially damaging clays and other mineral components
- When integrated with other mineralogical data, allows for evaluation of formation damage and design of remedial treatments
- Helps identify log interpretation problems, such as low-resistivity pay intervals
- When integrated with XRD, identifies elemental composition of various unknown materials such as scale samples, produced well material and filter samples

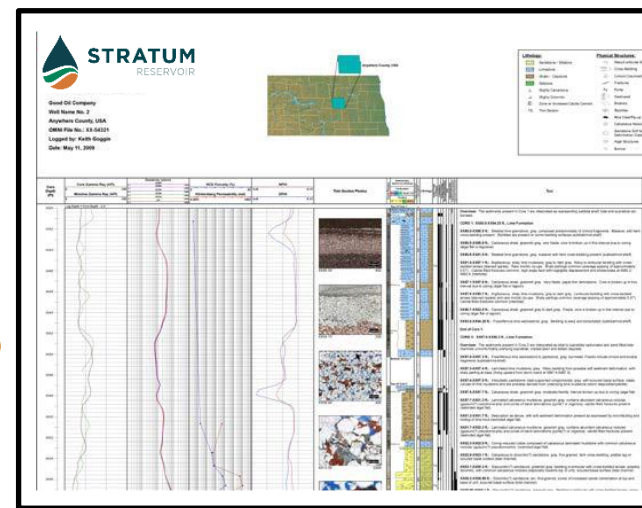


Sedimentology

Location: Brazil, Mexico

Unsurpassed expertise in the art and science of reservoir appraisal.

Appraising the size, shape and exact location of oil and gas reservoirs is both an art and a science. The science is conducted in a series of precise laboratory tests that, taken together, minimize uncertainty and predict reservoir performance. The art of appraisal can only come from experience in applying the scientific aspects of geology – an unsurpassed asset at Stratum Reservoir Laboratories. Our sedimentologists offer custom-tailored solutions to help operators understand and characterize different lithofacies, traps and seals and reservoir distribution. With this insight, our clients can make the best development decisions for each well, and for the field as a whole.



Core Descriptions

A core sample provides a wealth of information about the reservoir – everything from a more precise location of the most prolific formations to what kind of drilling, completion and production challenges the operator might expect. Plus, detailed core descriptions are vital to ground truth well log data that will be used in further exploitation of the field.

Core descriptions are performed on slabbed core and encompass recording a wide range of sedimentary and diagenetic features on the sample. Common properties obtained from core descriptions and some of the potential uses for that data can be customized depending on client needs in a variety of software (Easy Core, WellCAD). They typically include, but are not limited to:

- Lithology, fabric and textures
- Sedimentary structures
- Color and hydrocarbon staining
- Presence and types of fossils
- Bioturbation and the presence of trace fossils
- The presence and composition of cements and replacement minerals
- An evaluation of potential flow barriers and lateral reservoir continuity
- Calibration of core data with log data to create petrofacies
- Data for geologic and engineering production models
- Analysis of porosity types and fractures and their location relative to the depositional environment

SPECIAL CORE ANALYSIS

Location: Brazil, Mexico



Petrophysics is the study of the physical and chemical properties that describe the occurrence and behavior of rocks and fluids; ultimately shedding light on the reservoir rock's composition and structure. The most common instructive properties in Petrophysics include lithology, porosity, permeability, water saturation and reservoir thickness. Reservoir models are built upon these measured and derived properties to estimate:

- the amount of hydrocarbon present in the reservoir
- the optimal rate at which hydrocarbons can be produced from the reservoir
- the fluid flow properties of the reservoir rock
- enhanced oil recovery potential

Stratum Reservoir offers a full suite of petrophysical laboratory tools and techniques to measure these production properties. We also report the results in ways that guide informed decisions for subsequent well operations. Our standard suite of petrophysical analysis methods include:

Capillary Pressure

Capillary pressure is a key parameter in determining distribution of fluids in the reservoir. Methods for measuring capillary pressure include:

Mercury Injection (MICP)

- Fastest method to obtain results
- Range of pressure is higher compared to other methods
- Provides additional information in the form of pore throat size distribution
- Independent of wettability
- Shale samples for clay effect

