

# SPWLA INDIA CHAPTER TECHNICAL BULLETIN



Shri Om Prakash Sinha

## PATRON MESSAGE

It gives me immense pleasure to note that the SPWLA India Chapter continues to strengthen its role as a vibrant platform for knowledge sharing and professional collaboration in the domain of Formation Evaluation, Petrophysics, and Well Logging.

-Continue reading on Page 2



Shri Bhanu Pratap Singh

## PRESIDENT MESSAGE

It is a great honour for me to take over as the President of the SPWLA India Chapter. I am grateful for the trust placed in me and deeply inspired by the remarkable contributions of my predecessors who have nurtured this Chapter into a strong and vibrant professional society.

-Continue reading on Page 3



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## SPWLA INDIA STALL AT SPG 2025

## INSIDE THIS ISSUE

01

**Patron & President  
Message**

02

**Technical Articles**

1. Application of Look-Ahead Deep Resistivity While Drilling (LADRWD) for Accurate Well Placement in the Bassein Formation, Mumbai Offshore
2. Noise Logging-Based Leak Diagnosis in Effluent Disposal Well
3. Cutting Rig Time with Next-Generation Perforation: Single-Run Multi-Interval Perforation Using Addressable Multi-Gun Systems
4. Application of AI/ML in Petrophysical Workflows

03

**SPWLA India Chapter  
Events**

04

**Upcoming Events**

## PATRON MESSAGE



Shri Om Prakash Sinha

*Dear Members,*

It gives me immense pleasure to note that the SPWLA India Chapter continues to strengthen its role as a vibrant platform for knowledge sharing and professional collaboration in the domain of Formation Evaluation, Petrophysics, and Well Logging domain. Over the years, this Chapter has fostered a spirit of technical excellence by bringing together experts, young professionals,

and researchers to exchange ideas and showcase innovations that hold the key to shaping up the future of subsurface evaluation.

In the current era, the Exploration and Production industry stands at the intersection of conventional wisdom and transformative technologies. Advances in Logging technologies, Integrated G&G approach, Digitalization, and Machine Learning are redefining how we characterize reservoirs, reduce uncertainties, and enhance recovery. In this context, the SPWLA India Chapter's initiatives—through technical bulletins, symposiums, and collaborative platforms—play a pivotal role in disseminating knowledge and inspiring new directions in our professional pursuits.

As Patron of the Chapter, I commend the dedicated efforts of the SPWLA India team in India for creating an avenue and forum for sharing experiences, case studies, and technological advancements relevant to our industry. I am confident that the scientific contributions and collaborations will continue to inspire professionals across organizations, nurture young talent, and enrich the community of formation evaluation specialists in the country.

I wish the SPWLA India Chapter continued success in all its endeavors and look forward to its sustained contribution and thriving impetus towards advancing the science and practice of Petrophysics in India.

**Best Wishes & Regards,  
Shri Om Prakash Sinha  
Patron, SPWLA India Chapter**

## PRESIDENT MESSAGE



Shri Bhanu Pratap Singh

*Dear Members,*

It is a great honour for me to take over as the President of the SPWLA India Chapter. I am grateful for the trust placed in me and deeply inspired by the remarkable contributions of my predecessors who have nurtured this Chapter into a strong and vibrant professional society.

The energy industry is undergoing mega transformative changes. With the growing importance of advanced Logging technologies, data-driven solutions, and interdisciplinary collaboration, the role of Formation Evaluation and Petrophysics has become more critical than ever.

In this context, our Chapter will continue to serve as a platform for exchanging knowledge, fostering innovation, and building bridges between industry, academia, and young professionals.

Through our technical bulletins, workshops, and symposiums, we aim to showcase the best practices, case studies, and research that will shape the future of reservoir characterization in India and beyond. I encourage all members and young professionals to actively contribute and engage with the Chapter's activities so that together we can create a dynamic knowledge ecosystem.

I look forward to working with all of you in strengthening the SPWLA India Chapter and in advancing the science and practice of Petrophysics for the benefit of our industry and society.

**Best Regards,**  
**Shri B P Singh**  
**President, SPWLA India Chapter**

## Application of Look-Ahead Deep Resistivity While Drilling (LADRWD) for Accurate Well Placement in the Bassein Formation, Mumbai Offshore

Authors: Tushar Kanti Mahato- ONGC, Pawandeep Bagga - Baker Hughes

### Introduction

In petroleum exploration and production, accurate geosteering and well placement are fundamental for optimizing field development, particularly in reservoirs characterized by thin oil columns, transition zones, and active aquifers. In the Bassein Formation of the Panna Field, drilling pilot holes has traditionally been used to locate formation tops and fluid contacts such as the Gas-Oil Contact (GOC) and Oil-Water Contact (OWC). While effective, this method incurs additional rig days and can increase exposure to drilling hazards.

To overcome these limitations, Look Ahead Deep Resistivity While Drilling (LADRWD) technology was deployed on the XX platform (well name masked) of the Bassein & Satellite Asset. The objective was to accurately land horizontal sections in thin oil columns without requiring a pilot hole, thereby reducing cost and enhancing operational efficiency.

### Reservoir Context: Bassein Formation Challenges

The Bassein reservoir is characterized by:

- Thin oil columns
- Thick transitional zones
- Underlying strong water leg
- Permeability heterogeneity and reservoir depletion

Such geological conditions make horizontal wells vulnerable to high water cut or elevated GOR if the landing depth deviates even slightly from the optimal zone. Precise real-time mapping of fluid contacts during drilling is therefore essential to ensure optimal well placement.

### Technology Overview- Multi frequency transmitter and multi spacing transmitter-receiver (TR)

Increasing the transmitter-receiver spacing and reducing the operating frequency enhances the depth of investigation (DOI). The extra-deep resistivity tool used in this project features:

- Two far-offset receivers at 12 m and 17 m
- Operating frequencies of 20 kHz and 50 kHz
- Measurements of phase difference and attenuation to infer ahead-of-bit boundary positions

This configuration enables resistivity sensing far beyond the borehole and ahead of the bit, allowing early detection of approaching beds or fluid contacts.

### Azimuthal Sensitivity and Cross-Component Measurements

Conventional LWD resistivity tools, with symmetrical axial coils, are not sensitive to azimuthal variations. To overcome this limitation, the system utilizes:

- Tilted coils, and
- Orthogonally oriented coil systems

These configurations enable detection of cross-component signals and computation of boundary direction, dip, and approach angle—critical inputs for real-time geosteering.

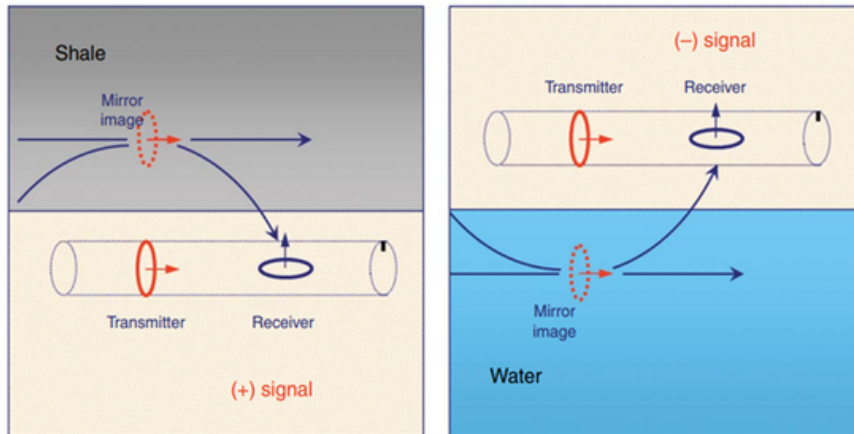


Figure showing Azimuthal sensitivity of a cross-component signal to a conductive layer

