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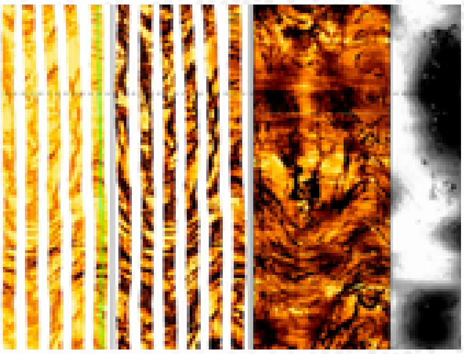

IDENTIFICATION OF OPEN FRACTURES INTEGRATING OPEN HOLE ACOUSTIC IMAGE (UXPL) LOG IN BASEMENT, WESTERN OFFSHORE BASIN, MUMBAI

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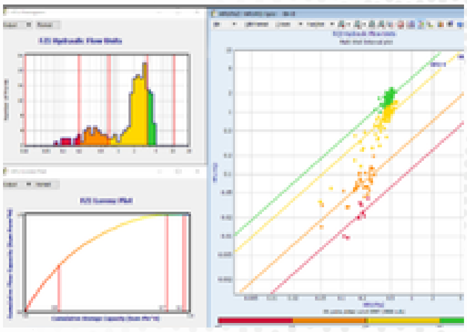

ASSESSMENT OF SILTY REGRESSIVE RESERVOIR VIA ASSIMILATION OF MULTI-MINERAL PETROPHYSICAL AND SATURATION HEIGHT MODELLING (SHM) WORKFLOWS: A CASE STUDY FROM MUMBAI HIGH FIELD, INDIA

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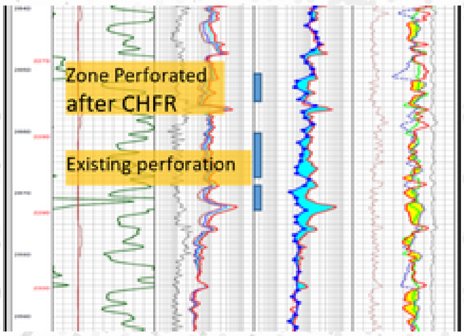

PRODUCTION ENHANCEMENT THROUGH MULTIDISCIPLINARY DATA ANALYSIS: A CASE STUDY IN THE BROWN FIELDS OF CAUVERY ASSET

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Identification of open fractures integrating Open Hole Acoustic Image (UXPL) log in Basement, Western Offshore Basin, Mumbai

Authors: Yogita, Sudhesh Babu – ONGC Mumbai

Introduction

This study presents the use of Open-Hole Acoustic Image Log (UXPL) for identifying open fractures in a granitic basement reservoir of Well–A. Basement reservoirs generally have very low or negligible primary porosity; therefore, hydrocarbon storage and flow mainly occur through secondary porosity created by faults, fractures, weathering, and alteration processes.

Since hydrocarbons are stored and transmitted through open fractures, therefore, identifying open fractures and distinguishing them from healed or mineralized fractures, identifying potential reservoir zones, and characterizing fluids within these fractures are essential for effective reservoir evaluation and development.

Well background

An exploratory Well-A was drilled to evaluate hydrocarbon potential in the basement reservoir. UXPL and micro-resistivity image (STAR) logs were acquired along with conventional log suites for fracture identification and characterization.

Technology overview

The UXPL tool emits focused ultrasonic pulses, typically within the 250–500 kHz frequency range, and records the amplitude and travel time of reflected acoustic signals. It provides two additional image types - acoustic amplitude and acoustic transit-time images -which serve as valuable and independent complements to resistivity image data.

The UXPL system generates three distinct image types, each providing unique diagnostic information for fracture characterization.

Image Type	Measurement Basis	Diagnostic Value
Resistivity Image (STAR)	Electrical conductivity contrast	Primary fracture detection; fluid type discrimination
Acoustic Amplitude Image	Reflected signal strength	Acoustic impedence contrast; fracture aperture indication
Acoustic Transit Time Image	Two-way travel time of acoustic pulse	Borehole geometry; enlarged zones; fracture depth penetration

Table 1: UXPL imaging modes and their diagnostic applications

Case study

The basement interval in well-A consists of heterogeneous granitic rock affected by metamorphism, possible mafic intrusions and alteration.

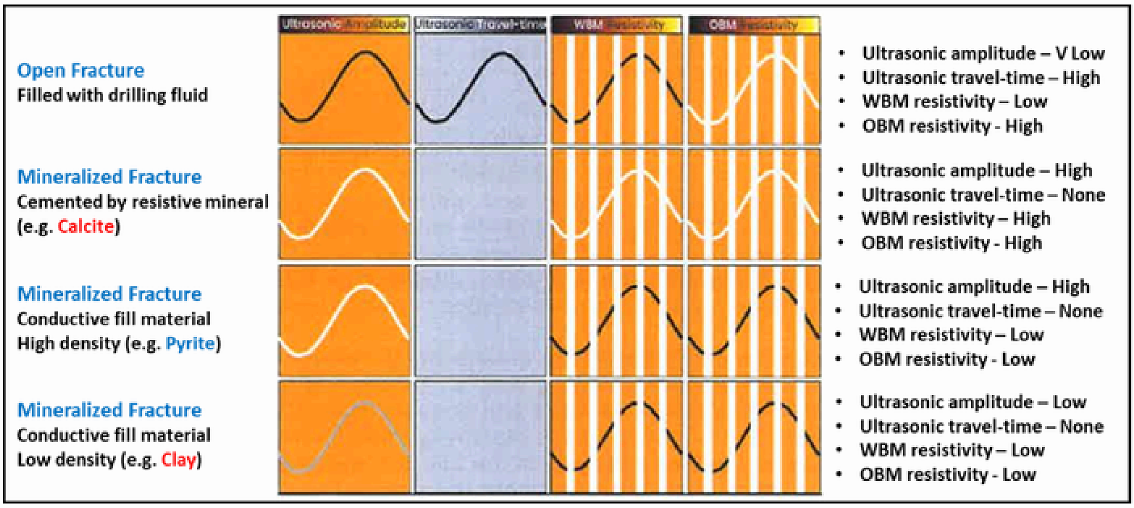

Figure 1 : Fracture Analysis Concept

Interpretation Methodology

Fractures were first identified manually on multiple image log passes to reduce uncertainty caused by tool movement and borehole conditions. Software-assisted fitting was then used to calculate fracture dip angles (ranging from 30° to 90°) and corresponding strike directions.

To confirm that the identified features were natural fractures and not tool or borehole artifacts, the image logs were juxtaposed with resistivity data and checked using normalization technique to distinguish conductive fractures, resistive features, borehole damage, and tool-related artifacts.

Primary Identification Criteria:

- Presence of dark, conductive features on STAR resistivity images.
- Corresponding low-amplitude zones on UXPL amplitude images.
- Increased acoustic travel time (darker tones) on UXPL transit-time images.
- Continuous sinusoidal patterns indicative of planar geological structures.
- Consistent correlation across all three image types at equivalent depths.

Exclusion Criteria:

- Features visible only on resistivity images, suggesting mineralized or healed fractures.
- Drilling-induced features such as axial breakouts and petal fractures exhibiting characteristic geometries.
- Irregular, non-planar features lacking sinusoidal continuity, indicative of borehole rugosity or tool artifacts.
- Features exhibiting very low resistivity-image contrast, suggesting poor fracture connectivity.

A total of 497 conductive fractures were identified from STAR image logs. These appear as dark sinusoidal features due to lower resistivity compared to the surrounding rock (Figure 2). The reduced resistivity is commonly associated with conductive drilling fluids or clay minerals occupying open fracture spaces.

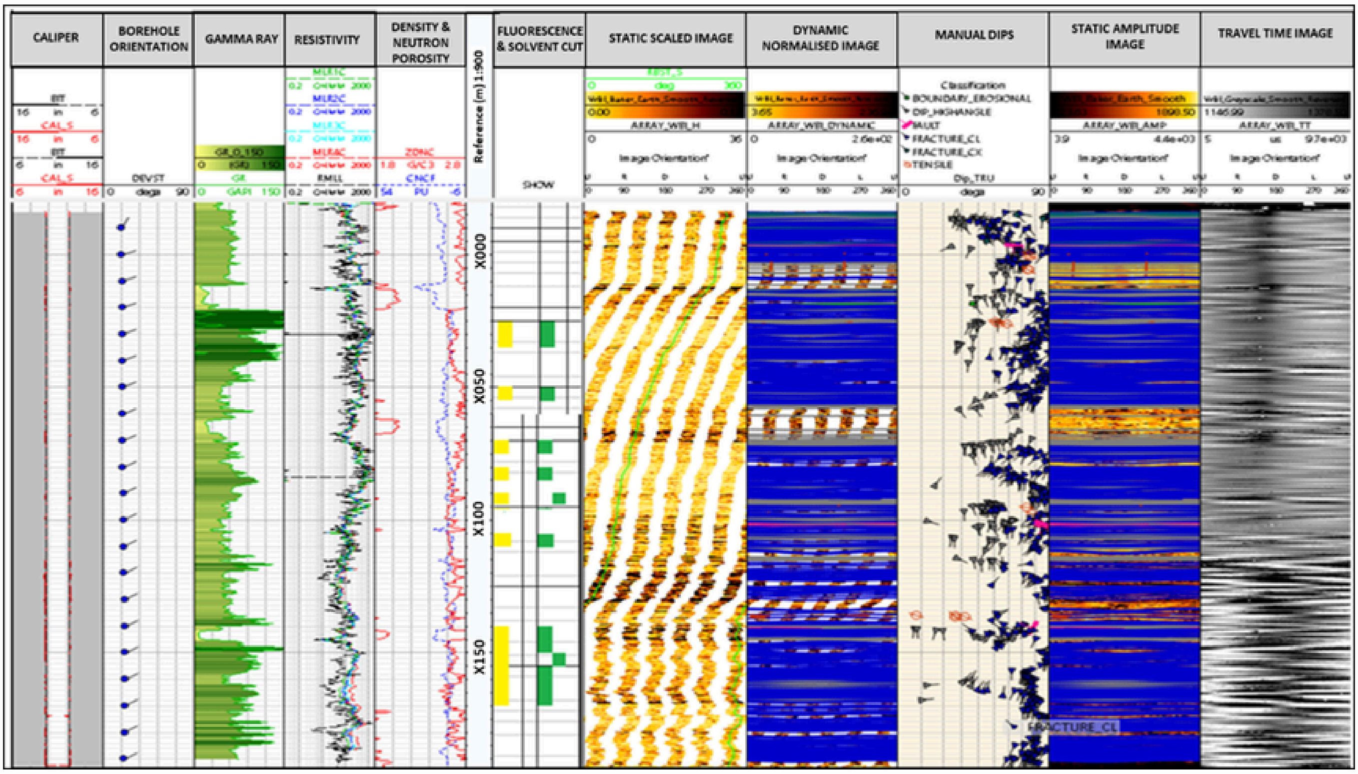

Figure 2: STAR log of the basement (entire logged section) showing 497 identified fractures. Tracks 8 and 9 display picked sinusoidal dips and dip tadpoles, respectively, including conductive, resistive, and mixed fracture types.