Ultra-centrifuge Method

- Increasingly favored for measuring capillary pressures
- Obtain a complete curve in a few days
- Produces high pressure difference between phases
- Rapidly reaches equilibrium and has good reproducibility

Porous Plate Method

- Much slower method, one full curve can take in excess of 180 days
- Highest pressure achieved equals the threshold pressure of the plate
- Electrical properties can be conducted concurrently with this method
- Representative confining pressure and temperature conditions



Electrical Properties

Laboratory measurements of electrical properties from core samples can be used to relate a reservoir rock's porosity, brine and hydrocarbon saturations to its in-situ electrical conductivity. Advantages:

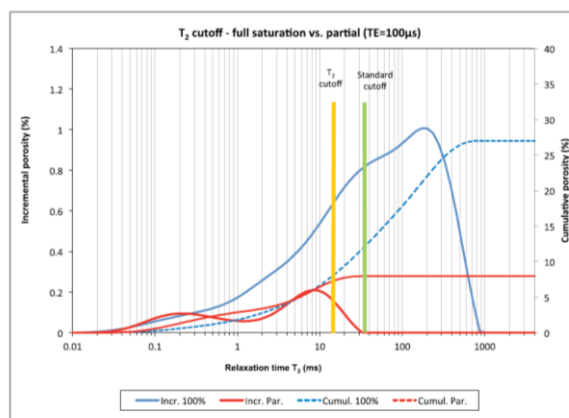
- Understand and calculate oil and gas reserves
- Understand and interpret electrical resistivity logs related to the overall assessment of oil and gas in place

Stratum Reservoir has the knowledge and practical experience to extend the range of electrical property and capillary pressure testing on rock samples with low water saturations, such as tight gas sands and shale. Our petrophysical experts helped develop and refine specific capillary membrane and vapor desorption techniques to investigate the ultra-high pressure conditions for this prolific and economically important class of unconventional reservoir rocks.

NMR

Stratum Reservoir routinely conducts nuclear magnetic resonance (NMR) studies on core samples. These tests not only provide useful core analysis data, deduced from the fluid within the pores, but also enhance data interpretation of NMR results from logging-while-drilling (LWD) tools. The core-based NMR studies provide an array of useful information, including:

- Determination of reservoir thickness and net pay
- Verification of formation's liquid-filled porosity and log response
- Calculation of a formation-specific permeability relationship
- Determination of formation-specific parameters to determine BVI (irreducible) from the downhole tool
- Determination of movable fluids from log responses



fluid/flow measurements

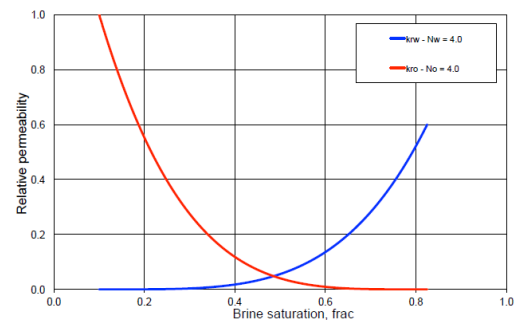


Relative Permeability

In multiphase flow in porous media, relative permeability is a dimensionless measure of the effective permeability of that particular fluid phase.

Stratum Reservoir employs a full complement of both steady and unsteady-state methods to measure relative permeability.

- Steady-state techniques produce reliable relative permeability data, and consist of simultaneously injecting two phases (oil and water) at constant rates for extended durations to reach equilibrium. Parameters such as saturation, flow rate and pressure gradient are measured for each phase and used in Darcy's law ($q = \frac{kA}{\mu} \frac{\Delta P}{L}$) to derive an effective permeability. While inherently time-consuming, steady-state methods are highly reliable and allow for the determination of relative permeability at a wide range of saturation levels, even early in the life of the field.
- Unsteady-state techniques provide relative permeability curves by production history matching. These experiments use reservoir conditions of temperature, pressure, net overburden and live fluids on restored state core. Relative permeability curves are generated from effluent volumes and differential pressure data recorded as a function of time, during a constant rate (or constant pressure) injection of a displacing fluid. Another unsteady-state method that only measures the produced phase relative permeability data is done with the centrifuge.