### Multi-Parameter Inversion and Real-Time Forward Modelling

Because the tool collects data with multiple DOIs and sensitivities, interpretation relies on multi-parameter inversion rather than simple curve correlation. The inversion simultaneously resolves:

- Layer resistivities
- Vertical/horizontal anisotropy ( $R_v/R_h$ )
- Layer thickness
- Bed dip
- Distance to boundaries

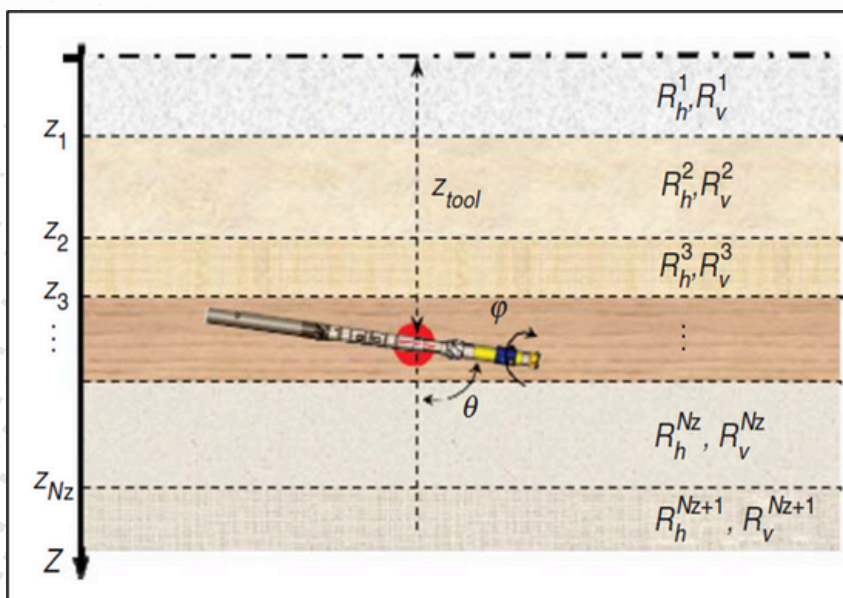


Figure showing Parameters used for inversion

## Integration with Drilling Systems

The LADRWD system integrates closely with:

- Rotary Steerable Systems (RSS) for trajectory control
- Geostopping to prevent premature penetration into high-water-saturation zones
- Real-time visualization platforms for structural mapping

Absolute layer orientation can be calculated from the tool's orientation relative to surrounding boundaries allowing precise structural navigation.

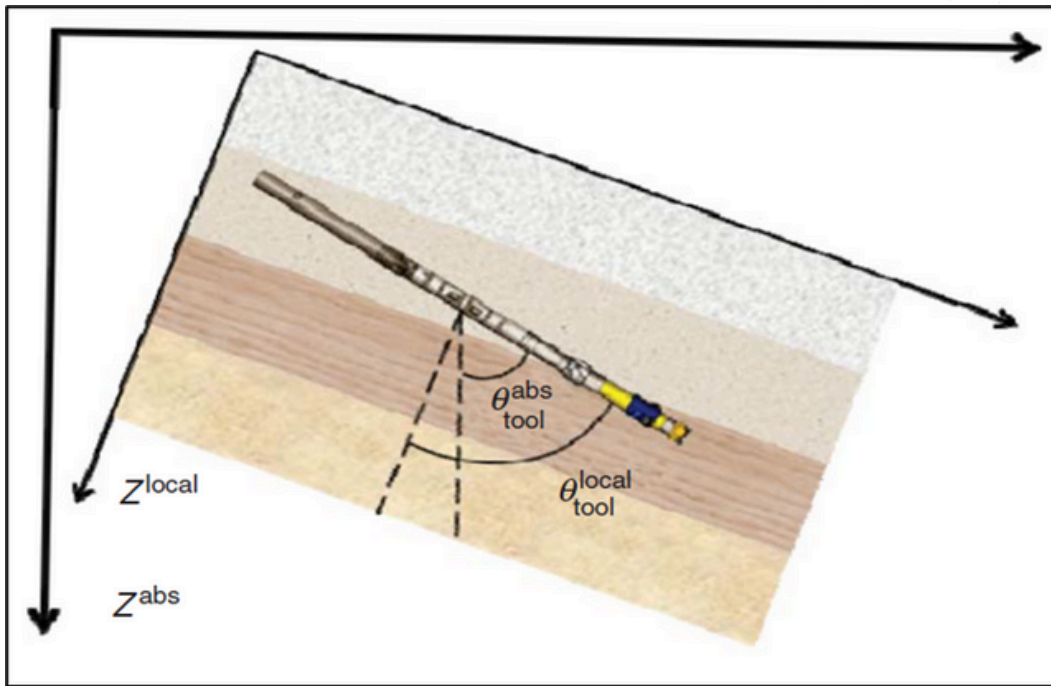


Figure showing Tool orientation relative to absolute and local coordinate system enabling realtime navigation

## Field Deployment and Results

XX#5yH(well name masked): Verification of LADRWD Predictions

The first deployment occurred in well XX#5yH, where predicted formation tops, GOC, and OWC from LADRWD were cross verified with conventional LWD logs. The results showed a strong correlation, validating the reliability of the look-ahead inversion model.

Subsequent Wells: XX#3yH, XX#4yH, XX#8yH, and XX#8zH

Encouraged by the initial success, the technology was deployed in four additional wells. Key outcomes included:

- Early identification of GOC in all wells
- Optimization of well trajectory to remain within the thin oil column
- Maintaining dogleg severity within completion-friendly limits
- Accurate real-time updating of reservoir structure and contact depth

The use of UHD inversion on real-time LWD data substantially improved the confidence level in proactive geosteering decisions

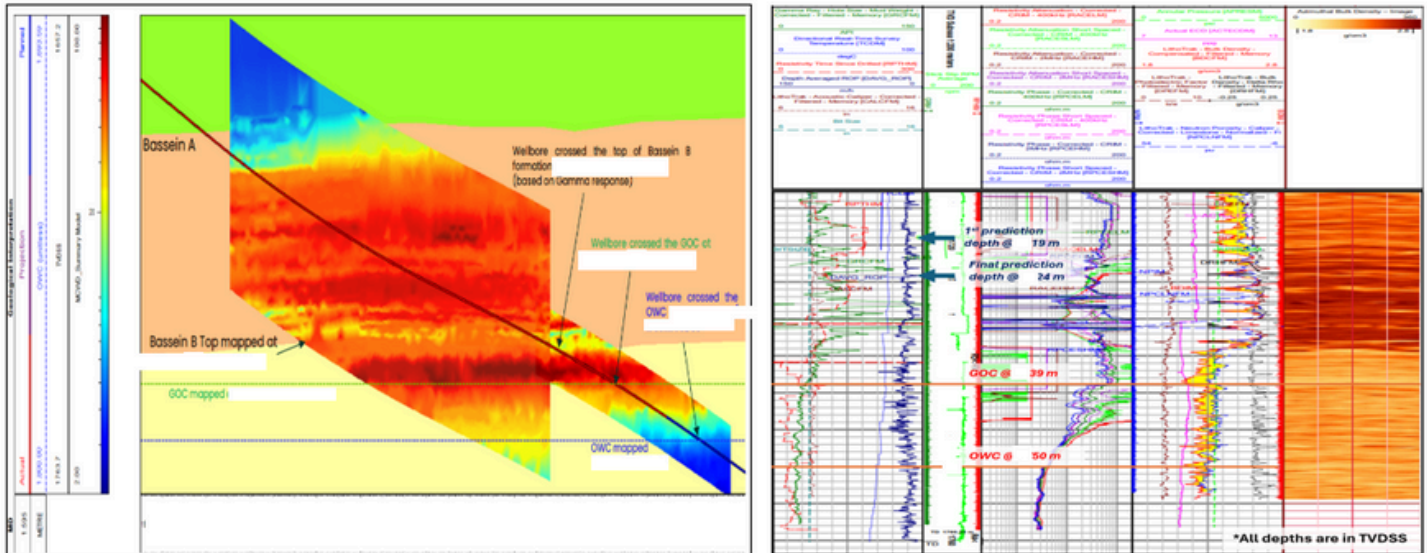


Figure showing UHD realtime modelling (left) and Log motif depicting good match with predicted contacts (right)