Integrating STAR resistivity images with UXPL acoustic images improves fracture interpretation and reduces the uncertainty associated with using a single tool. Conductive fractures appear as dark sinusoidal features on STAR images, while open fractures show low amplitude and higher transit time on UXPL images. Combining these responses helps distinguish open natural fractures from healed fractures and drilling-induced features.

The integrated interpretation confirms the presence of open, conductive fractures and shows a dominant WNW–ESE fracture strike orientation, which is consistent with the regional maximum horizontal stress direction. The study also shows that zones with a higher fracture density have better permeability because of interconnected open fractures, resulting in improved reservoir connectivity and hydrocarbon flow potential (Figure 3).

To identify the fluids present in potentially open and conductive fractures, RCI straddle-packer testing was carried out using Chiton packer elements. Candidate intervals were chosen based on fracture density, fracture height, aperture, evidence of fluid-conductive fractures, Stoneley-wave response, borehole condition, and hydrocarbon shows observed during drilling.

Out of the 497 conductive fractures identified from STAR and UXPL data, several showed characteristics of open, fluid-conductive fractures, such as low ultrasonic amplitude and high acoustic transit time. Based on these results, nine zones were selected for RCI straddle-packer testing to evaluate fluid properties.
Fluid Identification (FID) tests were conducted in four intervals. Three intervals produced oil along with water-based mud filtrate (WBMF), while one interval produced only WBMF.

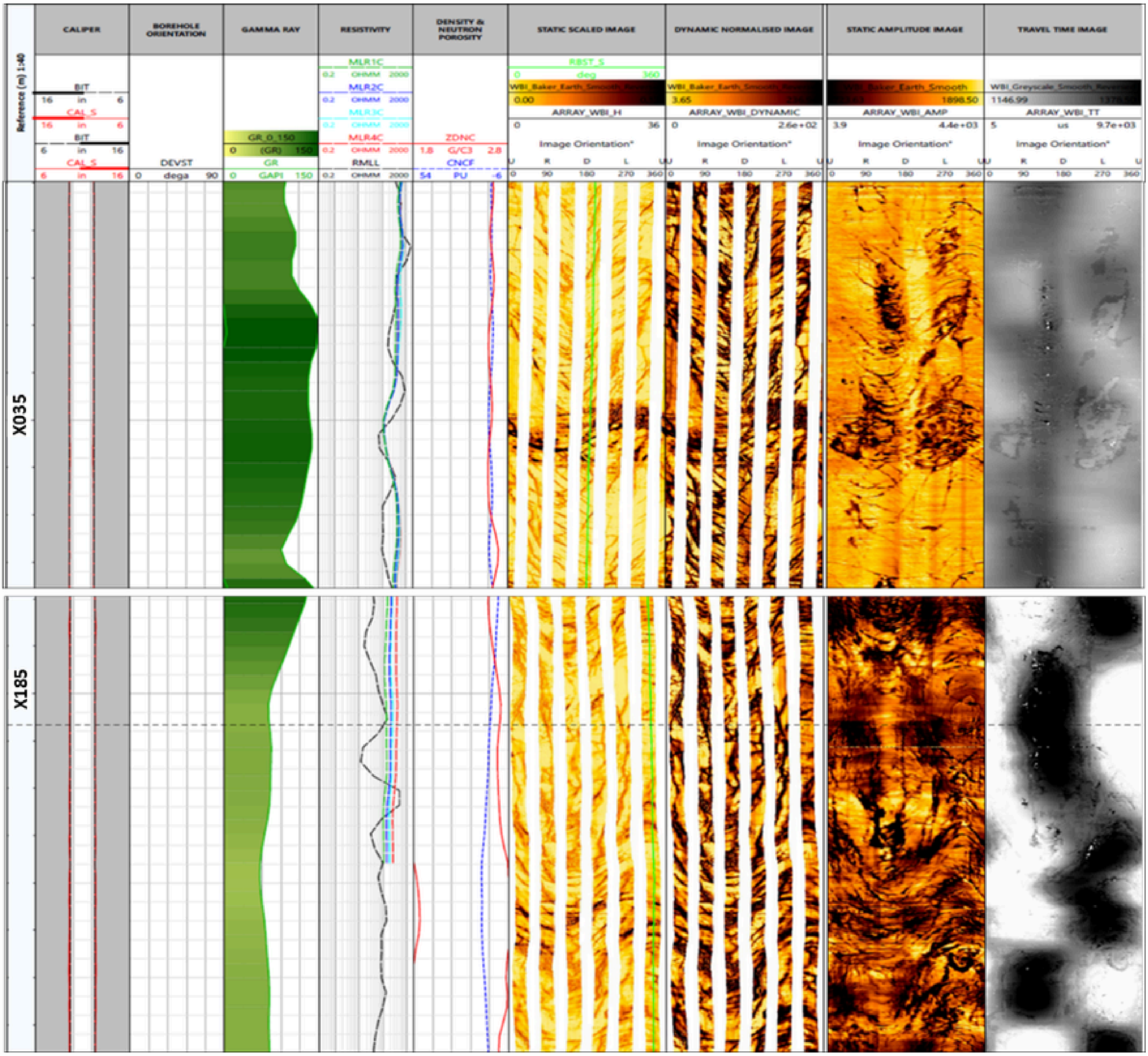

FIGURE 3: UXPL AMPLITUDE IMAGE (9TH TRACK) AND UXPL TRAVEL TIME IMAGE (10TH TRACK) AT 2035M & 2185M DISCRIMINATING OPEN FRACTURE.

Conclusion

The integrated interpretation of STAR resistivity images and UXPL acoustic image logs proved highly effective in identifying and characterizing open fractures within the granitic basement reservoir of Well-A.

A total of 497 conductive fractures were identified, and several open, fluid-conductive fractures were confirmed using UXPL data. These Open and fluid conductive fractures were selected for formation testing. RCI straddle-packer fluid testing confirmed the presence of hydrocarbons in three of the four tested intervals, demonstrating the reliability of the integrated image-log approach for fracture identification and reservoir evaluation.

On barefoot testing, basement flowed Oil and Gas. **Qoil: 1012 bpd (API: 39.17°), Qgas: 7893 m3/d, BS&W: Nil.**

Assessment of silty regressive reservoir via assimilation of multi-mineral petrophysical and Saturation Height Modelling (SHM) workflows: A case study from Mumbai High Field, India

Authors: - Tony Kalra*, Anshul Kumar, Sanjeev Kawan, Parama Nand - KDMIPE, ONGC, INDIA

Introduction

For realistic estimates of hydrocarbon in-place of a reservoir, an important & relatively uncertain input petrophysical parameter is water saturation (Sw). The other parameters viz., effective porosity, clay volume can be straight forward calibrated with core measurements. However core calibration of water saturation can be done from preserved core samples only. In absence of it, this leads to uncertainties in estimates of in-place volumes of the reservoir. During field development, surpassing the envisaged production profile of the reservoir indicates the necessity to revisit the initial in-place estimates, of which Sw emerges as one of the corrective input parameter.

S1 sand is a free gas reservoir of Mumbai high field has shown similar challenges and estimates of initial hydrocarbon in-place volumes have been revised multiple times during field development. This study integrates outcomes from core petrophysical & sedimentological evaluations in multi-mineral log data processing along with evaluation of Sw from resistivity independent Saturation Height Models (SHM) derived from core capillary pressure measurement.

Water saturation (Sw) derived from log data reflects conditions at the time of measurement whereas SHM provides Sw estimates independent of resistivity logs, by incorporating rock type and vertical distance from the Free Water Level (FWL). Hence SHM Sw in 3-D reservoir models is very useful for geologically consistent population of Sw above the FWL in static model and reservoir simulation during dynamic modelling.

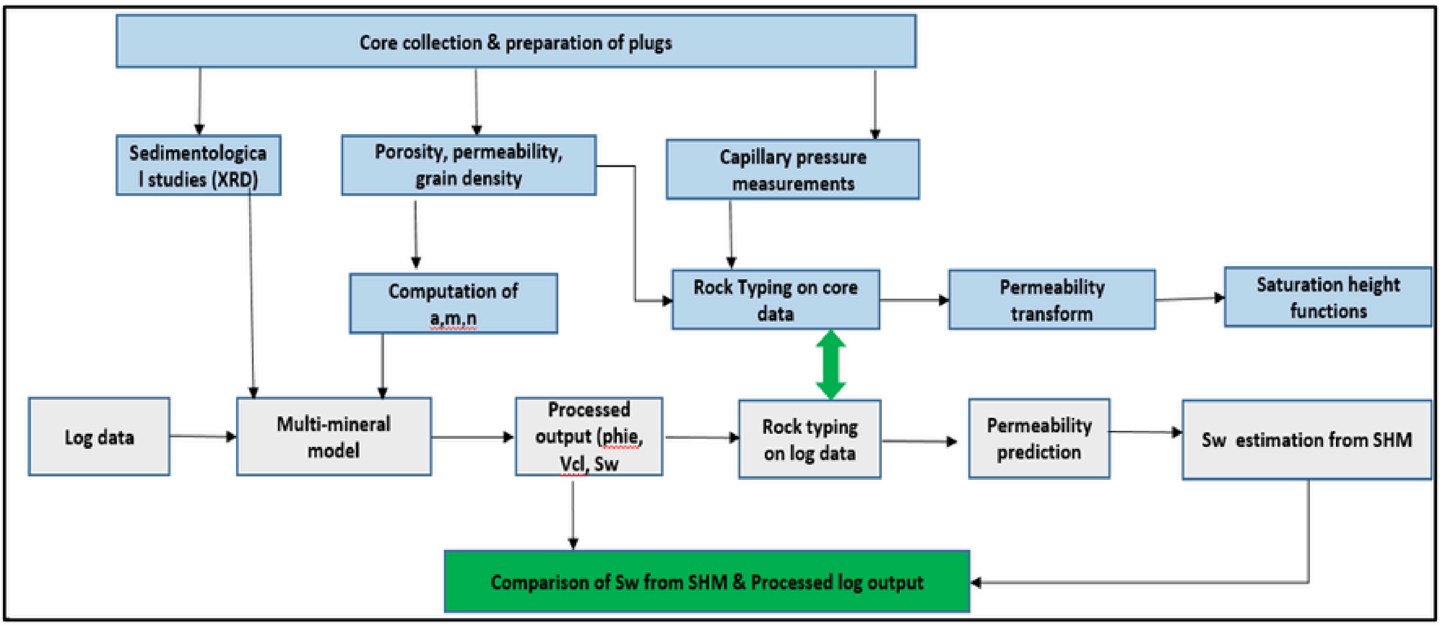

FIGURE-1: WORKFLOW OF THE STUDY

Multi-mineral model and log data processing

The model was prepared utilizing both log & core data is described below.