Wettability

Wettability measurements, the analysis of one fluid's tendency to spread on or adhere to a solid surface in the presence of other immiscible fluids, play a key role in understanding basic reservoir properties like relative permeability, capillary pressure and resistivity.

Stratum Reservoir employs a range of lab methods, including Amott, Modified Amott/USBM and contact angle measurements, to measure the wettability of the rock formation in the presence of different reservoir fluids.

formation damage



Location: Mexico

E&P processes may cause formation damage if they reduce the natural inherent productivity of the formation or reduce injectivity of a water or gas injection well. Formation damage can take place at all stages of a well's life, from drilling on through to its production decline. Our formation damage studies are custom tailored to identify a problem and offer the appropriate solution that will allow the well to be drilled, completed and produced in the safest and most efficient manner possible. A few examples of well operations that commonly encounter formation damage issues include:

Drilling

During the drilling of a well, the improper design of drilling mud composition and cuttings may result in plugging of pore throats, clay swelling, or adverse fluid-fluid interactions that may result in organic scaling or water block.

Fracture Stimulation

In well stimulation operations in shale and other low permeability formations, a well-connected fracture network between the productive zones of the reservoir and the well bore is essential. There are a myriad of formation damage challenges that threaten the fracture network, and the overall production of the well. These challenges include:

- Inorganic/organic scales in the well bore
- Expose pore filling clays
- Wettability changes
- Fracture conductivity decline due to proppant embedment and crushing
- Plug perforations from remnant debris
- Release of fines
- Collapse of the formation during acidizing or inadequate breakers for high viscosity fracture fluids may cause blockage of propped fractures

Completion

The improper planning of completion operations can have a number of serious impacts on the long-term integrity and production potential of the formation. Excessive overbalance pressure can force both solids and fluids into the formation. Incompatibility between circulation fluids and the formation can result in clay swelling/reduced pore throats, invasion of the perforating fluid solids and explosives debris into the formation with resultant pore plugging or wettability alteration from completion fluid additives.



Production

Adverse effects from chemical injection, incompatible waters or steam injection can cause reductions in injectivity and overall production. A multitude of remedies and prevention testing is available.

Stratum Reservoir deploys a wide range of formation damage laboratory test methods, including but not limited to:

Capillary Suction Time (CST)

- Measures the affinity rock has to hold onto fluid. In filter-cake evaluations, CST measures reactivity permeability of water-base drilling muds (WBMs) or completion fluids. This test may also be used to study how clays and shale react in filter cakes, or be a quick look for rock/fluid sensitivity.

Rock/Fluid Sensitivity

- Various dynamic flow tests allow us to understand if the permeability changes are related to mobile fines or to changes in chemical composition, pH, or salinity.

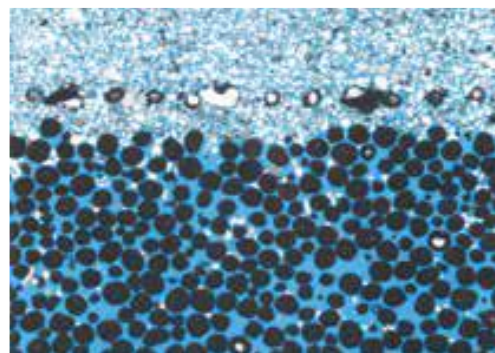
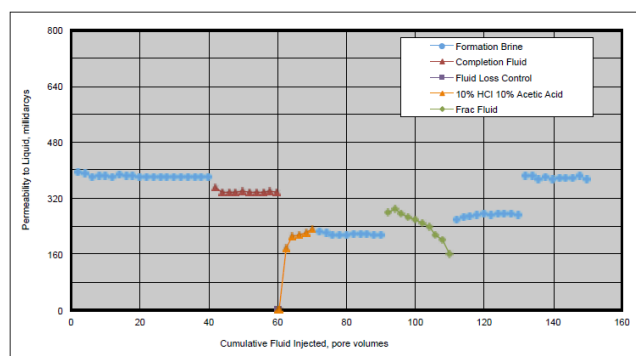
Critical Velocity

- Core flow tests are carried out at various flow rates to determine at which velocity certain clay minerals may become dislodged and reduce permeability.