### Benefits Achieved

The deployment of Look Ahead Deep Resistivity technology delivered several tangible advantages:

#### Time and Cost Efficiency

- Eliminated the need for pilot holes and sidetracks
- Saved 5–7 rig days per well

#### Enhanced Operational Safety

- Reduced exposure to total-loss zones and unexpected fluid contact transitions

#### Superior Well Placement

- Improved landing accuracy in thin and dipping reservoirs
- Lower risk of early water breakthrough or high GOR

#### Reduced Environmental Footprint

- Fewer drilling days and sidetracks led to lower fuel consumption and emissions. By eliminating unproductive pilot hole, unnecessary drilling footprint is reduced

#### Enhanced Reservoir Understanding

- Continuous, real-time boundary mapping improved geological and structural models

## Noise Logging–Based Leak Diagnosis in Effluent Disposal Well

Authors: – Kanad Kulkarni – Baker Hughes, Babu Banothu, R S Chauhan – ONGC

### Introduction

This case study presents the application of a wideband Noise Tool (NTO) in effluent disposal well YY#47 (well name masked) to diagnose suspected leaks, evaluate zonal isolation, and understand fluid movement within a complex completion. The work integrates acoustic noise measurements with temperature, spinner, and cement bond logs to characterize injection behavior and verify the integrity of tubing, casing, cement squeezes, and a bridge plug in a high-pressure effluent disposal environment.

### Well background

YY#47 (well name masked) is an effluent disposal well where repeated attempts were made to pump water through both tubing and annulus, initially with no flow returning to surface. Following coiled-tubing acid cleaning, tubing constriction was removed and circulation from tubing to annulus was restored, but a subsequent injection test few days later showed a pressure drop from 62 ksc to 45 ksc and raised suspicion of casing damage, after which the well was shut in.

### Technology Overview- NTO (Noise Logging Tool)

The NTO is a 1 11/16 inch, through-wired, pressure-compensated acoustic noise sonde rated to about 350 °F and 20 kpsi, suitable for all fluid types and compatible with standard Sondex strings. It employs a piezoelectric crystal covering 0–12.7 kHz, with digital FFT sampling at 0.5 s, full-spectrum recording, selectable high-pass filters, and adjustable gain, allowing acquisition of detailed noise spectra visualized as VDL, FFT, or logarithmic displays in both continuous and station modes.



Figure showing Noise Logging Tool NTO

### Objective

The primary objective was to confirm that injected effluent remained confined to the intended disposal intervals and did not migrate upward towards shallower aquifers or the water table. Specific investigation targets included cement squeeze intervals at 1269–1271 m and 1273.5–1277 m, a repaired cement interval at 1291–1292 m, multiple disposal perforation sets between 1308 m and 1852 m, the 7 inch bridge plug at 2293 m, and any potential 7 inch casing leakage or damage.

## Logging operations

Noise and temperature measurements were acquired along with spinner and cement bond data to resolve inflow and channeling zones under injection and shut-in conditions.

## Key findings

Injection fluid was found to enter through active perforations, squeezed intervals, and the repaired cement interval, then channel upward to about 1235 m, where poor cement bond behind the 9 5/8 inch casing allowed vertical migration. The 1235–1560 m interval, within the double-casing region, accepted most of the injected fluid as evidenced by pronounced cold storage and high noise, whereas the 1729–1852 m interval in 7 inch casing took relatively less fluid.

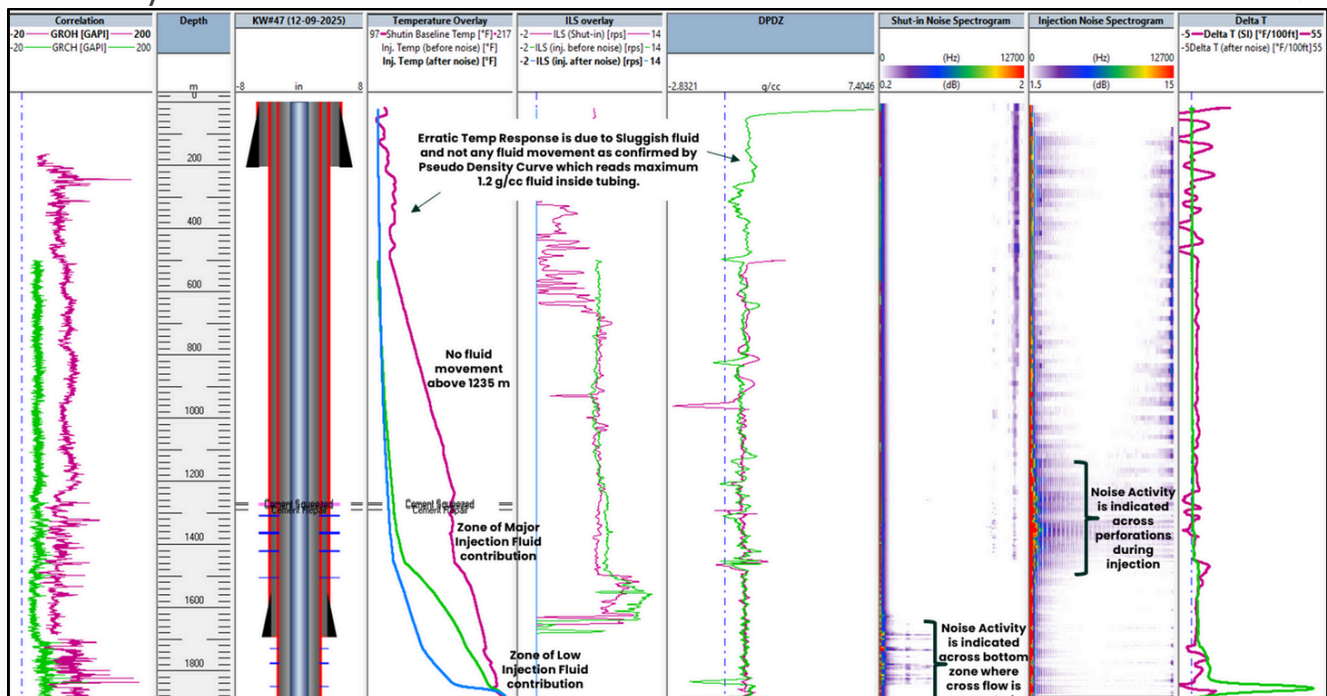


Figure showing composite plot of Noise log.

## Well integrity assessment

Acoustic and temperature responses indicated that tubing and the 7 inch bridge plug were mechanically intact, with no clear signature of leaks through these components. However, under shut-in conditions, crossflow from 1849–1852 m to 1775–1778 m within the 7 inch casing was inferred from persistent noise and temperature anomalies, confirming internal redistribution of injected effluent even without active pumping.

## Conclusion

The case demonstrates that NTO-based noise logging, when combined with temperature, spinner, and cement bond data, is highly effective for diagnosing complex leak paths, channeling, and crossflow in effluent disposal wells.