Clay minerals: Kaolinite & Illite   Matrix: Quartz & Albite

Additional mineral: Muscovite

Petrophysical constants: a=0.81, m=2.04, n=1.61   Rw: 0.1 ohm-m @ Formation temp

Log data of the wells were processed using above-described model. Porosity estimated with model output and core porosity are in good agreement (Figure-2).

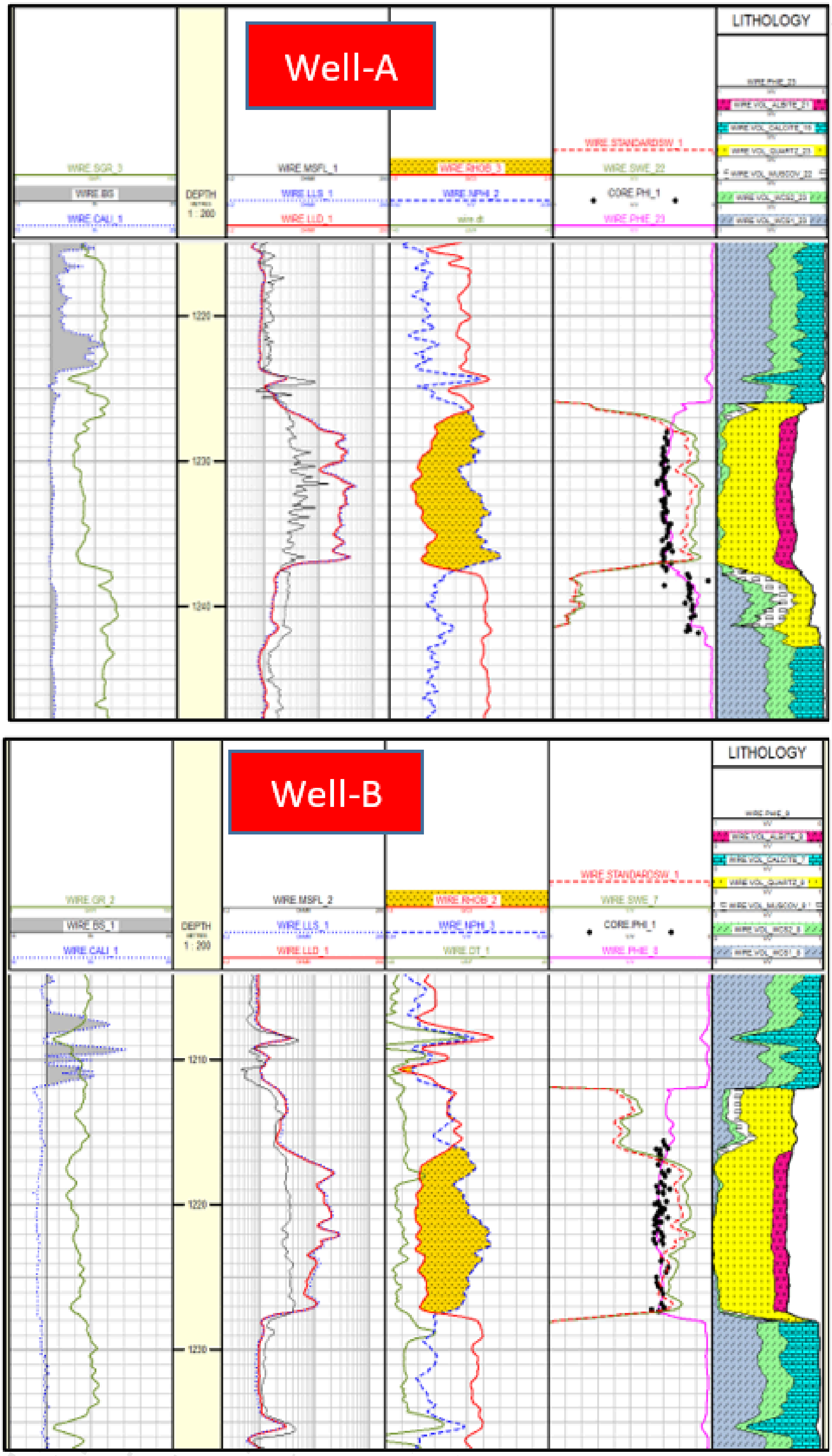

FIGURE-2: COMPARISON OF PROCESSED LOG WATER SATURATION WITH DEFAULT (DOTTED RED CURVE, 2ND LAST TRACK) & MULTI-MINERAL MODEL (GREEN CURVE, 2ND LAST TRACK)

Saturation Height Modelling (SHM)

Extensive core study was carried out and equations generated in core domains are used in log domain. The process is described below.

Core Domain:

A parameter, Rock quality index (RQI), is used for reservoir rock typing in core domain (figure 3).

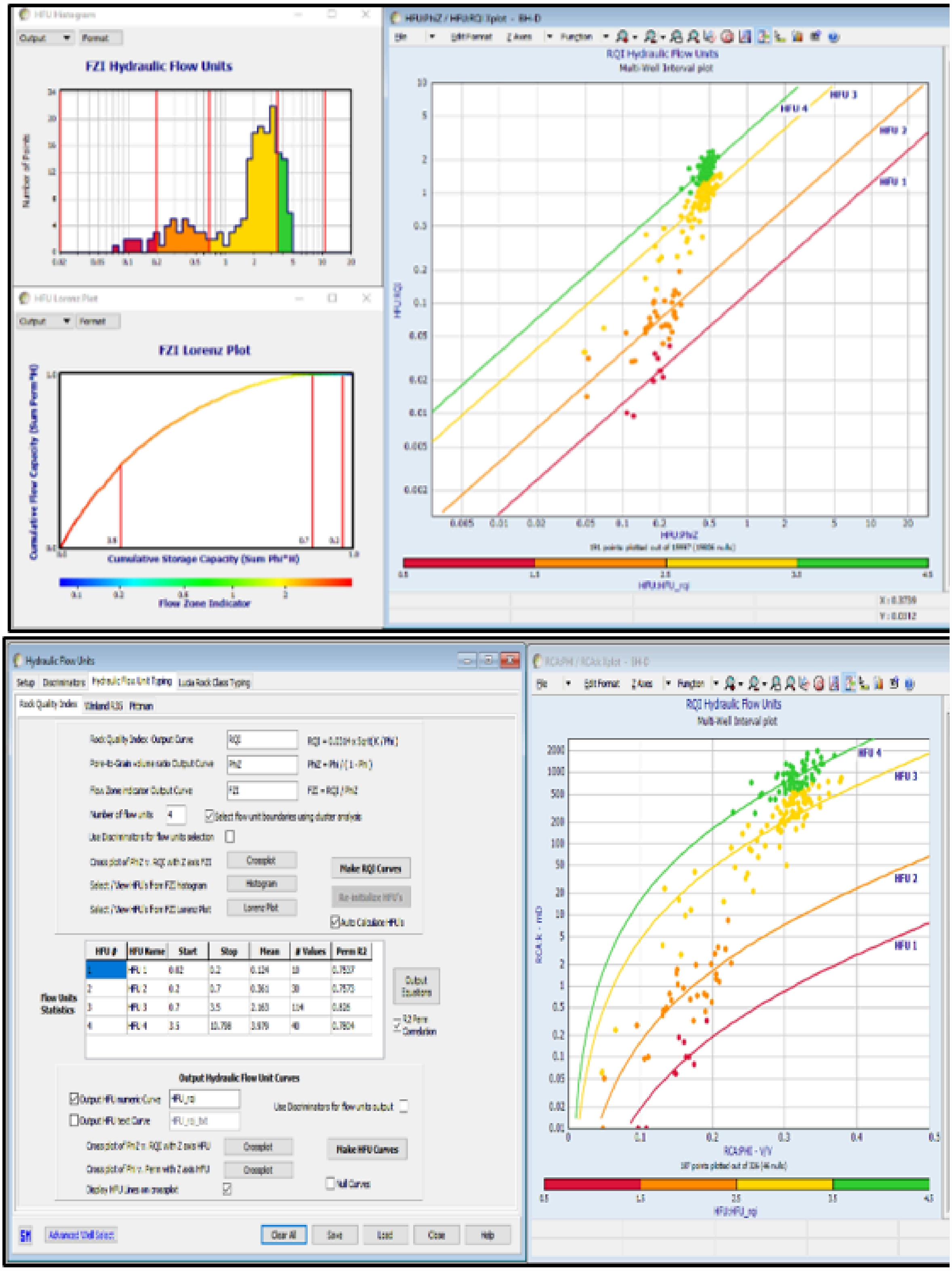

FIGURE-3: ROCK QUALITY INDEX (RQI) AND HYDRAULIC FLOW UNITS (HFU) ANALYSIS

FZI=RQI/PHIZ................................... (i)

Where RQI=0.0314*√(K/Phi)

PHIZ=Phi/(1-Phi).

Hydraulic flow units for each rock type define.