Regained Permeability

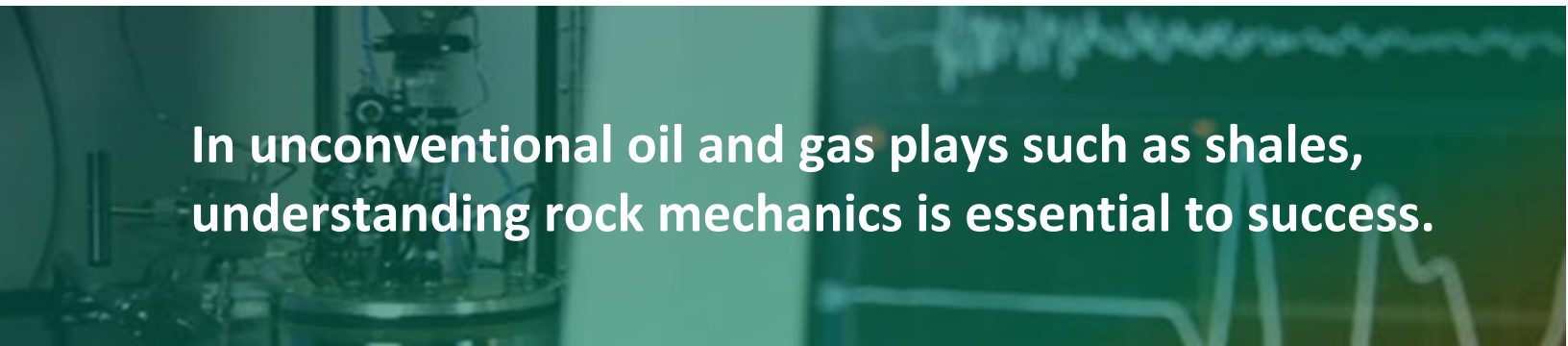
- Determines the effects of a drilling or completion fluid on the reservoir rock under dynamic (flowing) conditions. Once the baseline flowing properties of the core are established with non-damaging fluids, a treatment with a test fluid is performed. The amount of permeability regained after the treatment is presented as a percentage of the baseline/treated permeability.

Fluid Fluid Compatibility and Scaling Tendency



rock mechanics

Location: Mexico



In unconventional oil and gas plays such as shales, understanding rock mechanics is essential to success.

Rock mechanics is the study of how formation rock responds to forces imposed by their physical environment. Rock strength affects essentially every aspect of reservoir development including well placement, drill bit selection, high-angle and horizontal drilling, deepwater drilling, hydraulic fracturing, completion operations and production.

Failure to properly measure rock mechanic properties can cause a number of wellbore problems such as borehole instability, casing shear, subsidence, stuck pipe and sand control issues. Together, these issues are estimated to cost the E&P industry billions of dollars each year in the form of lost or deferred production, expensive remediation and intervention operations.

Stratum Reservoir has the experience and analytical tools to understand a core sample's rock mechanics, and how these translate to better well construction decisions in the field. Our rock mechanics laboratory methods include:

Triaxial Compressive Tests and Acoustic Velocities

We conduct triaxial compression strength tests on cylindrical core samples to understand how the rock responds to compressional stress. Such information guides where and how the operator will place hydraulic fracturing stages. Axial and radial strains are measured while increasing axial stress at constant confining pressure. We also perform the unconfined compression test, which is done with zero confining pressure. Combined, this information helps determine the compressive strength, failure envelope, Poisson's ratio and Young's Modulus. In determining the Mohr-Coulomb failure envelope, 3-4 triaxial tests on samples recovered from the same depth are recommended to obtain trustworthy results.

When core material is limited, a multi-stage triaxial test can be conducted on a single sample at several different confining pressures for Mohr-Coulomb failure analysis. Acoustic velocities can be determined during compressive tests. Dynamic elastic parameters are provided from compressional and shear wave velocities along with sample bulk density and can be compared with static values.