## Cutting Rig Time with Next-Generation Perforation: Single-Run Multi-Interval Perforation Using Addressable Multi-Gun Systems

Authors: Narsingh Rao Gurram – ONGC, Ravi Jain – Baker Hughes

### Background

Perforating multiple production zones in separate wireline runs increases rig time, exposure of the formation to completion fluids, and overall operational cost. To overcome these limitations in an offshore brownfield setting, the Symphoni™ Addressable Perforating System from Baker Hughes was deployed in a series of candidate wells in Mumbai Offshore.

### Technology overview

The Symphoni™ addressable gun system is an electronically controlled, downhole firing circuit that allows selective initiation of individual or clustered guns in response to surface command signals sent over a mono-conductor cable. The system supports up to about 30 clustered guns in a single run, enables real-time gun status monitoring and skip-gun capability, and is compatible with top-fire, select-fire, and plug-and-perf stage completions in both production and injection wells.

Symphoni™ uses high-specification addressable detonator cartridges designed to resist RF, static, and stray voltages, thereby enhancing safety, particularly in offshore installations and electrically noisy environments. The fully pre-assembled gun strings reduce wellsite handling, wiring, and port-plug operations, simplifying logistics and minimizing human error exposure.

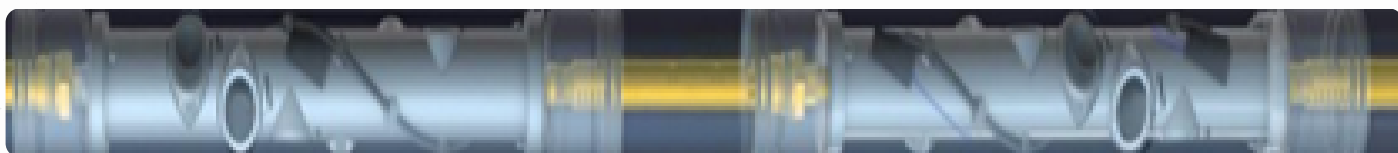


Figure showing Symphony gun system

### Case study 1 – First offshore induction and multi-interval perforation

The technology was first inducted in well XX#1 (well name masked) high-profile producer in the Mumbai High-North area where reservoir saturation monitoring logs identified three closely spaced target intervals in stacked carbonate pays. Under conventional selective perforation, these intervals would have required three separate wireline runs, each involving rig-up, pressure testing, running in hole, depth correlation, firing, and retrieval.

By deploying the Symphoni™ addressable system, the operation was redesigned such that all three intervals were completed in only two runs, while retaining control over the firing sequence and confirmation of gun performance. This translated directly into reduced rig time, fewer pressure cycles on the wellhead, and lower cumulative exposure of the reservoir to completion brine.

## Case study 2 – Multi-pay reperforation and additional intervals in a sub-hydrostatic environment

In another offshore field (D1) well YY#1 (well name masked), hydrocarbon was being produced from multiple pays in the Ratnagiri and Panvel formations, where aging completions had led to high water cut and declining rates. Well YY#1 in this field required reperforation of approximately 15.5 m and additional perforation of about 17 m over a gross interval of nearly 300 m in the middle-pay Ratnagiri reservoirs.

Conventional selective guns would have required about 11 separate runs to cover all planned clusters. Using Symphoni™, the operation was engineered into four runs: the first two runs combining four intervals each, followed by two runs combining two intervals each, thereby reducing **wireline runs from 11 to 4 and saving roughly 35 hours of rig time.**

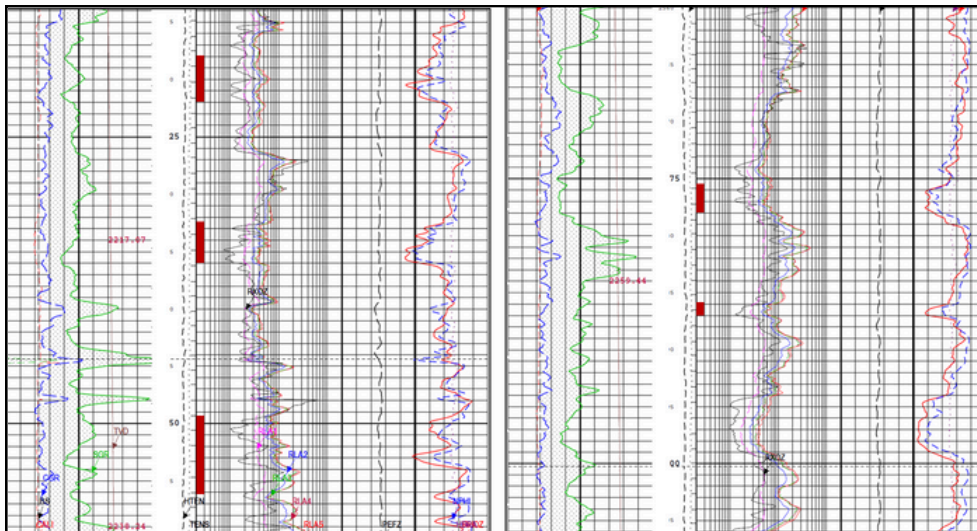


Figure showing log motif of well YY#1 (few perforation intervals are marked)

Because all pays were sub-hydrostatic and equipped with an ESP, the use of conventional loss-control pills was constrained, and any prolonged open-hole exposure to completion fluids risked significant reservoir damage. By compressing the total operating time, the addressable system mitigated fluid-loss related damage and preserved ESP functionality, while still achieving the desired completion objectives.

A second well ZZ#1 (well name masked) in the same field required 33.5 m of reperforation plus 1.5 m of new perforations in middle-pay Ratnagiri intervals. The original plan using conventional selective firing again demanded around 11 separate runs to respect gun spacing and available housing length.

The Symphoni™ system allowed the design of five optimized runs: the first and second runs each combining four intervals, followed by three runs with single intervals where specific spacing or mechanical constraints applied. This re-engineering of the perforation program **cut the estimated operating time by about 30 hours, with direct savings in rig cost.**

### **Key features and operational advantages:**

The practical offshore deployments highlight several key features of the Symphoni™ system:

- Multi-zone capability in a single run, with flexible cluster length and high gun count, enabling efficient completion of stacked pays.
- Real-time monitoring of gun status at surface, including confirmation of firing and the ability to skip individual guns when required.
- Compatibility with cable tractors in highly deviated wellbores, which is especially beneficial in complex offshore well architectures.
- Applicability across a wide range of completion types, including natural and stimulated completions, sand-control systems, and injection wells.

Operationally, the system reduces non-productive time by eliminating labor-intensive wiring and port-plug operations, and by consolidating multiple perforating objectives into far fewer runs. In wells with multiple pay intervals and fluid-loss constraints, the reduced perforating time also lowers the duration of completion-fluid contact with open perforations, which helps protect near-wellbore permeability and ESP performance.

### **Strategic implications for offshore perforation campaigns:**

Across the presented cases, the adoption of Symphoni™ addressable perforating technology consistently reduced the number of wireline runs by more than half, with documented rig-time savings of approximately 30–35 hours per well in complex multi-interval jobs. These savings scale significantly at the field and campaign level, especially in offshore environments with high rig spreads and tight schedules.

Beyond time and cost reduction, the technology provides a platform for more sophisticated perforation designs—higher cluster counts per run, better distribution of shots across pay sections, and tighter control on firing sequence, which together contribute to more uniform inflow and improved production potential. The masked-well case studies from Mumbai offshore thus demonstrate how addressable perforating systems can play a central role in revitalizing mature reservoirs while managing operational risk and reservoir integrity.