HFU4: $Perm=Phi^3*(3.98/(0.0314*(1.0-Phi)))^2$ $R^2= .75$,

HFU3: $Perm=Phi^3*(2.16/(0.0314*(1.0-Phi)))^2$ $R^2= .76$

HFU2: $Perm=Phi^3*(0.36/(0.0314*(1.0-Phi)))^2$ $R^2= .83$,

HFU1: $Perm=Phi^3*(0.12/(0.0314*(1.0-Phi)))^2$ $R^2= .78$

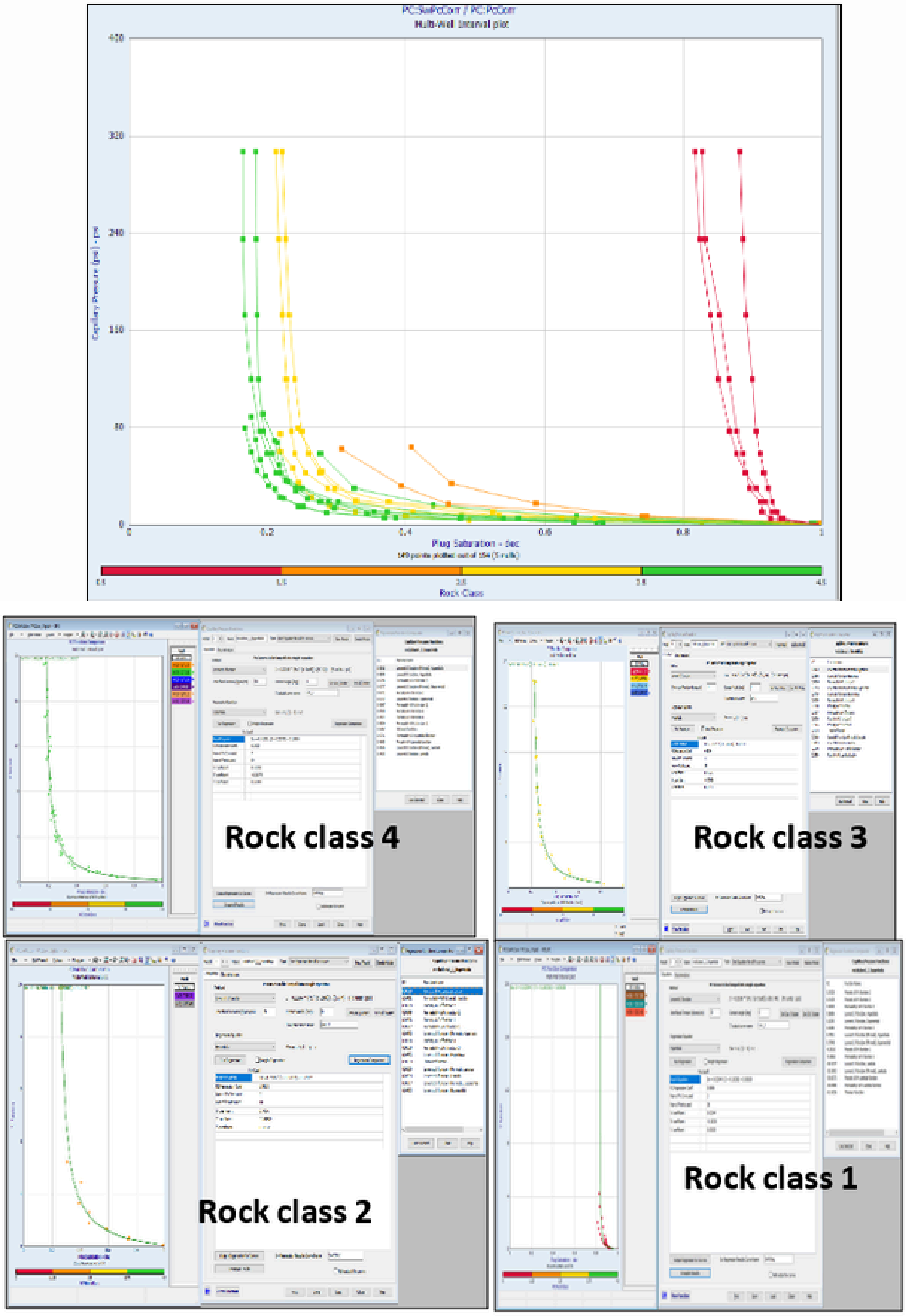

FIGURE-4: OBSERVED ROCK CLASSES ON CAPILLARY PRESSURE DATA AND SATURATION HEIGHT FUNCTIONS

The capillary pressure measurement in laboratory was carried out on 17 core plugs through centrifuge method in air-brine media, the measurements were converted to reservoir domain i.e. gas- water system.

θ res: 0 deg in gas water system.

The hydrocarbon density at reservoir condition as estimated from PVT data is ~0.1 g/cc. Water density is considered as 1 g/cc

After applying the required correction on capillary pressure data, rock classes wise saturation height functions have been generated based on Leverret-J function which corresponds to highest correlation to the observed data. The saturation height functions generated for each facies are presented in figure-4.

Rock class 4: Sw=0.42/(J+0.324)+0.16494 R^2= 0.99,

Rock class 3: Sw=0.47/(J-0.376)+0.20204 R^2= 0.98

Rock class 2: Sw= 0.76/(J+0.856)+0.22812 R^2= 0.99,

Rock class 1: Sw=0.025/(J+0.183)+0.83638 R^2= 0.95

Where J = 0.2166*(Pc/σ.CosΘ)√ (K/Phi). For gas water system interfacial tension σ=50 dynes/cm & contact angle Θ=0 deg. K is core permeability in mD and Phi is porosity in fraction.

Log Domain:

As raw log curves may have certain uncertainties due to various reasons (borehole effect, normalization of curve, curve missing in zone of interest etc.) & this make facies identification task more cumbersome. To overcome this, instead of raw log data, processed output curves (phie & Vcl) were used. Also for consistent implementation of facies in 3D space, a deterministic criteria is designed for facies identification.

Cross plot of processed log phie & Vcl in figure-5 indicates higher points closer to Y-axis (vcl) has high vcl/phie ratio and lower points nearer to X-axis (phie) have lower vcl/phie ratio. For facies discrimination, slope of Vcl/phie ration can be utilized. Equivalent facies identified by clustering (Figure-5: middle) can be attained with the different vcl/phie ratio slope (figure-5: Right) and ratio values are tabulated below:

Log facies	**Color**	**Reservoir**	**VCl/Phie ratio**
4	Green	Very good reservoir	< 0.1
3	Yellow	Good reservoir	0.4 to 0.1
2	Orange	Moderate reservoir	2.5 to 0.4
1	Red	non reservoir	>2.5

It should be noted that the limits of these deterministic facie identification criteria may varies from reservoir to reservoir and is highly dependent on the input processed log curves. These limits should actually be defined with the processed log data of respective reservoir of interest.

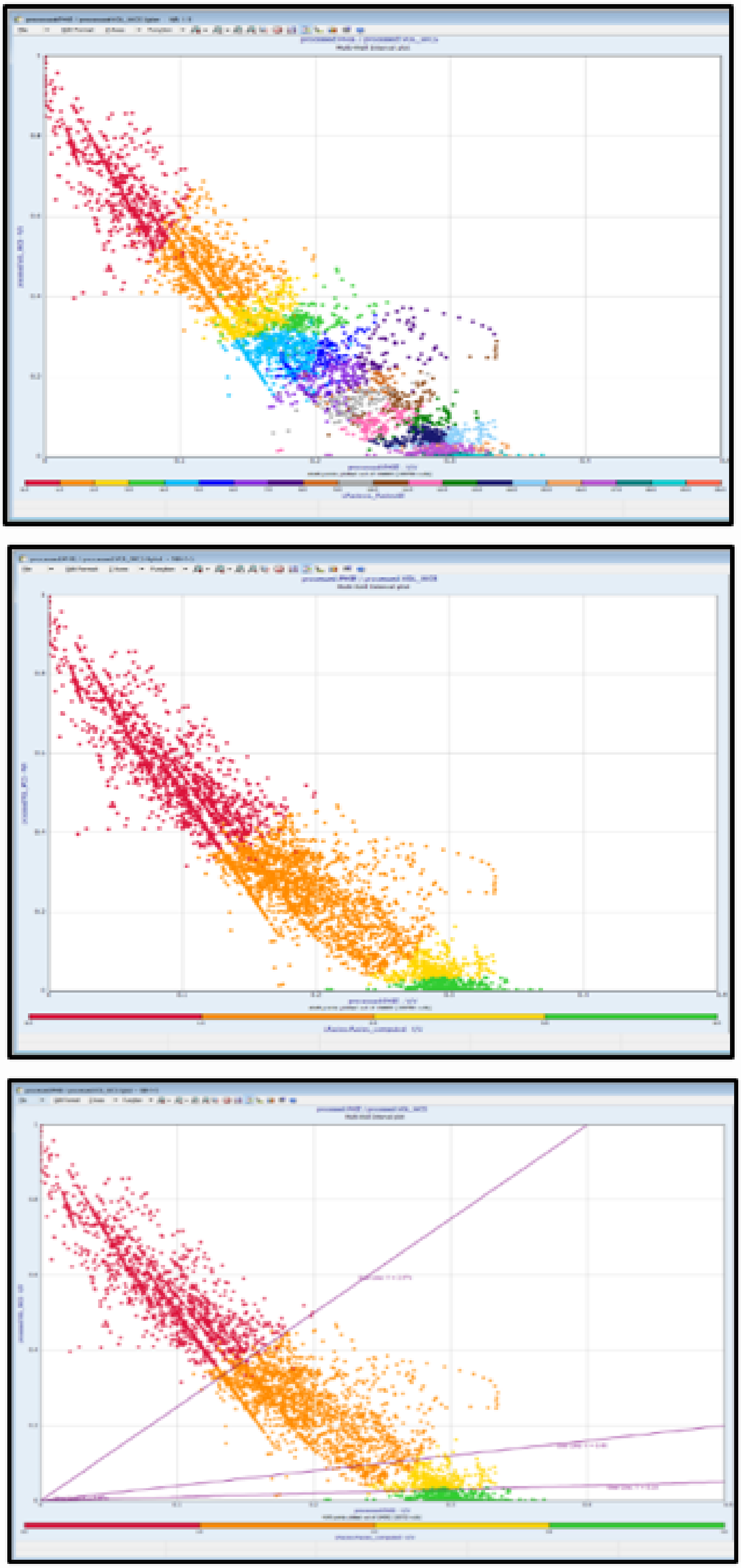

FIGURE-5: TOP: INITIAL 20 FACIES FROM CLUSTERING ANALYSIS, MIDDLE: FACIE AFTER CLUSTER CONSOLIDATION, BOTTOM: EQUIVALENT FACIE WITH DETERMINISTIC CRITERIA

Facie correlation among different domains

Reservoir facies were identified in different domains viz., RCAL, capillary pressure & log domains. For robust model, it is necessary to have consistency among facie in all domains. Table below summarizes the identified integrated reservoir facie number in different domains.