Proppant Embedment Tests

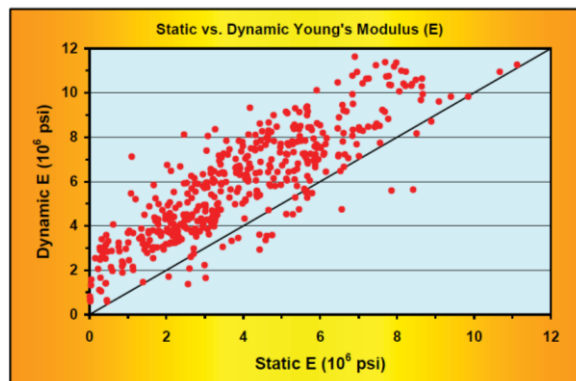
Stratum Reservoir conducts proppant embedment tests to evaluate proppant behavior with increasing stress. Different types of proppants and concentration can be tested to characterize proppant embedment with stress.

Thick-Walled Cylinder Testing (TWC)

Stratum Reservoir routinely conducts this test, in which a rock sample in the form of a hollow cylinder sample is externally stressed to failure. The test configuration produces non-uniform stress and strain distributions around the central hole, thus closely mimicking field conditions of near wellbore or near perforation production stress and strain regimes. Such information is vital in helping to characterize openhole stability and the potential for sanding or solids production.

Indirect (Brazilian) Tensile Strength

Measurement of the maximum tensile strength that the rock can withstand is an important parameter in planning a fracture stimulation job. Stratum Reservoir has the expertise to conduct indirect testing of the tensile strength of core samples by subjecting the sample to line load until failure, and then using well-established equations to determine the corresponding tensile strength.



PVT & FLOW ASSURANCE

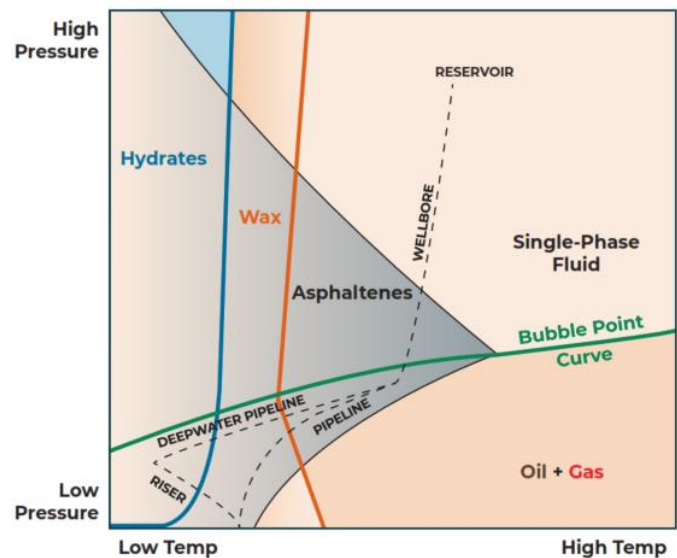
Location: PVT - Mexico & Flow Assurance - Houston

UNDERSTANDING VOLUMETRIC FLUID BEHAVIORS TO MAKE FASTER DECISIONS

Our expertise and rigorous application of customized high pressure, high temperature (HTHP) PVT cells and state-of-the-art flow assurance capabilities enables us to deliver high quality results and fluids solutions.

WE ARE YOUR ANSWER FOR:

- Oil & gas separator sampling in production or well testing environments
- Routine Volumetric phase behavior analysis (i.e., PVT Tests) and advanced flow assurance tests (AOP, WAT, etc.)
- injection flow streams, inc. sour gases (H_2S)
- Full emissions compliance testing to satisfy flare gas regulations



OUR SERVICES INCLUDE:

- PVT studies on:
 - Gas condensate
 - Volatile oil
 - Black oil
 - Heavy oil
- Chromatography for liquid and gas analysis
- Scaling potential
- Water sampling
- Inhibitor evaluation
- Surface Sampling and sample transfer services
- Live fluid preparation
- Integrated PVT and geochemical analysis
- Sample storage

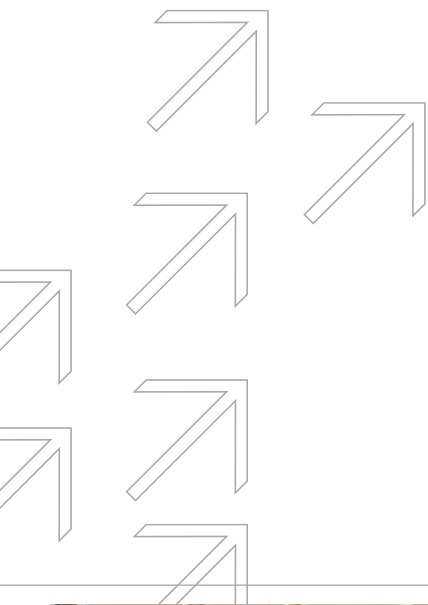
Our team is able to quickly deliver results without compromising quality, accuracy or precision. We are respectful, collaborative and transparent in our engagement with all of our stakeholders. Our objective is to be the leading provider of geoscientific solutions.