## Application of AI/ML in Petrophysical Workflows

Authors: Mohammed Anees , Viresh Jadhav – ONGC

### Introduction:

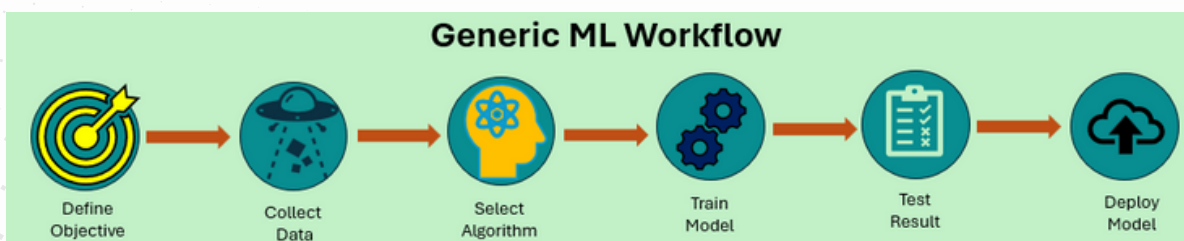
Classical petrophysical workflows are built on well-established physical models and calibrated correlations that map log responses to rock and fluid properties. These methods remain fundamental but face challenges when applied to large multiwell datasets, heterogeneous lithologies, and integrated data types such as images and 3D volumes. Artificial intelligence and machine learning (AI/ML) offer complementary, data-driven capabilities that can enhance productivity, consistency, and insight without replacing physics-based interpretation.

In petrophysics, ML is particularly attractive because many measurements have clear physical meaning, which can guide feature engineering, model design, and quality control. Typical objectives include generating continuous geo-mechanical properties for 1D mechanical earth models (MEMs), predicting permeability and rock types in uncored intervals, refining reservoir property estimates, and correcting or synthesizing log curves where measurements are incomplete or not recorded due to borehole conditions. The following sections summarize a concise, practical workflow for embedding ML into routine petrophysical practice, along with representative use cases.

### Proposed AI/ML workflows in Petrophysics:

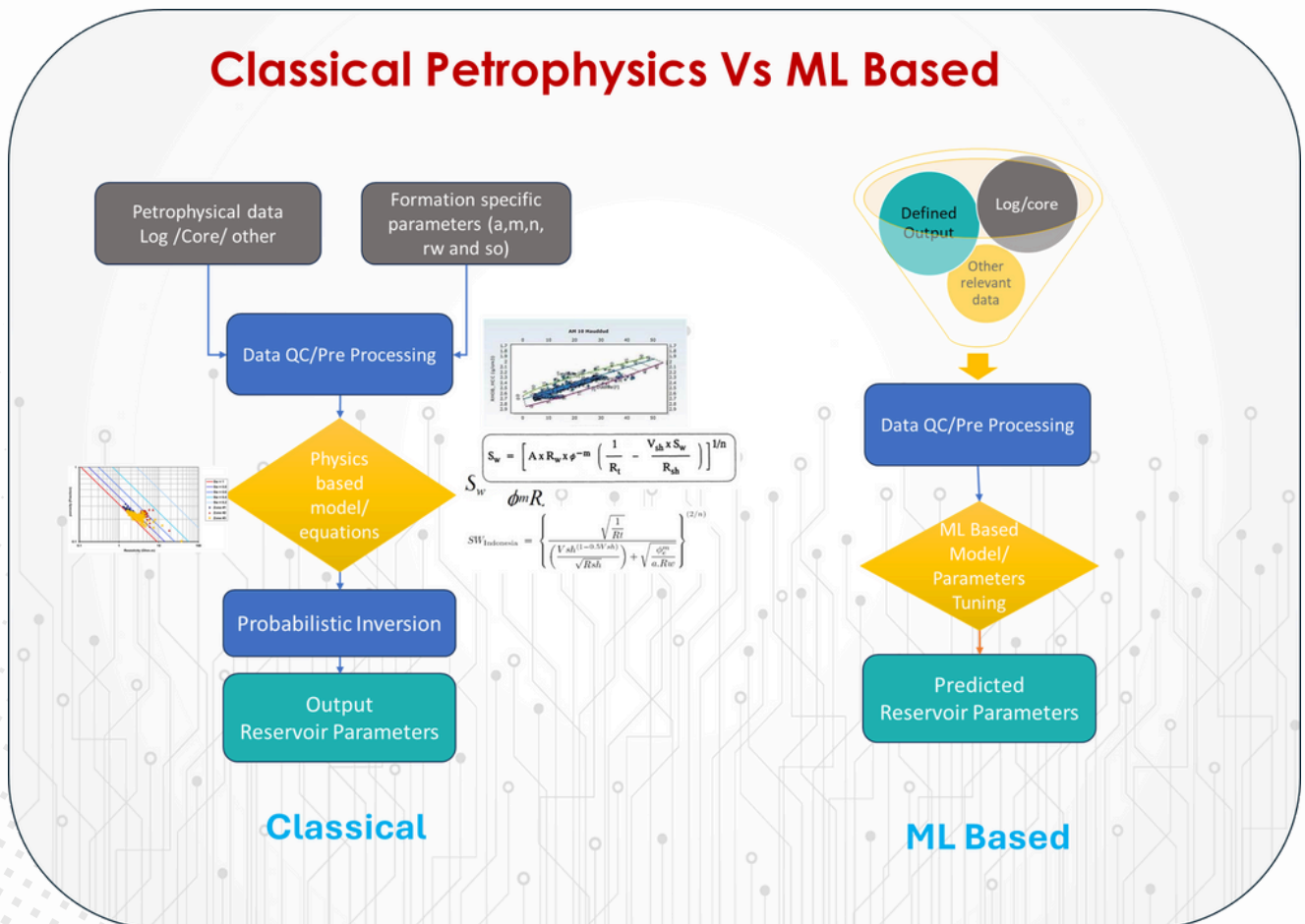
An effective ML-enabled petrophysical workflow can be organized into a few essential steps.

- **Define the Objective:** Clearly state the technical goal, such as predicting effective porosity, classifying electrofacies, generating MEM inputs, or correcting bad-hole density logs. This definition fixes the target variable, problem type (regression or classification), and evaluation criteria.