Facies Number	Facies Colour	RCA domain	PC domain	Log Domain	Reservoir
4	Green	HFU 4	Rock Class 4	4	Very good reservoir
3	Yellow	HFU 3	Rock Class 3	3	Good reservoir
2	Orange	HFU 2	Rock Class 2	2	Moderate reservoir
1	Red	HFU 1	Rock Class 1	1	Non reservoir

Permeability prediction

Permeability in log domain is generated using processed log porosity and equations generated under core domain. The generated permeability curve was validated with the core measured permeability values (Figure-6 & Figure-7: Track-7). A fairly good match is observed among the log predicted and core measured permeability values.

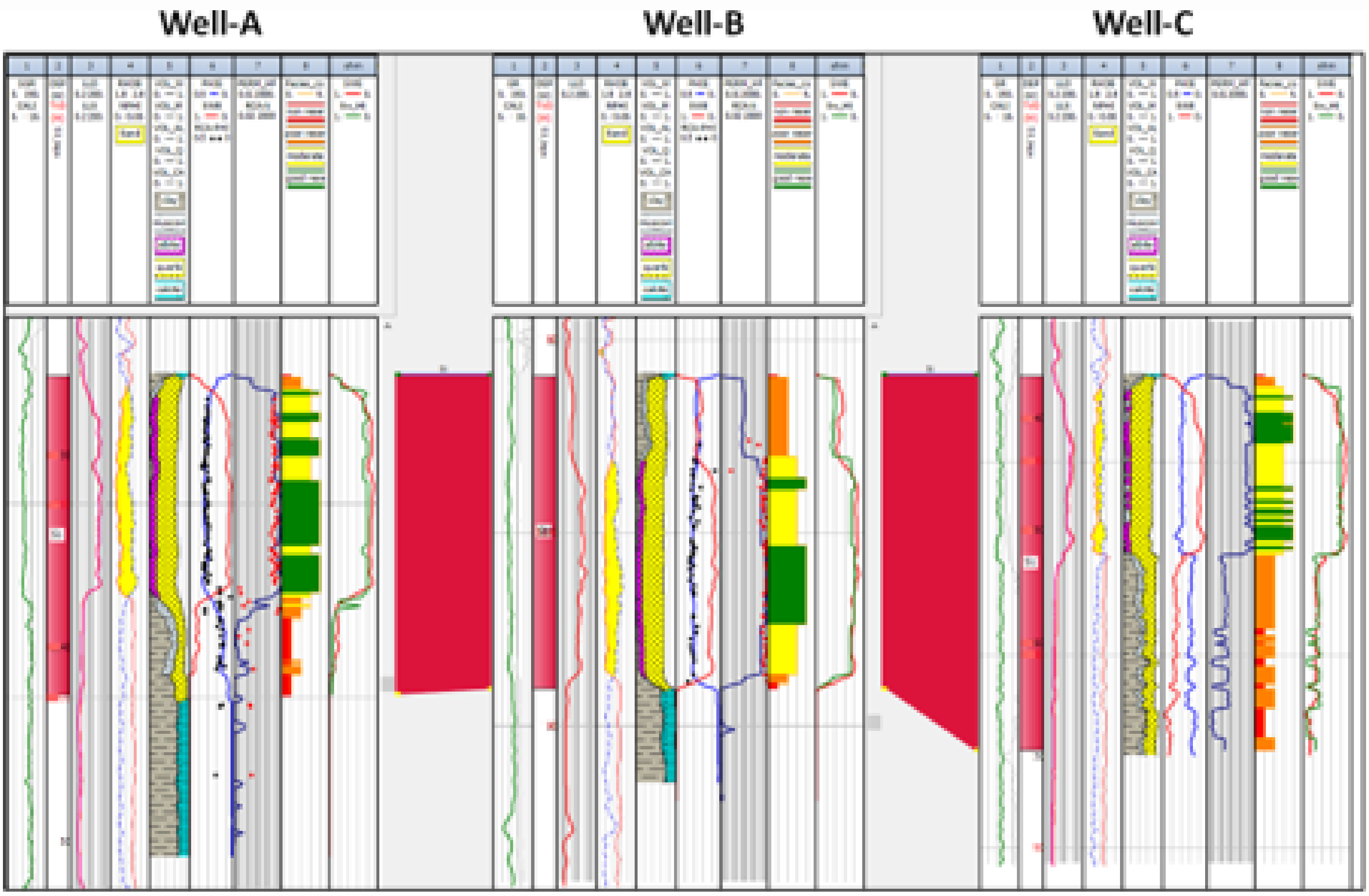

FIGURE-6: MATCHING OF CORE MEASURED AND LOG ESTIMATED PERMEABILITY (TRACK-7). COMPARISON OF SHM SW WITH PROCESSED LOG SW (LAST TRACK: GREEN CURVE: SHM & RED CURVE: PROCESSED LOG).

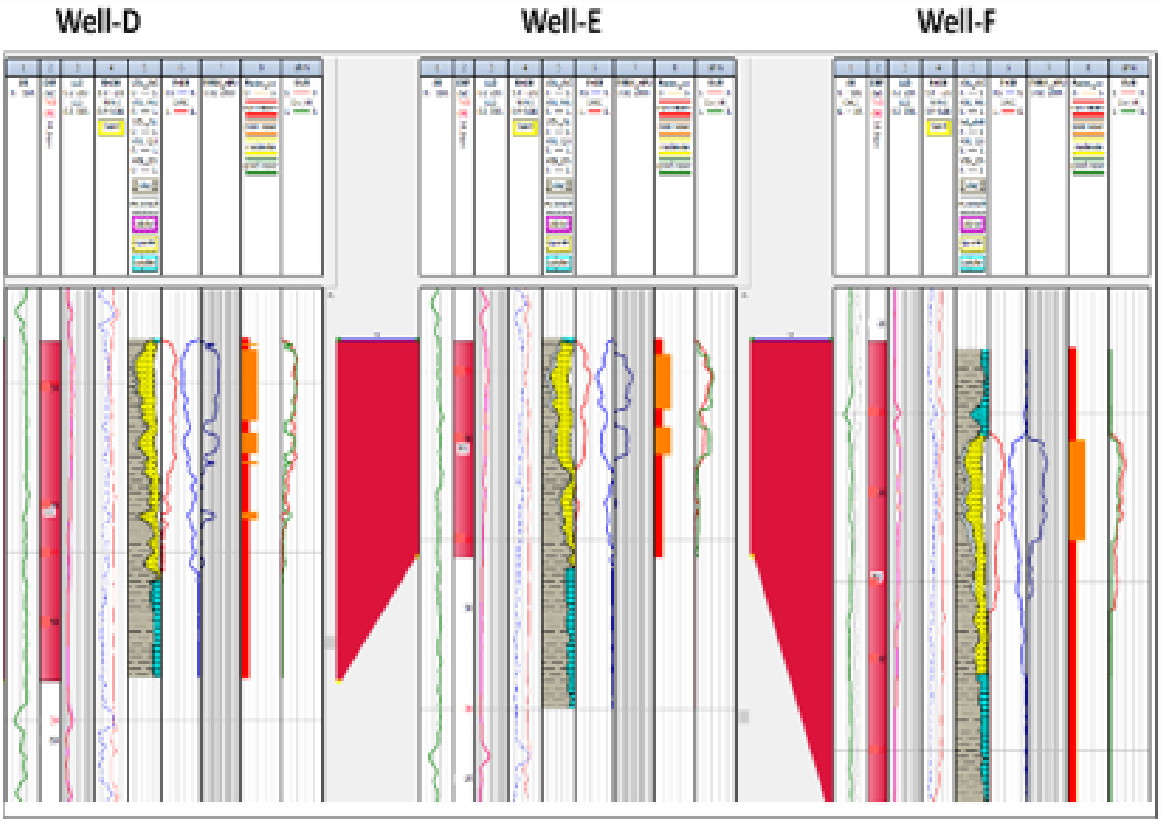

FIGURE-7: MATCHING OF CORE MEASURED AND LOG ESTIMATED PERMEABILITY (TRACK-7). COMPARISON OF SHM SW WITH PROCESSED LOG SW (LAST TRACK: GREEN CURVE: SHM & RED CURVE: PROCESSED LOG).

Application of saturation height functions at well level

Facies wise SHM water saturation (Sw) was estimated by using equations generated by name rock class under core domain. SHM Sw was compared with processed log Sw (Figure-6: last track). There is satisfactory match in estimated Sw by processed log & SHM for good reservoir facies (Well-A, B & C) as well for silty/poor facies (Well-D, E & F).

Conclusion

Integrating the multi-domain data always resulted in better understanding of the field. Regardless of reservoir quality, net pay average water saturation & net pay thickness calculated from processed log Sw and facie wise saturation height models are in good agreement (Figure-8). The computed water saturations shows ~5 units increase in hydrocarbon saturation in comparison to earlier estimates. Identified deterministic criteria for reservoir rock typing has direct application of SHM in 3D reservoir model.