Stratum Reservoir Latin American staff, both for the execution of analyses and interpretations, is professional, highly qualified and with remarkable years of experience.

The leadership of routine core analysis departments as special core analysis is the responsibility of Geologist Joel Vasquez with more than 40 years of international experience in the management of consolidated and unconsolidated rocks in numerous siliciclastic and carbonates formations. Accompany him in these roles, petroleum engineers with more than 10 years of experience in the handling and control of rock and fluid samples.

In the area of geology, the leadership is led by the Geology Engineer Giselle Gedler, with 30 years of international experience in sedimentology, accompanied by geologist engineers, Jessica Aguillar, Alexis Contreras and Alma Jose.

In addition to the aforementioned professionals another group of professionals and highly experienced personnel is part of the staff of Stratum Reservoir. For the services that are requested, a project manager is assigned to the client, to guide them, keep them informed and advise them technically throughout their project.



GEOCHEMICAL ANALYSIS

Location: Houston

REDUCING EXPLORATION AND DEVELOPMENT RISK WITH ADVANCED GEOCHEMICAL TECHNOLOGIES AND INTERPRETIVE EXPERTISE

Inquire about how Stratum Reservoir Geochemical Services Group can help you:

- Gain access to discounted, world class analytical services for students and educators
- Develop operational protocols and methodologies to be implemented in your academic laboratory setting
- Select the right instrumentation, configuration and support equipment for your academic laboratory setting
- Take advantage of our laboratory training opportunities
- Participate in Geochemical Interpretive short courses



Working along side our team of experts, you will
gain the tools needed to get it right the first time

Geochemical Services

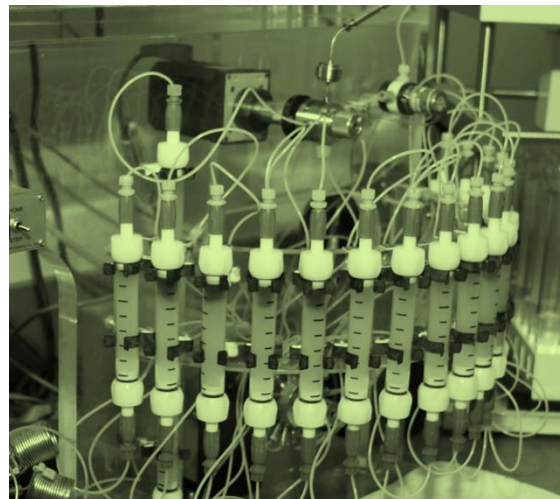
- Rock-Sample Analysis
- Gas-Sample Analysis
- Oil and Extracts Analysis
- Environmental Services
- Geochemical Interpretation

Methodology and Procedural Development Services

- Equipment selection and configuration
- Instrument sales
- Procedural development
- Protocols for safe practices

Analytical Method Development

Our team of dedicated engineers and analytical geoscientist can work with you to develop robust methods for preparing and analyzing a wide range of sample types from the exploration and/or production side of the Oil and Gas industry



Procedural Development

Process driven, value based operations are key to your success – With decades of experience in all aspects of analytical petroleum geochemistry, Stratum Reservoir's Geochemical Services Group is uniquely positioned to help you and your academic institution implement operational procedures with a keen eye towards quality and safety

Geochemical Services

Whether you are interested in assessing the potential of a shale play, pinpointing the source of an oil spill, or quantitatively allocating the production from multiple zones in a commingled production stream, Stratum Reservoir has the geochemical services available to get you the answers you need.

- Sample Preparation
- Source Rock Geochemistry
- High Res GC Fingerprinting
- GCMS Biomarker Analysis
- Elemental Analysis
- Bulk Properties
- Isotopic Analysis
- Instrument Sales

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