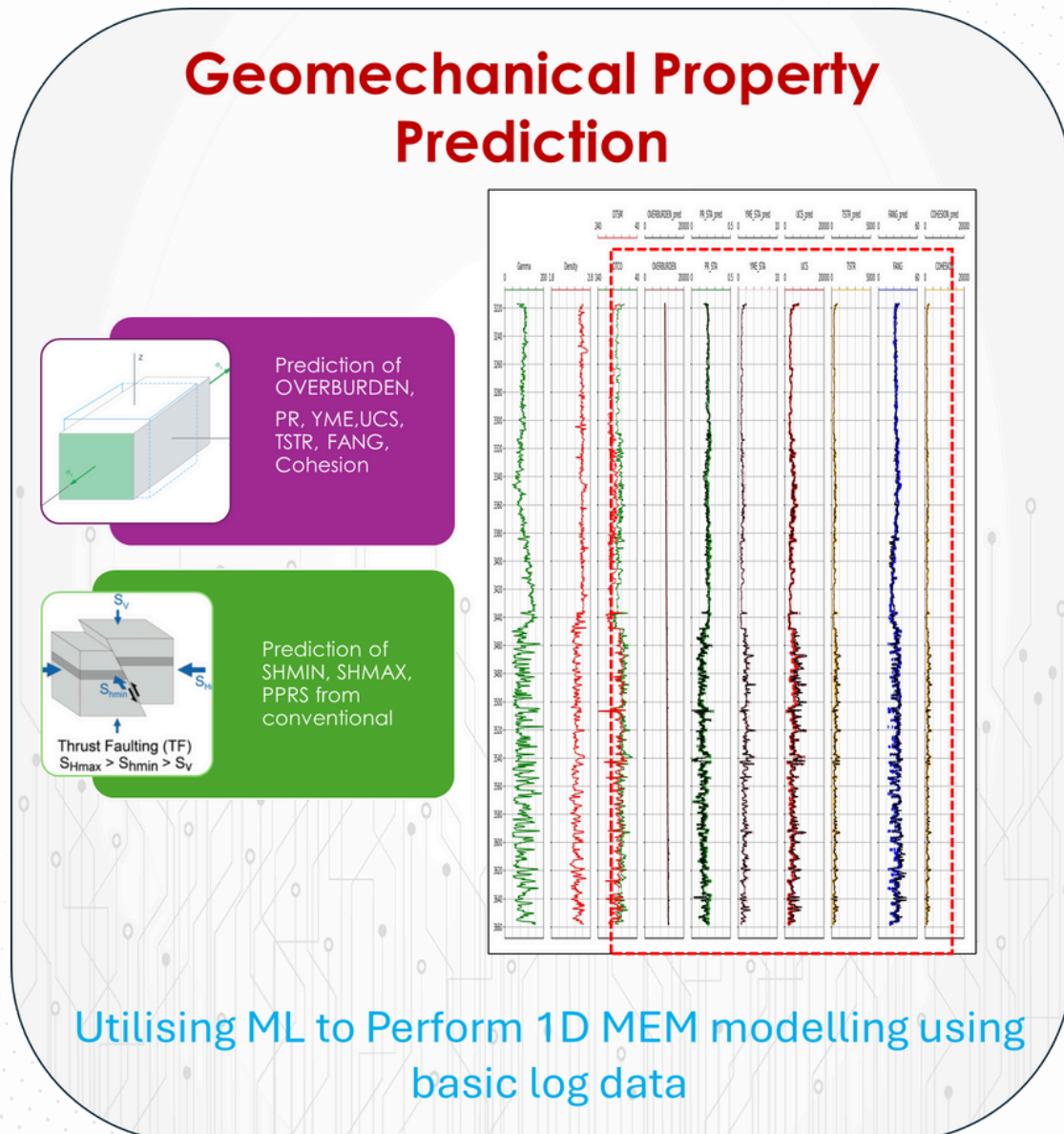
- **Collect representative data:** Assemble input data from standard open-hole logs (GR, resistivity, density, neutron, sonic), core measurements, image logs, and other available attributes. Ensure that reliable target values exist over at least part of the dataset (e.g., core permeability, lab-based mechanical properties, high-quality reference logs) and that the training data span the range of lithologies and conditions expected in application wells.

- Quality control and preprocessing:** Perform depth matching, environmental corrections, bad-hole editing, and outlier handling under standard petrophysical QC. Treat missing data appropriately and construct physically meaningful features (for example neutron–density separation, resistivity ratios, or derived sonic indicators) to present the model with informative inputs.
- Select and train a simple model:** Start with relatively simple, robust algorithms such as tree-based ensembles or shallow neural networks, following the principle “keep it simple and start with a basic model.” Train using appropriate train–validation splits and, where possible, hold out one or more blind wells for independent assessment.
- Validate, quantify uncertainty, and deploy:** Evaluate performance using numerical metrics and qualitative checks such as actual vs predicted cross-plots and depth overlays. Where feasible, estimate uncertainty through ensembles or empirical error analysis, and deploy only when predictions are stable and physically plausible on blind data. Once validated, integrate the model into standard workflows and periodically retrain as new wells are added.



## Geo-mechanical property prediction and 1D MEM:

ML can extend geo-mechanical workflows in wells where only basic logs and limited laboratory data are available. By training on intervals or wells with known elastic and strength properties, models can predict continuous curves such as Young's modulus, Poisson's ratio, and UCS from basic log suites. These predicted properties then feed into 1D MEMs, enabling more comprehensive borehole stability and completion design studies in wells where advanced sonic data is not recorded.



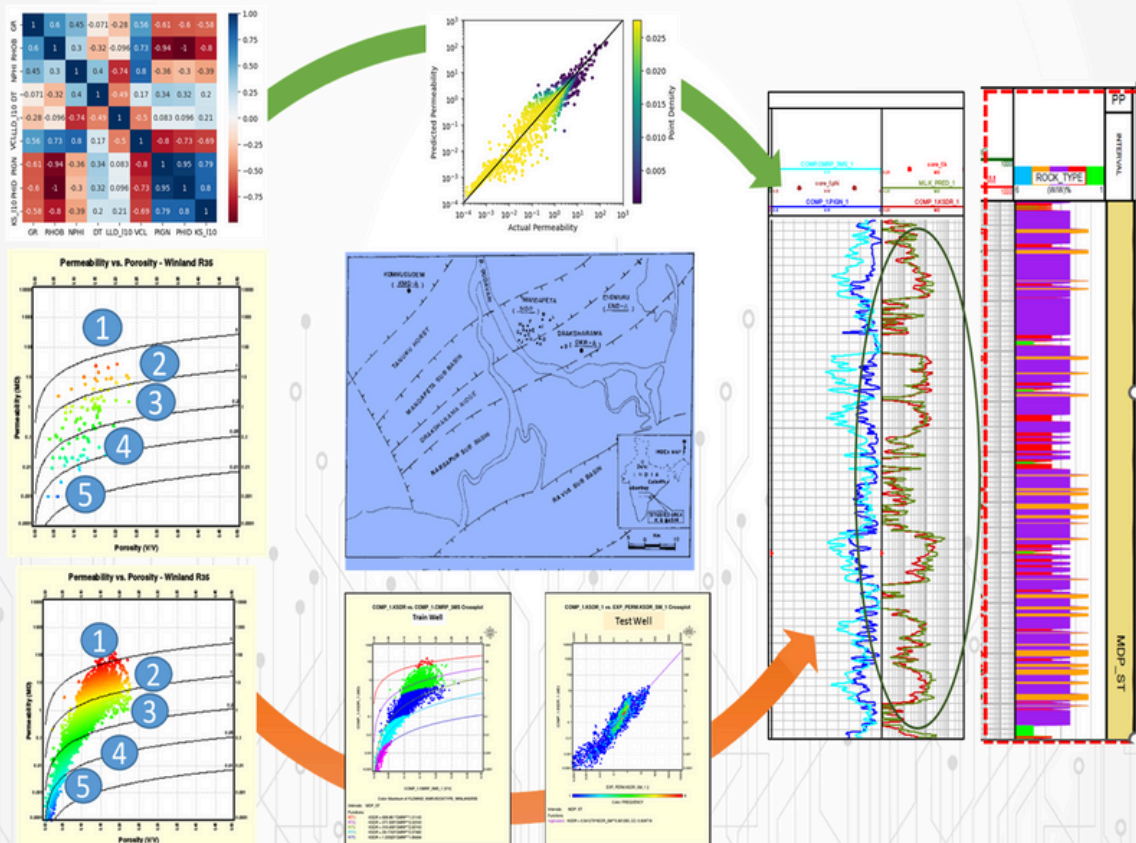
Applying physics-based constraints is critical: predictions should fall within realistic bounds and maintain sensible relationships with porosity, lithology, and depth. Such checks ensure that ML-enhanced MEMs remain consistent with established geomechanical understanding and can be confidently used in planning and operations.

### Rock typing and permeability prediction:

Electrofacies or rock typing is well suited to ML classification because it relies on patterns in multiple log responses. Supervised workflows use core descriptions, geological facies, or SCAL-based rock types as labels to train models that classify log intervals into rock types across cored and uncored zones.

For permeability, ML models trained on core permeability and basic logs can provide continuous permeability estimates beyond core coverage. Incorporating rock type as an additional input often improves performance, since it encodes key textural and depositional information. Predicted permeability is evaluated using cross-plots against core data and depth-track comparisons to identify biases and guide adjustments.