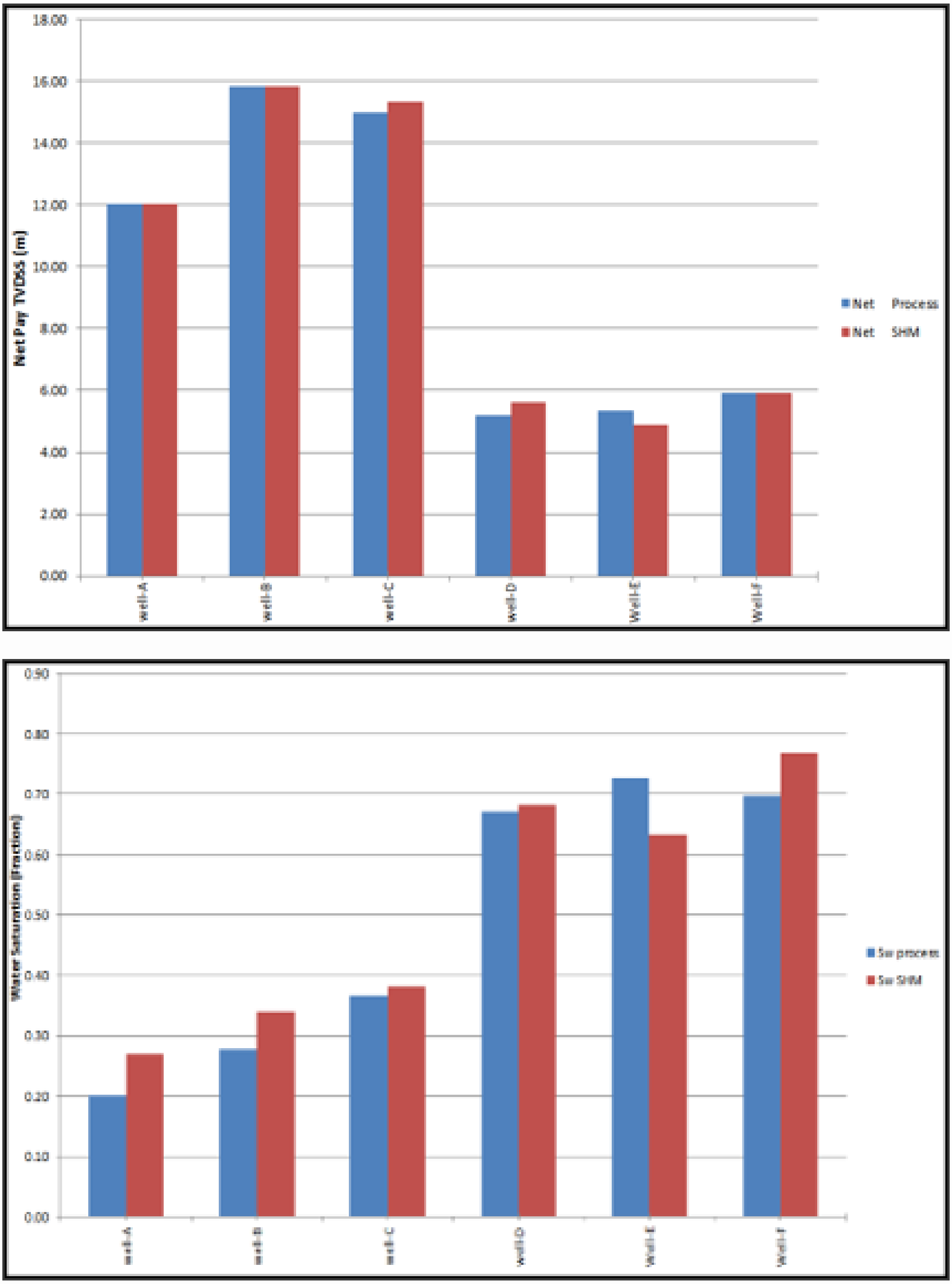

FIGURE-8 NET PAY AVERAGE WATER SATURATION (BOTTOM) AND NET PAY THICKNESS (TOP) COMPARISON

Acknowledgements

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Production enhancement through multidisciplinary data analysis: A Case study in the brown fields of Cauvery Asset

Authors: Shaji P T, Logging Services, Cauvery Asset- ONGC

Introduction

Kovilkalappal field is one of the most prolific and established hydrocarbon field producing from early cretaceous age in Cauvery Asset. North Kovilkalappal field is located on the north eastern plunge of Pattukattai-Mannargudi ridge in the Nagapattinam sub-basin.

The well A was drilled to exploit oil from AS-10 sand of Andimadam formation in 2015.Total of five objects were released in the well to test in Andimadam formation. The well produced a cumulative of 3219 tons oil and 0.68 MMm3 Gas from AS-10 sand and after that well got ceased to flow. The well A_Z, where this analysis was carried out, was side tracked as an inclined 'L' profile from the existing well A to produce oil from AS-10 sand of Andimadam formation.

Analysis

Top part of the sand AS-10 (above GOC) developed in the interval 2575-2619.5 m is interpreted as Gas bearing and identified as Object- IIIB. AS-10 sand (Below GOC) in the interval 2628 - 2676 m is interpreted as Oil bearing .This oil bearing part of AS- 10 sand was perforated in the interval 2673-2669, 2668-2660 and 2658-2651.5m at 6 SPF and produced 46.8m3/day oil and 2000m3/day gas since March 2022. From Jan 2023 onwards water production started and the well became nonflowing since April -2023 due to water loading.

Up to April-2023, the well cumulatively produced 10013 MT oil and 2.0 MMm3 of gas. In the month of June-2023, the first work over rig was deployed for water shut off in the current perforation interval. Cased hole formation resistivity log was recorded with the aim of determining fluid contact movement in the AS-10 sand and identifying any saturation left out in the perforated zone. The Ultra sonic image log was also recorded prior to the cased hole formation resistivity log to check the casing integrity.

Based on the cased hole formation resistivity log data, it was evident that the bottom sand packs within the intervals 2673-2669and 2668-2660 have water loaded or flushed out.

Additionally, the cased hole formation resistivity log shows a decrease in resistivity values for the sand packs within the interval 2658-2651.5m. However, considering the last production rate which was about Oil-21tpd, Wtr-3 m3/d, Gas-5884m3/d in the first week of April 2023, separately tested the interval 2655.0 - 2651.5m after cement squeezing the entire interval. On activation well flowed Oil@6 m3/d and gas @ 2861 SCMD and completed the well on SRP. The cased hole formation resistivity and ultra-sonic image logs are shown in fig 1

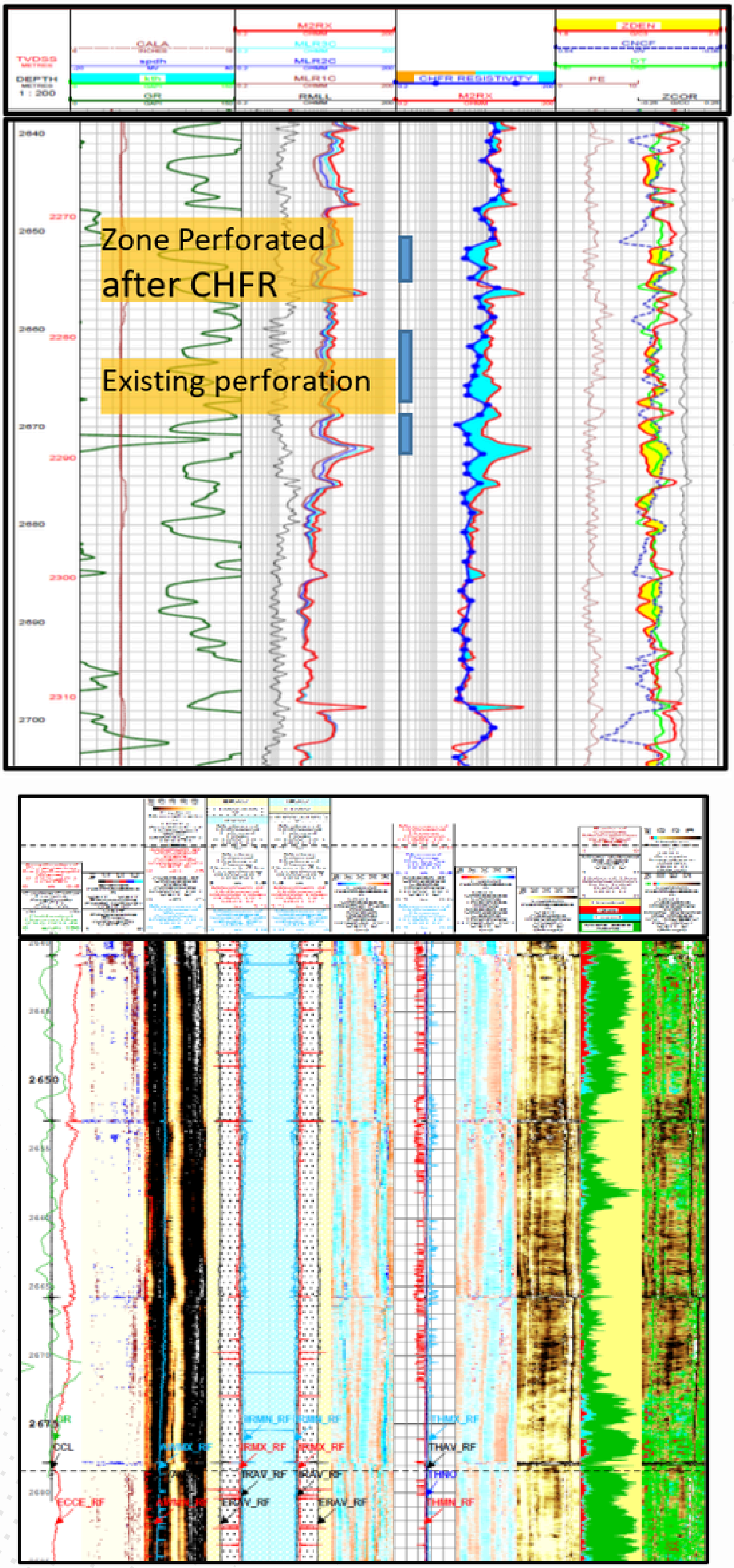


Figure 1: showing CASEDHOLE FORMATION RESISTIVITY COMPOSITE LOG and ULTRASONIC IMAGE COMPOSITE LOG

In May- 2024, the work over rig was again deployed for additional perforation in the As-10 sand for production enhancement. As per this perforated the intervals 2642-2649m, 2635-2639m & 2628-2632m below the GOC. On activation well flowed oil @ 1.4 KL with Gas @ 46303 SCMD. It was a surprise that huge amount of gas produced from an already established oil zone of As-10 sand. It was decided to record a production log in the interval 2656m - 2600m both in flowing and shut in condition to identify the high gas production and ascertain the possibility of channelling behind the casing.

The PL stack lowered with the following tools in flowing condition

- 1. XTU- Ultra link telemetry
- 2. PRC- Roller centralizer
- 3. PGR- production gamma ray
- 4. QPC- Quartz pressure capacitance (pressure & CCL)
- 5. FDI – Fluid density Inertial
- 6. PRC- Roller centralizer
- 7. CTF- Capacitance and Temperature (Water hold up and Temperature)
- 8. CFJM- Continuous Jewel mounted flow meter.

First, PLT down pass was recorded in flowing condition at a cable speed of 8 m/min from 2600 m to 2655 m and flow up pass was recorded in same interval at same cable speed. Further flow down and up passes with different cable speeds were also recorded. Stationary passes were also carried out above, below and against open intervals.