## Rock typing & Permeability Prediction



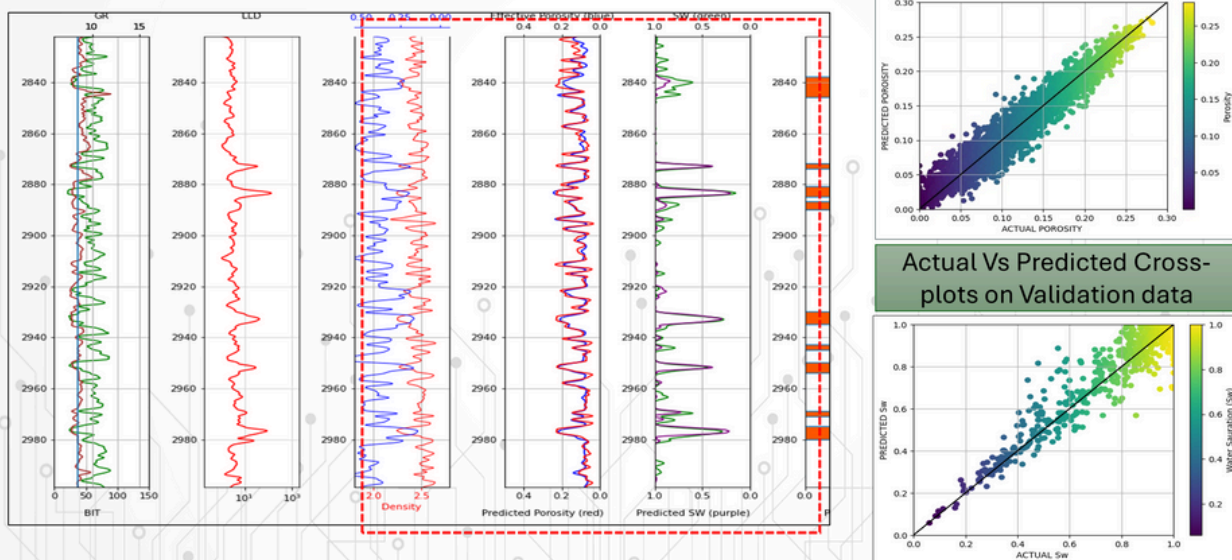
Permeability modelling and Rock typing using Basic log data

## Reservoir property prediction and missed opportunities:

Effective porosity and water saturation, derived by classical interpretation, are central to volumetric assessments and development decisions. ML can complement these estimates by integrating multiple resistivity measurements, porosity-indicating logs, and spectral gamma-ray or image-derived attributes into a single predictive framework.

A practical extension is missed-opportunity screening, where ML-predicted porosity or saturation is compared with legacy interpretations to flag intervals with significant discrepancies. Such intervals can then be prioritized for detailed review, additional measurements, or testing, providing a systematic, data-driven way to search for bypassed pay or under-evaluated zones.

## Reservoir Property Prediction Effective Porosity & Water Saturation

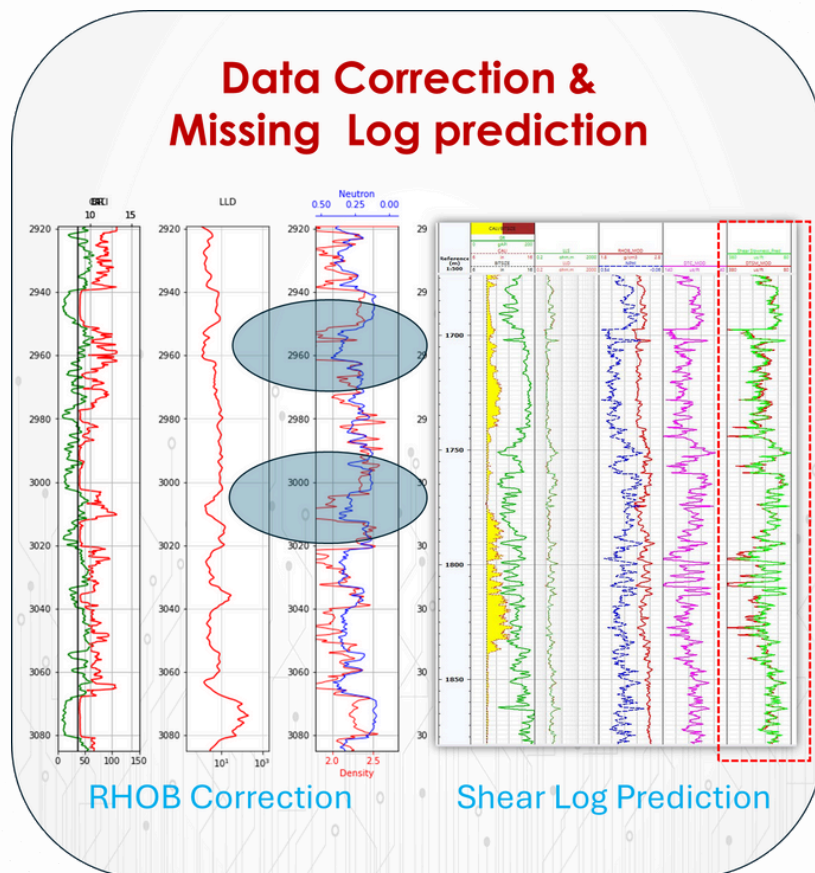


Using ML for Reservoir Property prediction and Missed Opportunity Identification integrating Multi Dimensional Data

## Data correction and missing-log prediction

Log correction and synthesis are recurring challenges in operational petrophysics. ML-based density (RHOB) correction uses high-quality intervals to train a model that predicts a “clean” density curve from other logs in zones affected by washout or poor tool standoff. The corrected density can materially improve volumetric calculations and geomechanical models.

Similarly, shear-sonic logs—often unavailable due to cost or operational constraints—can be predicted from compressional sonic, density, and lithology-sensitive logs. These synthetic shear curves enable rock physics, AVO, and MEM workflows in wells where shear measurements were not run, provided that ratios and depth trends remain physically reasonable.



## Best practices and role of expertise

Experience indicates that data quality, representativeness, and strong domain oversight are more important than aggressive algorithm choices. ML projects should begin with modest, well-defined objectives and simple models, supported by rigorous QC and transparent validation. Physics and petrophysical expertise are essential for designing features, interpreting model behavior, enforcing plausibility constraints, and judging where ML outputs can be trusted or should be treated with caution.

When applied in this way, AI/ML becomes an effective extension of classical petrophysics, improving efficiency and consistency while keeping physical understanding at the core of interpretation.

# SPWLA INDIA Chapter – Events

## SPWLA India Stall at SPG India Conference 2025

SPWLA India Chapter had a remarkable presence at the **SPG India Conference 2025 (26–28 October)**, beginning with a special visit from **Shri O. P. Sinha, Director (Exploration), ONGC**, who appreciated the Chapter's initiatives in advancing formation evaluation, digital innovation, and technical outreach.

Across the three days, the **SPWLA India Stall** attracted strong engagement from professionals, students, and young geoscientists. Visitors explored the evolution of logging technologies, interacted with our experts, and participated in a series of lively outreach activities. Key attractions included the **Petrophysics Quiz Series** and a **highly popular SPWLA INDIA Photo Engagement Challenge**, both of which saw excellent participation.

**Quiz winners** were Sumeet Mavani, Jaya Pandey, and Navneet Srivastav, while the Selfie Contest winners were Kolli Laxminarayana (Winner), Muthulakshmi V (1st Runner-Up), and Pawandeep Singh Bagga (2nd Runner-Up). We extend our sincere thanks to SPG India for providing this valuable platform to showcase the work of the SPWLA India Chapter and to promote collaboration within the geoscience community. We remain committed to strengthening the petrophysics fraternity through continuous engagement and technical excellence.



Glimpses of Successful campaign of SPWLA India chapter at SPG-2025 Conference, Jaipur (India)

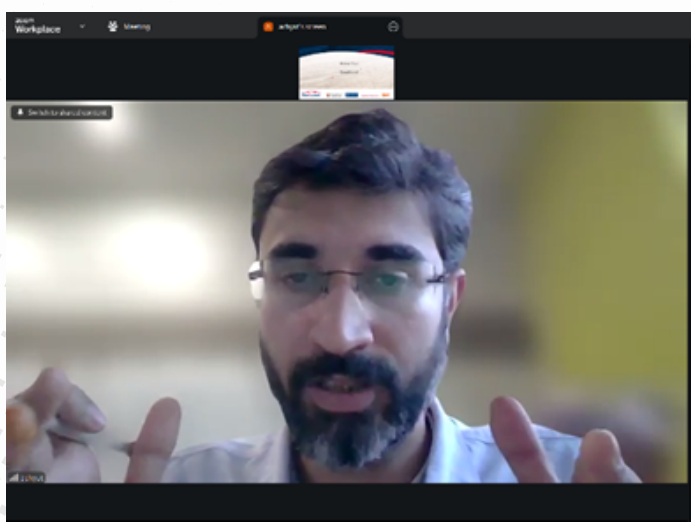
# SPWLA INDIA Chapter – Events

## SPWLA India Knowledge Connect Series – National Education Day Special Session

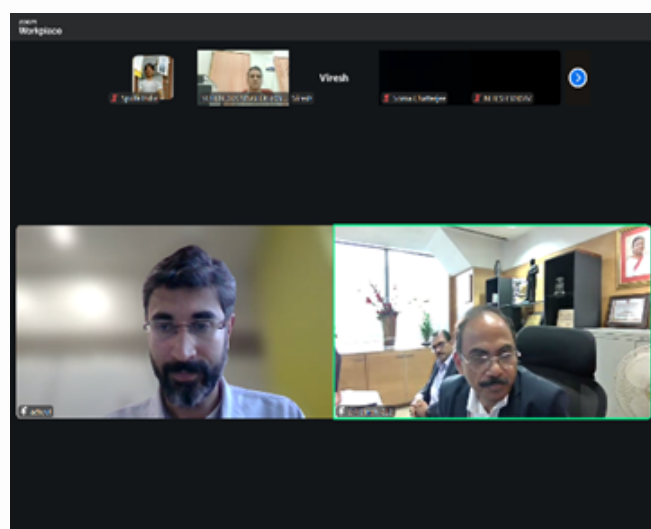
On the occasion of **National Education Day**, the **SPWLA India Chapter** hosted an insightful online session under its **Knowledge Connect Series**, strengthening academia–industry collaboration within the petrophysics community.

The technical talk, delivered by **Dr. Achyut Mishra (Assistant Professor, IIT Gandhinagar)**, focused on **“Interpreting Sedimentary Heterogeneity Using Wireline Logs and Its Impact on Modelling Geological CO<sub>2</sub> Storage.”** The session provided a comprehensive overview of how fine-scale lithological heterogeneity influences reservoir modelling, fluid flow simulation, and CO<sub>2</sub> plume behaviour—key themes in India’s growing energy–transition research. Dr. Mishra shared cutting-edge methodologies integrating core data, high-resolution geological modelling, composite rock types, machine learning tools (IRIDA), and graph-theory-based simulations to more accurately characterise CO<sub>2</sub> storage reservoirs. The talk drew active engagement from SPWLA India members, enabling meaningful discussions bridging academic research and industry applications.

The **session** proved **enriching and well-received**, reflecting SPWLA India’s continued commitment to knowledge sharing, capacity building, and collaboration across the geoscience community.



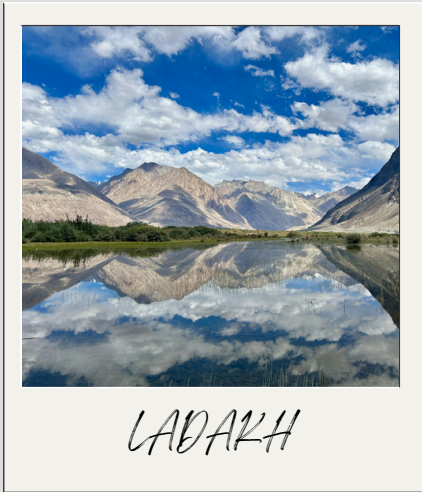
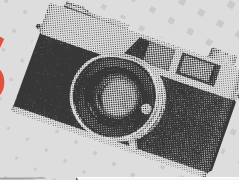
Prof Dr Achyut Mishra delivering the technical talk



SPWLA India Chapter President Shri B P Singh welcoming the presenter (Achyut Mishra).

# SPWLA INDIA Chapter

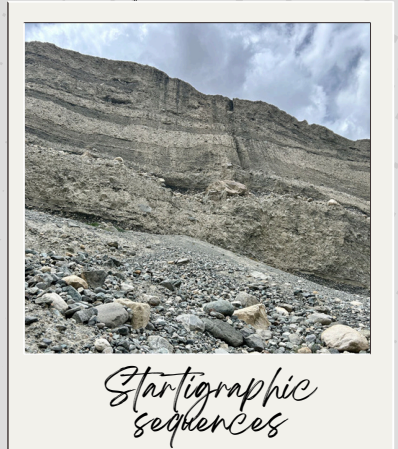
## GEO-LENS



LADAKH



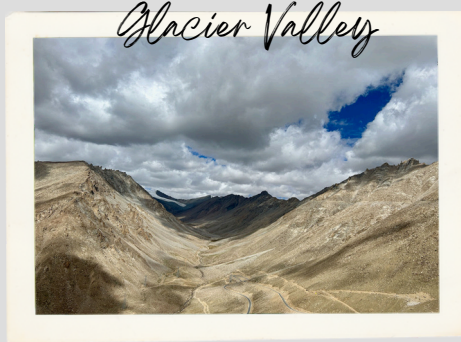
white sand dunes, Nubra



Stratigraphic sequences




Fold Unconformity & more



Glacier Valley

Clicked by  
**SAJITH CS**

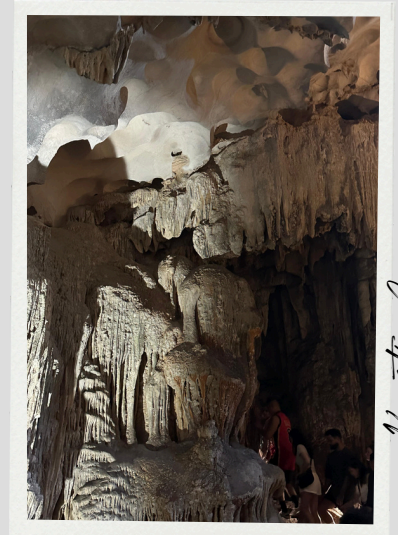



Sung sot cave, Vietnam



Stalagmites (go up)

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Karstic Caves



Stalactites (hang from top)

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# Upcoming Events

## VIRTUAL TECH-TALK

### SPWLA India Knowledge Connect Series -

Petrophysics insights for an integrated reservoir modelling: A case study from Deepwater Field, Malaysia

by

Patcharaporn Petchdee  
SPWLA REGIONAL  
DISTINGUISHED SPEAKER



22nd Dec 2025 | 15:00 hrs  
Online Virtual Mode



SPWLA INDIA CHAPTER, 103, 11 HIGH BUILDING, LOGGING SERVICES, ONGC, BANDRA-SION LINK ROAD, MUMBAI - 400017, INDIA.

MAIL: SPWLA.INDIA@GMAIL.COM

PH NO: +91-22-24088103.

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