Salient Observations of PLT

- Dominant gas production is coming from the top perforated interval 2628m – 2632m
- Top 2m of the perforated interval 2635m – 2639m is contributing dominantly gas. Contribution from remaining interval 2637m - 2639m is masked by the gas production from the top interval 2635m - 2637m.
- Technical water settlement is observed below 2637m which is visible in density and water hold up data also. Flow meter log (CFJ) is not showing any response against the interval 2642m – 2649m. Slight contribution in the interval 2642m - 2648m is observed in the temperature profiles.
- Technical water settlement against the interval 2651.5m – 2655m is observed in fluid density and hold up data. Temperature profiles are depicting that this squeezed interval is slightly contributing to the well bore. However, due to insufficient sump below 2655m, it was unable to be validated confidently.

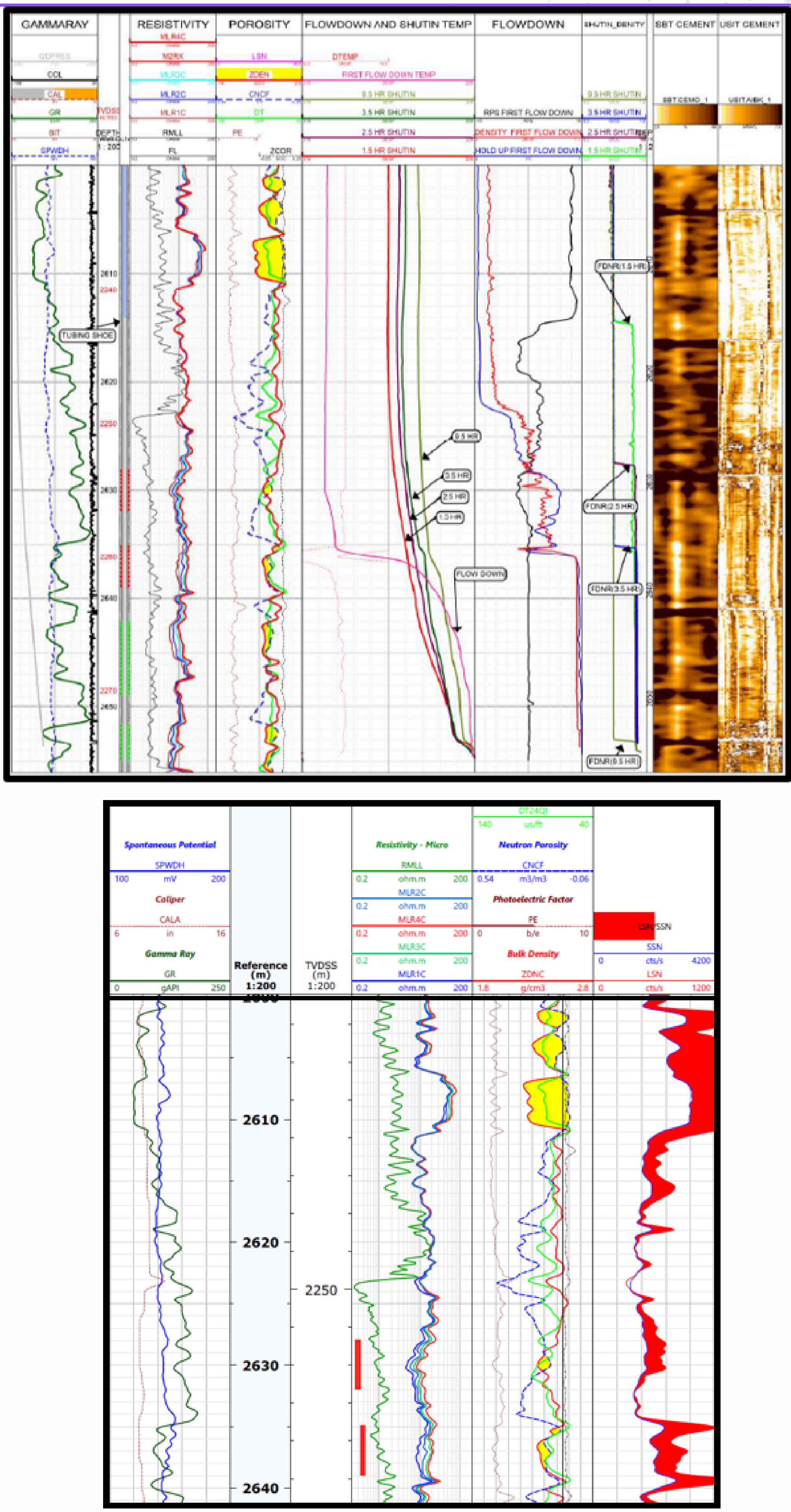


Figure 2: showing Production Log and Composite Log

From the production log data, it is clear that the upper two intervals are contributing mainly the gas. Segment bond log was recorded to find the possibility of channelling and it was evident from the segment bond log that there was no gas channelling behind the casing from the above gas cap. Whatever gas production is coming from the top two perforated zone only. This clearly indicates the movement of gas cap towards the oil zone. Cased hole neutron log was also recorded to confirm this gas cap movement. The production log and cased hole neutron logs are given in fig: 2. Based on the production log data and cased hole neutron log data, cement squeezed the entire open interval and re-perforated the interval 2651.5m - 2655m and 2642m - 2649m @ 6 spf. Upon activation well flowed 8m3/day oil without water.

Key Findings

- Gas cap movement into oil zones was successfully identified using integrated production and neutron logging.
- Multidisciplinary data analysis (logs + production data + cement integrity) enabled accurate diagnosis of abnormal gas production.
- Work over interventions guided by advanced data interpretation sustained oil production in a mature brownfield.

Conclusions:

- Integrated multidisciplinary data analysis is essential for production sustainability in mature brownfields.
- Combining cased-hole resistivity, neutron logs, ultrasonic image logs, and production logging provides a holistic view of reservoir performance.
- Work over interventions, when guided by such analysis, can mitigate water cut and abnormal gas production challenges effectively.

References:

Al Afeefi, B.S., Bong, S., Mustafa, H., et al., 2020. A Unique Use of New Generation Pulsed Neutron Tool Integrated with Advanced Production Logging to Evaluate Gas Production from an Oil Well: A Case Study from Offshore UAE. SPE-203387-MS, presented at the Abu Dhabi International Petroleum Exhibition & Conference, Abu Dhabi, UAE, November 2020. DOI: 10.2118/203387-MS.

SPWLA India Chapter Conducts Insightful Technical Session on Stress Regime Characterization & Rock Physics Modelling

The SPWLA India Chapter successfully conducted an exclusive technical session for its members on 16th January 2026 at Imperial Hall, Pride Plaza Hotel, Kolkata. The session witnessed enthusiastic participation from 50+ oil & gas professionals representing various organizations across the industry.

The event featured two highly engaging and technically rich presentations:

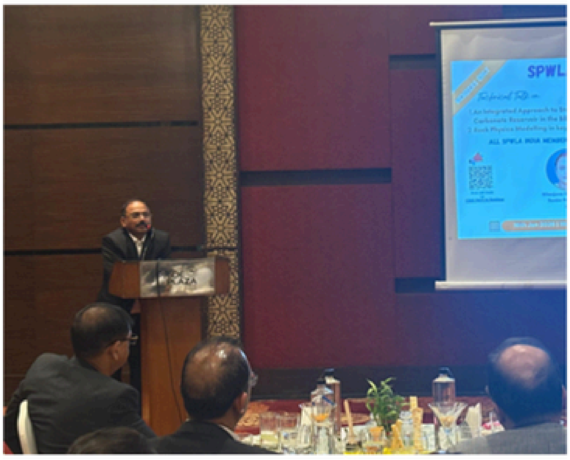
- **An Integrated Approach to Stress Regime Characterization – Insights from a Fractured Carbonate Reservoir in the Bikaner–Nagaur Basin, Rajasthan**
  Speaker: Ms. Nilanjana Ganguli Mondal, Senior Petrophysicist, HLSA

- **Rock Physics Modelling in Key Wells of Mahanadi Offshore Basin**
  Speaker: Ms. Krishna Mandal, Supdtg. Geophysicist (W), ONGC

The session concluded with an interactive Q&A, fostering meaningful technical discussions among participants. The diverse audience—comprising experienced professionals and young practitioners—actively engaged with the speakers on practical workflows, modelling challenges, and field implementation aspects.

Ms. Nilanjana Ganguli giving Technical Talk

Ms. Krishna Mandal giving Technical Talk



Shri B P Singh President -SPWLA INDIA welcoming the speakers

Engaging discussion with professionals

SPWLA INDIA Chapter - Events

SPWLA India Chapter Insightful Technical Session on From Data to Depth: AI in E&P & Basement Plays

The SPWLA India Chapter successfully conducted an exclusive in-person technical session at ONGC Nazira on 23rd MArch 2026, attended by 50+ geoscientists, petrophysicists, drilling professionals, and oil & gas experts from across the industry.

The event featured two highly engaging and technically rich presentations:

- **From Data to Depth: AI-Powered Log Prediction in E&P**
  Speaker: Mr. Phoolchand Mahato, DGM (Geophy-W), HLS -Nazira, ONGC.

- **Basement Plays Unveiled: Logs and Sampling Synergy in Mumbai High**
  Speaker: Dr. Kanad Kulkarni, Well Construction Advisor – Baker Hughes

Both presentations generated significant interest among participants and were followed by interactive discussions on the practical implementation of advanced technologies, digital workflows, and innovative reservoir evaluation techniques.

Figure Shri Phoolchand Mahato delivering his technical presentation during the session (left) and SPWLA President (right) felicitating the Speaker with Certificate and Memento

Figure Dr Kanad Kulkarni delivering his technical presentation during the session (left) and SPWLA President (right) felicitating the Speaker with Certificate and Memento

SPWLA INDIA Chapter – Events

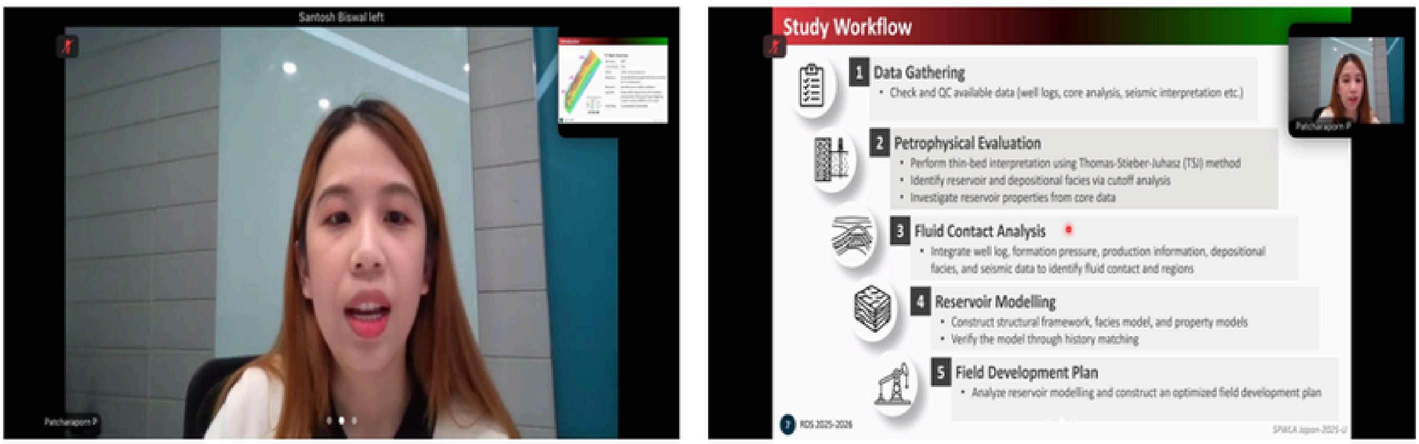
SPWLA India Knowledge Connect Series

The SPWLA India Chapter successfully conducted multiple virtual technical sessions under its flagship **"Knowledge Connect Series"**, bringing together distinguished global experts and industry professionals for high-impact knowledge exchange.
Each session witnessed an overwhelming response with **100+ participants** comprising petrophysicists, geoscientists, reservoir engineers, academicians, and energy professionals from India and international locations.

Petrophysics Insights for an Integrated Reservoir Modelling: A Case Study from Deepwater Field, Malaysia

- Speaker: Ms. Patcharaporn Petchdee
- Petrophysicist, PTTEP
- SPWLA Regional Distinguished Speaker
- Date: 22nd December 2025 | Online

Ms. Petchdee presented an insightful case study demonstrating how petrophysical analysis plays a critical role in integrated reservoir modelling workflows for deepwater assets. The session highlighted challenges in data integration, uncertainty handling, and cross-disciplinary collaboration between petrophysics, geology, and reservoir engineering teams.



Ms. Patcharaporn Petchdee delivering Technical Talk in SPWLA INDIA Knowledge Connect Session

An Applied Approach to Predicting Petrophysical Log Data

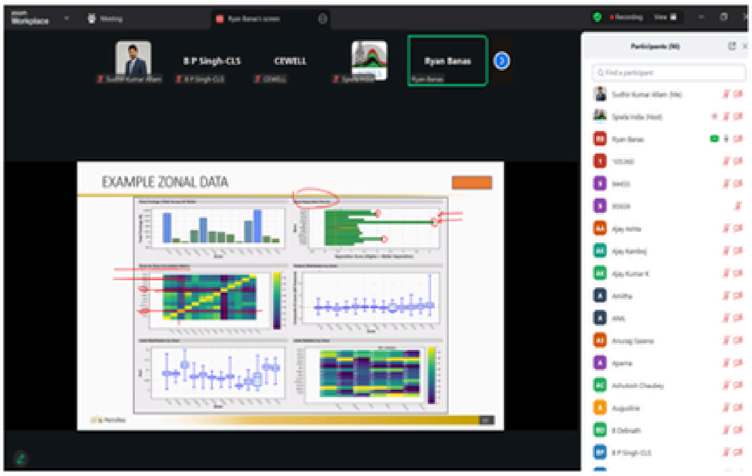
- Speaker: Mr. Ryan Banas
- Director, PetroRes Consulting
- SPWLA Regional Distinguished Speaker
- Date: 6th January 2026 | Online

SPWLA INDIA Chapter – Events

SPWLA India Knowledge Connect Series

Mr. Ryan Banas delivered a technically enriching session focused on applied methodologies for predicting missing or unavailable petrophysical log data. The talk emphasized practical workflows, data-driven strategies, and best practices for improving log prediction reliability in complex reservoir settings.

Participants gained valuable insights into model calibration, uncertainty management, and integration of prediction workflows into reservoir characterization



Mr. Ryan Banas delivering Technical Talk in SPWLA INDIA Knowledge Connect Session

Geopolitical Risk and Deepwater Opportunities

- Speaker: Mr. Shanu Batra
- Senior Customer Success Manager, S&P Global Energy
- Date: 13th February 2026 | Online

This session explored the evolving global energy landscape, highlighting how geopolitical shifts influence deepwater exploration and production strategies. Mr. Batra provided a comprehensive perspective on risk assessment, investment outlook, and emerging offshore opportunities.

Mr. Shanu Batra delivering Technical Talk in SPWLA INDIA Knowledge Connect Session

SPWLA INDIA Chapter - Events

SPWLA India Knowledge Connect Series

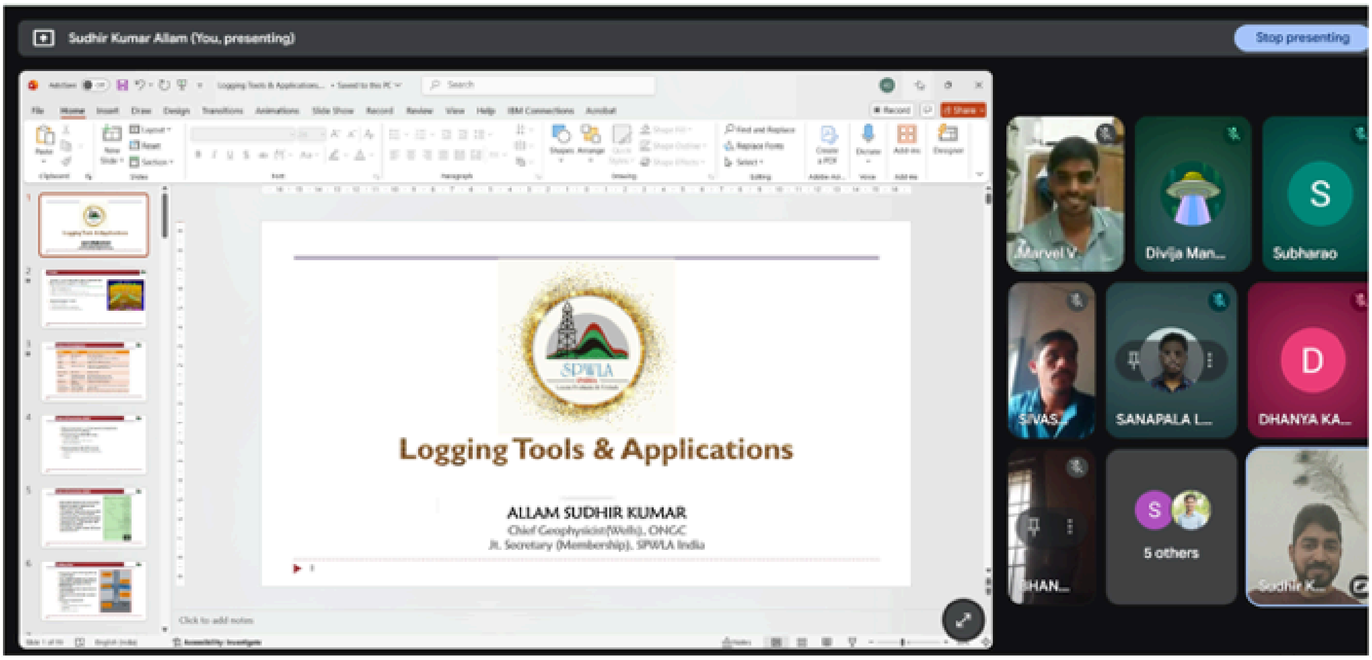
- **Going Full Cycle in a Wellbore Stability Case Study: From Pre-Drill Analysis to Post-Drill Evaluation**
- 17th April 2026 | Online
- As part of the SPWLA India Chapter's Knowledge Connect Series, a highly informative technical session was delivered by Dr. Frans Mulders, Software Product Champion – Geomechanics, Geoactive.

The session provided a comprehensive overview of the complete wellbore stability workflow, covering the journey from pre-drill geomechanical planning through drilling execution to post-drill evaluation and model validation. Dr. Mulders shared practical insights into the application of geomechanical principles for mitigating drilling risks, optimizing well trajectories, and improving operational efficiency.

SPWLA India Student Connect Session

- **Technical session on Well Logging Tools and Their Applications**
- Speaker: **Allam Sudhir Kumar**, Chief Geophysicist (Wells), ONGC; Joint Secretary (Membership), SPWLA India Chapter
- Date: 10th January, Online

The speaker delivered an online technical session on 10th January 2026 for students of the Department of Geophysics, Andhra University, one of the earliest established geophysics departments in India with a long-standing legacy in geophysical education and industry collaboration.



Mr. Allam Sudhir, Joint Sect.(Membership) SPWLA INDIA Chapter, delivering Technical Talk in SPWLA INDIA Student Connect Session

SPWLA INDIA Chapter

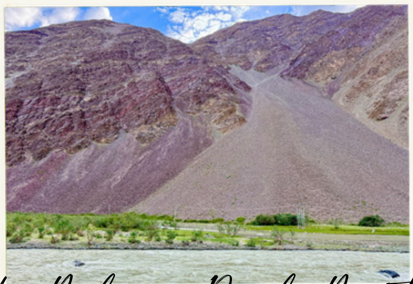
GEO-LENS


Tso moriri Lake -LEH


Puga Valley


Hot Springs


Folded Strata


Indus Molasse -Purple Mountains

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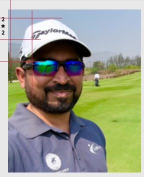

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Mud Pillars Spiti Valley


Theban cliff of Luxor, Egypt


Brahmaputra - Tributary channels


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Call for Abstracts

SPWLA 68th Annual Symposium

SPWLA 68th Annual Symposium in Pau, France, from May 22-26, 2027, at Le Palais Beaumont, a conference jointly hosted by

SPWLA USA and SPWLA France Chapter!

Click here for Abstract Submission

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